IEEE Asia Pacific

IEEE Region 10 Golden Jubilee Commemoration, 2017
Region History 1967 – 2016

◆IEEE

Acknowledgments

Enthusiastic cooperation and timely inputs from many have gone into the preparation of this book. These have made my task in compiling information and editing this book a very pleasant experience. I would like to gratefully acknowledge

- ❖ Past Directors of IEEE Region 10 who graciously shared memories covering their tenure as R 10 Directors.
- ❖ Arokiaswami Alphones, Akinori Nishihara, Byung Gook Park, Ravikiran Annaswamy, Sri Niwas Singh and Mehvish Zahoor who shared responsibility for information collection and editing parts of this book.
- ❖ Karen Galuchie and Janina Mazierska for special editorial inputs.
- ❖ Zia Ahmed, Ramalatha Marimuthu, Celia Shahnaz, Nivas Ravichandran, David E Berger and Toshihiko Sugie who wrote, or provided material for specific topics in this book.
- ❖ Chairs of Region 10 Sections/ Councils for providing write-up; and Ravikiran Annaswamy and Mehvish Zahoor for coordinating and editing this material for this book.
- ❖ IEEE staff for Awards and Fellow programs, in particular Donna Dukes, Lynn Frassetti, Cecelia Jankowski, Rosann Marosy, Emily Panasowich and Kerry Ann Ward for lists of Recipients of IEEE awards and Fellows from Region 10, and sponsors of awards.
- ❖ Tina Cordeiro, Tamara Gallio, Cecelia Jankowski, Donna McClelland and Elyn Perez for statistical information and tables on membership data.
- ❖ Nathan Brewer and Robert Colburn for history and related details.
- ❖ Fanny Su and Ewell Tan for cheerful cooperation all along; and Ewell Tan for developing map of Region 10 used on the back-cover of this book.
- ❖ Karen Kaufman for the write-up on IEEE Foundation (inside back cover), and Harish Mysore for write-up on IEEE Offices in Region 10.

Previously documented information *'IEEE Region 10 (Asia and Pacific) History'* from http://ethw.org/IEEE_Region_10 (Asia_%26_Pacific) history; IEEE Region 10 History Supplement of IEEE Region 10 Newsletter, September 2008; and a manuscript *'IEEE Centennial' (*1984 – author/editor not known) has been used or consulted in developing the present book.

IEEE Foundation approved a grant to support publication of this book. My special thanks to David Green and Karen Galuchie.

Responsibility for coordination of page layout, printing, publication and distribution of this book was handled by IEEE India Office. Harish Mysore and his staff shouldered the entire task. Harish merits a special acknowledgment and appreciation.

IEEE Region 10 Director Kukjin Chun extended total support and stepped in personally to facilitate timely inputs. Without his support and encouragement, this book might not have been a reality.

V Prasad Kodali
Editor-in-Chief, **IEEE Asia Pacific**

Welcome from Region 10 Director

When the AIEE and the IRE merged to form the IEEE on 1st January 1963, the present day Region 10 was a part of IEEE Region 9. On 24th August 1966, IEEE Board of Directors resolved that areas not included in Regions 1 through 9 shall be designated Region 10. The membership started with 2,509 and increased to 125,060 which is 50 times steady growth for the last 50 years.

Now Region 10 has 6 councils, 57 Sections and 26 Subsections in 20 countries. They are Afghanistan, Australia, Bangladesh, Brunei, China, Fiji, India, Indonesia, Japan, Korea, Malaysia, Nepal, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Taiwan, Thailand and Vietnam. There are also 606 Chapters, 1384 Student Branches, 656 Student Branch Chapters, 39 YP Affinity Groups, 37 WIE Affinity Groups, 7 Life Member Affinity Group as of 31st December 2016. There are 5 IEEE offices in Singapore, Beijing, Bangalore, Tokyo, and Shenzhen. As Region 10 Founding Director Shigeo Shima mentioned, Region 10 consists of many countries, languages, cultures, and different degrees of industrialization. Great effort is being exerted to form new subsections in Myanmar, Cambodia and Mongolia where petitioners are already assigned. More geographical units are expected to establish in Laos, Bhutan, Maldives and Papua New Guinea in the future.

A great deal of engineers and researchers of Region 10 have been recognized for their excellent achievement for industry and humanity with IEEE Medals, Technical Field Awards, Fellows Grade and Milestones. This book 'IEEE Asia-Pacific' is published to commemorate Region 10 Golden Jubilee and illustrates the history, technical activity, member activity and the status of Sections and Councils of Region 10. We should remember the enthusiasm and contribution of IEEE volunteers who have facilitated present IEEE Region 10 and I would like to congratulate and thank all the volunteers on behalf of Region 10. Special thanks goes to Prasad Kodali and his editorial team as well as Region 10 Section Chairs and IEEE staff and volunteers who provided a lot of important material and editing.

I hope you will enjoy the Sections Congress 2017 in Sydney this August, which is the first time in Region 10!

Kukjin Chun
2017-2018 Region 10 Director
10th June 2017

Preface

V Prasad Kodali

Editorial Team: Harish Mysore,Ravikiran Annaswamy, Prasad Kodali,Kukjin Chun,Akinori Nishihara, Ewell Tan

IEEE Region 10 has travelled many miles, and come a long way since its birth fifty years ago. The Region and its members have several tangible accomplishments. This book presents many historical developments over the past five decades.

Major organizational developments include:

❖ A 50-fold membership growth from 2509 at the beginning of 1967 to 125,060 by the end of 2016; and

❖ Growth in number of organizational units from one Section and two Society Chapters at the beginning of 1967, to 6 Councils and 57 Sections with 26 Subsections and close to 1000 Society Chapters by the end of 2016.

Along the travel route, the number of IEEE Fellows in Region 10 has swelled from a mere 18 Fellows (out of 2759 IEEE Fellows) in 1967. By the beginning of 2017, around 1175 Fellows (out of 7470 IEEE Fellows world-wide) are from the Asia Pacific region. List of current IEEE Fellows from Asia Pacific is in section 4 of this book, along with citations.

Recognizing excellence is a hall-mark of IEEE's awards and recognitions program. Before 1967, Leo Esaki was the only recipient of an Institute level medal from Asia Pacific region. Leo Esaki received the 1961 IRE Morris N Liebmann Memorial Award (and later 1973 Nobel Prize in Physics, and 1991 IEEE Medal of Honor). During the past fifty years, members from Asia Pacific region have been the recipients of 37 IEEE Medals, 28 Recognitions, and more than 100 Technical Field Awards. There were three recipients of IEEE Medal of Honor during these years from Asia Pacific. These peer recognitions are indicative of the highest quality scientific and technical contributions made by members from Region 10. Section 4 lists these awards recipients and citations; and includes available photographs.

Key historical achievements in electrical and electronic engineering are recognized as IEEE Milestones. Asia Pacific region has 37 IEEE Milestones; and information on these is given in section 5 of this book.

Past laurels and recognitions by peers often serve as inspiration for setting even higher goals in future. By the '*Golden Jubilee Year*' of Region 10, the record of achievements in the first fifty years is an abundant *gold-mine* of inspiration for IEEE members and leaders from Asia Pacific.

History is often quickly forgotten, and documentation of past history has gaps. This present book **IEEE Asia Pacific** may not be an exception. Major gaps can be bridged in future in the electronic version of this book.

V Prasad Kodali
Editor-in-Chief, **IEEE Asia Pacific**
10th June 2016

Table of Contents

Front Cover – photograph taken during R 10 SYLW Congress, Bengaluru, August 2016

1.

IEEE Region 10 History

Editor - V. Prasad Kodali

A small IEEE Bylaw amendment on 24th August 1966, resulted in the historic birth of IEEE Region 10.

IEEE and its predecessor societies, Institute of Radio Engineers (IRE) and American Institute of Electrical Engineers (AIEE) had however been active in several countries throughout Region 10 before this date, and both had members in many countries. Members of AIEE and IRE were active in Australia, India, Japan and New Zealand even though Sections or organizational units were not yet formed in some of these countries. An IRE Tokyo Section was formed in December 1955 and many technical meetings and conferences were conducted. IRE India Section was formed in November 1959; but no record is available about its activities. Before 1967, present day Region 10 was a part of IEEE Region 9 (after Europe, the Middle East and North Africa were designated as Region 8 in 1963). The 1966 amendment to IEEE Bylaw resulted in South and Central America, and some other specified geographical areas becoming Region 9. Areas not included in Regions 1 through 9 were designated as Region 10.

After Region 10 was created, many IEEE Sections were formed during the first decade:

- New Zealand Section, 1968 (Founding Chair - Robert Adams)
- Pakistan Section, 1968 (Founding Chair – S M Akbari)
- India Section, 1969 (Founding Chair - Faqir C Kohli)
- Hong Kong Section, 1971 (Founding Chair - W S Leung)
- Australia Section, 1972 (Founding Chair - James J Vasseleu)
- Philippines Section, 1974 (Founding Chair - Benjamin Tesoro)
- Taipei Section, 1974 (Founding Chair - Lok Lin)
- Korea Section, 1976 (Founding Chair - Chung H Lee)

Historical Notes

Tokyo Section of IRE - formed in December 1955

India Section of IRE - formed in November 1959

IRE Leaders from Asia-Pacific:

- *Arthur Stephen McDonald (Australia), IRE Vice President 1949*
- *S R Kantebet (India), IRE Vice President 1953*
- *Yasujiro Niwa (Japan), IRE Vice President 1957*
- *Hanzo Omi (Japan), IEEE Region 9 Director 1965*

IRE (IEEE from 1963) Tokyo Section

- *Hidetsugu Yagi was the first Section Chair*
- *Issued bulletin "Denshi Tokyo" annually from 1958*
- *Formed MTT Society Chapter (first Society Chapter) in 1958*
- *Sponsored "International Conference on Microwave, Circuit Theory and Information Theory (ICMCI)" in 1964.*
- *Published Membership Directory of Tokyo Section in 1966.*
- *Several Society Chapters were formed in Japan.*

Rapid membership growth, and physical distances in India, led to the creation of IEEE India Council in 1976

(first IEEE Council established in Region 10) with simultaneous formation of Bombay, Delhi and Bangalore Sections. **There were thus 11 IEEE Sections and one IEEE Council in Region 10 at the close of first decade.**

Shigeo Shima (B 1905 - D 1994)

Region Directors

After Region 10 was created, Mr Shigeo Shima from Japan was elected by the IEEE Assembly, and appointed by the IEEE Board of Directors, as the first Region 10 Director for 1967-68. Founding Director of Region 10 Shigeo Shima unfortunately passed away in 1994 before he could share his thoughts with us during the Golden Jubilee Year.

Fortunately, Prasad Kodali (Region 10 Director 1981-82) recalls Mr Shima telling him in 1981 that, "IEEE Region 10 has many countries, many languages, many cultures, and different degrees of industrialization. I hope IEEE can be a unifying force to bring together the electrical and electronics engineers from all over this region to promote common good".

For the next decade, Region 10 Directors continued to be elected by the IEEE Assembly (not directly by members living in Region 10, as is done today).

During this decade, Shigeo Shima was succeeded by:

- Douglas Lampard (Australia), Region 10 Director 1969-70 (deceased);

- Tatsuji Nomura (Japan), Region 10 Director 1971-72 (deceased);
- Faqir C Kohli (India), Region 10 Director 1973-74;
- Hiroshi Shinkawa (Japan), Region 10 Director 1975-76 (deceased).

Faqir C. Kohli, the sole living past Region 10 Director from this decade, recalls how rapidly the Region grew during his tenure and his role in establishing the reduced dues for members with income levels below a specified threshold, which is still the practice today. In 2012, IEEE awarded Faqir C Kohli with the IEEE Founders Medal, sponsored by the IEEE Foundation, in recognition of his 'early vision and pioneering contributions to the development of IT industry in India'.

Region Governance

During July 1971, Tatsuji Nomura arranged an informal meeting of the Section Chairs in Hong Kong. Section Chairs from India, New Zealand, Pakistan and Tokyo attended this meeting. The first formal meeting of the Regional Committee was held in 1973 at the NHK Center in Tokyo, Japan. Region Committee meetings were held every year from 1973.

Throughout the decade, Region 10 hosted visits from numerous IEEE Presidents including Robert Tanner (1972), John Guarrera (1974), Arthur Stern (1975), Ivan Getting (1978), as well as IEEE General Manager Eric Herz. Their informal meetings, with IEEE members in different countries, were used to encourage formation of new IEEE Sections in several countries and cities.

These initiatives catalyzed the formation of Sections during and after the decade.

Douglas Lampard (B 1927 - D 1994)

Tatsuji Nomura (B 1913 - D 2010)

Hiroshi Shinkawa (B 1909 - D 2004)

Faqir Chand Kohli

"I had the opportunity to build IEEE Sections, a Council and Student Chapters all over India. I also helped set up the first IEEE Sections in South Korea and Singapore. The most significant contribution from my end was to get my colleagues on the Board to understand that most of the Indians and some from other countries would not find it possible to pay full dues of IEEE. IEEE Board of Directors passed a resolution in December 1974 to provide reduced member dues for members with income levels below a specified threshold, and for retired members who are not yet eligible for Life member grade. This helped the professionals in developing countries to become members of IEEE. This gave tremendous response to IEEE membership not only in India, but also in Africa and some parts of South America".-----Faqir C Kohli

IEEE Activities

IEEE activities grew in different countries and Sections with the formation of Region 10, and new Sections. Region Committee meetings helped develop a closer understanding, cooperation and bonds between different Sections. Significant activities in Region 10 (1955 onwards) include:

- Formation of new Sections resulted in the organization of many technical meetings and national level conferences, particularly in Japan, India, Australia and New Zealand. Technical meetings and conferences were frequently co-sponsored with national engineering and scientific societies.
- Formation of new Region gave added impetus to growth of IEEE activities in Japan.
- MTT Society Chapter was formed during 1958 in Tokyo (first Society Chapter). 'International Conference on Microwave, Circuit Theory and Information Theory (ICMCI)' was the first international conference sponsored by IEEE Tokyo Section during 1964.
- Tokyo Section (initially IRE, later IEEE) issued an annual bulletin 'Denshi TOKYO' beginning in 1959 to improve communication with its members.

- Numerous IEEE Society Chapters were formed in Japan, India and New Zealand.
- IEEE India Section published 'IEEE News' as a quarterly from 1972.
- Student Activities received attention from the beginning. Sakai Yamamura from Japan was the first Region 10 Student Activities Coordinator during 1971-72. He was followed by S Y King from Hong Kong. Procedures and rules were framed after considerable study and discussion, with the first R10 Student Paper Contest being held in 1974.
- In India, an annual event 'IEEE Annual Convention and Exhibition' was started in 1973. This event continues to be conducted even to this date (now by India Council).

These activities promoted interaction among members during technical meetings and conferences towards building a vibrant technical community; and also catalysed rapid membership growth in Sections. For example, the IEEE Tokyo Section membership grew from a mere 50 in 1955 to more than 1100 in 1969; and membership in India more than doubled to 613 members by 1973. The enthusiasm of volunteers and members from Region 10 during the first decade was reflected in the total 140% membership growth from 2509 in 1966, to 6034 by 1976.

1973 Regional Committee meeting Seated F.C. Kohli, (2nd from left) Shigeo Shima (3rd from L); standing from left James Jasseleu, David Hutt, S M Vehra, Prasad Kodali

Regional Committee Meeting 1973 From left -James Vasseleu, Faqir Kohli, David Hutt, Prasad Kodali, Shigeo Shima)

Regional Committee Meeting – 1973, Social (From left Prasad Kodali (1st), David Hutt,(2nd) F.C. Kohli (7th), Shigeo Shima (9th), Tatsuji Nomura (10th), James Vasseleu (11th)

Prasad Kodali & Shigeo Shima, 1990

Speakers at ICMCI Tokyo 1964, O.P.D Cutteridge, George Sinclair, V.I. Siforov and Max Knoll
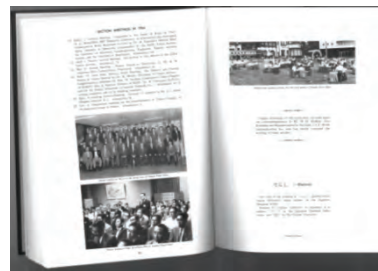
Tokyo Section Publication "Denshi **TOKYO**" -1959 and 1964

India Section Publication "IEEE NEWS -1973"

Panel Discussion during IEEE India Section Annual Convention and Exhibition – 1973

Second Decade of IEEE Region 10

Region Development

Momentum for growth of IEEE in Region 10, generated during the first decade, paid rich dividends during the second decade. New IEEE Sections were formed in Singapore and Thailand (1977); Kolkata and Madras (1978); Karachi (1982); Kerala and Victoria (1983); Beijing, Hyderabad and Western Australia (1984); and Kharagpur, Malaysia, New South Wales, Queensland, and South Australia (1985). New Zealand Section was re-organized as New Zealand Council, with two Sections New Zealand North and New Zealand South in 1980. Australia Council was formed in 1986 to facilitate greater coordination between different Sections in Australia. **During this decade, IEEE membership in Region 10 grew nearly three-fold from 6034 in 1976 to 17327 by 1986. Region 10 had 3 Councils and 26 Sections at the close of second decade.**

Region Directors

During this decade, five IEEE member served as Region 10 Directors, contributing to diversity of thought and action:

- James J Vasseleu (1977-78) from Australia *(deceased),*
- S Y King (1979-80) from Hong Kong,
- V Prasad Kodali (1981-82) from India,
- Harry E Green (1983-84) from Australia, and
- Irving T Ho (1985-86) from Taipei *(deceased).*

In accordance with the earlier practice, Directors Vasseleu and King were elected by the IEEE Assembly to serve as Region 10 Directors. After Region 10 bylaws were approved, Directors Kodali, Green and Ho were elected as Region 10 Director-Delegates by the voting members in Region 10; and they also served as Region 10 Delegates to the IEEE Assembly.

Following a two-year term as Region 10 Director-Delegate, Prasad Kodali served as IEEE Secretary during 1983 and 1984. He had the distinction of being the first member elected to IEEE Executive Committee from Region 10. In 2014, Dr. Kodali received the IEEE Haraden Pratt Award in recognition to his 'Sustained contributions to IEEE, its Boards and committees, and for pioneering the development of Region 10'.

Michiyuki Uenohara from Japan later served as IEEE Secretary during 1986. He received the IEEE 1996 Frederik Philips Award 'For fostering cooperative R&D management and advancement of microelectronics technology'.

Past Region 10 Directors Prasad Kodali and Harry Green have shared important recollections from the years of their service as Region Directors.

James J Vasseleu (B 1930 – D 2007)   Irving T Ho (- D 2003)   Irwing T Ho Memorial Foundation Webpage

SY King

2016 group picture with SY King in retirement

> "I am fortunate to have met Region 10 Founding Director Shigeo Shima. His vision for Region 10 has been truly inspiring. In the 1981 Region 10 Committee meeting held in Bangkok, two key directions for future were adopted. First resolution was to foster close linkages between IEEE and various national engineering societies in different countries. This was considered crucial for growth of IEEE in Region 10. Second was to evolve modalities to bring benefits of IEEE educational activities, and IEEE Society Distinguished Lecturer programs, to members in different Sections".
> - V Prasad Kodali

V Prasad Kodali

Harry E Green

> "One of the most important things I did was to have the Region Committee agree at its 1983 meeting endorse a Regional levy, set at US$ 1 per year for all members in Region 10, other than students. At the time I took over, the Region 10 finances were in pretty parlous state, and agreeing to this was the key to getting us out of our difficulties and starting down the road to being able to accomplish things. Another activity to be highlighted was 1984 itself, which was IEEE's Centennial year with various special events." - Harry E Green

Region Governance

When Region 10 was formed in 1966, southern part of the African continent was included as part of the Region. While IEEE Sections were formed in South Africa and Kenya, there is no evidence of any activity at the Sections or Region level. By the beginning of 1981, the entire African continent was transferred to Region 8; and Region 10 was given a new descriptive name reflecting this change 'Asia Pacific Region'.

SY King provided leadership for the formal drafting and adoption of the Region 10 bylaws. An important part of these bylaws was the adoption of the process and procedure for election of Region 10 Director-Delegate by members living in the Region. This bylaw change replaced the earlier practice, in which the Region 10 Director was elected by IEEE Assembly. New procedure became effective beginning in 1980. Accordingly, V Prasad Kodali (from Delhi, India) was the first Region 10 Director -Delegate elected by members living in the Region. He contested the election as a petition candidate against two other candidates nominated by the Region Committee, and won the election.

Region 10 Committee Meeting in Bangkok 1981

Region 10 Committee Meeting in Hong Kong 1983

1981 R10 meeting Bangkok

Thailand Section Secretary Charmon Suthipongchai, IEEE President Damon, Thailand Section Chair Kamthon Sindvananda, R-10 Director Prasad Kodali

Region 10 Bylaws relating to election of Region 10 Director- Delegate were revised based on experiences during Region Committee meetings several times during the decade. The initial change introduced during mid-1980s was for election (by members) of a Vice-Chair or Director-elect for a one year term, who later became single candidate for election as Region 10 Director. This practice involved two elections. In 2000, Region 10 finally adopted the practice of electing a Director-elect for a two-year term, who automatically became Region 10 Director-Delegate thereafter. This practice eliminated the need for a second election, and continues till date.

Committees were constituted at the beginning of 1981 to address region planning, membership development, educational activities and student activities. Recognizing that IEEE's future growth and smooth functioning of Sections were critically dependent on cooperation with national engineering

societies in different countries, Region 10 Committee advocated a broad policy frame-work in 1981 encouraging co-sponsorship of technical meetings and conferences with concerned national societies; and formal cooperation agreements between IEEE and appropriate national scientific and engineering societies in different countries. This policy was endorsed by the then Regional Activities Board (now called Member and Geographic Activities Board), and IEEE Board of Directors. These agreements became the foundation for many cooperation agreements signed between IEEE and national engineering societies in different countries, and demonstrated Region 10's influence and importance to the overall IEEE organization. Region 10 Committee meetings were held each year at different locations around the Region. Subjects related to Region organization structure, administration and strategic planning were extensively discussed in these meetings.

During this decade, Region 10 financial resources were strengthened by introducing Region Assessment. This step enabled support for initiatives such as educational activities and region distinguished visitor program to facilitate technical interaction across members in different Sections and countries.

IEEE Activities

Significant IEEE activities during the decade included:

- Visits by IEEE Presidents to several Sections each year. These visits were used to encourage technical activities at Section level, interaction with industry and academia, meetings with national engineering societies in different countries, and formation of more Sections and/or IEEE Society Chapters, where these did not exist.

- An IEEE delegation under the leadership of 1981 IEEE Vice President for Publication Activities Theodore H Bonn and Region 10 Director V Prasad Kodali visited the Peoples Republic of China at the invitation of Chinese Institute of Engineers (CIE) in September 1981 to study opportunities for cooperation.

- 1982: Whereas the 1973 Region Committee meeting had only six Section Chairs attending, the number of attendees at 1982 Region Committee meeting held in Delhi (India) was 27. Attendees at this meeting included 1982 IEEE President Robert E Larsen, President-elect James Owens, Vice Presidents for Regional and Technical Activities, and Presidents of AES, CPMT, Computer and MTT Societies. The delegation also visited several Sections and presented technical talks and seminars.

- 1981 IEEE President Richard Damon and R10 Director Prasad Kodali visited IEEE Sections in New Zealand and Australia (Sydney), and met members.

- 1983 IEEE President James B Owens and Region 10 Director Harry Green visited NEC and held discussions with CEO Koji Kobayashi and Michiyuki Uenohara.

- The inaugural Region 10 flagship technical conference TENCON was held in Hong Kong during 1982.

- The IEEE Centennial in 1984 was celebrated with a special Banquet in Singapore, which was co-located with the second TENCON and the Region Committee meeting. 1984 IEEE President Richard Gowen attended these meetings.

- Region 10 continued to conduct 'Region 10 Student Paper Contest', which was initiated in 1976.

- Options for conducting continuing education programs in different Sections with core material provided by the IEEE Educational Activities, and programs using Distinguished Lecturers from Societies were discussed. A proposal for selecting Region Distinguished Lecturers was also made.

- Several IEEE Society Chapters were formed in Sections. These Chapters significantly contributed to growth of technical and educational activities in many Sections.

- IEEE had a membership of around 7000 in Region 10 during 1980, less than that of Region 7 or Region 8. Region 10 overtook Region 8 (Europe) by 1982, with nearly 10,000 members. By 1984, total membership in Region 10 was more than 14000, highest number in any IEEE transnational Region.

Visit of IEEE delegation to NEC HQ – 1983 (Seated IEEE president James Owens, NEC CEO Koji Kobayashi , IEEE General Manager Eric Herz and Michiyoki Uenohara; Standing R-10 Director Harry Green and Tokyo Section Chair Kanji Ogata)

NSW Section Meeting (seated Anthony Zaglas, David Tien; standing Walter Lachs, David Burger, Zac Zakarevicius, James Vasseleu)

TENCON & IEEE Centennial Banquet, Singapore 1984. Seen in the pictures are: Singapore Section Chair Ah Choy Lieu, 1984 IEEE President Richard Gowen, Region 10 Director Harry Green, 1984 IEEE Sectretary V Prasad Kodali, IEEE General Manager Eric Hertz & IEEE Birthday Cake

Region Development

During this decade, IEEE membership in Region 10 more than doubled from 17037 in 1986 to over 35000 by 1996. New IEEE Sections were formed in Australia Capital Territory (1988), Indonesia (1988), Gujarat (1990), Changwon (1991), Daejeon (1991), Uttar Pradesh (1992), Taegu (1992), Bangladesh (1993), and Northern Australia (1994). **By the close of the third decade in 1996, Region 10 had 3 Councils and 35 Sections.**

Region Directors

During this decade, these five individuals from different parts of the Region were elected to serve as Region 10 Director- Delegates:

- Ah Choy Liew (1987-88) from Singapore,
- Morarji V Chauhan (1989-90) from Madras, India (*deceased*),
- Souguil JM Ann (1991-92) from Seoul, Korea,
- Tsuneo Nakahara (1993-94) from Tokyo, Japan (*deceased*), and
- Paul YS Cheung (1995-96) from Hong Kong

1993-94 Region 10 Director Nakahara foresaw the important role Region 10 would play within the worldwide membership and wisely understood that it would require a different leadership approach when he observed after his term as Region 10 Director that "IEEE R10 has many countries widely spread with diversified culture. These are the largest populations in the world that will promote an increase of IEEE membership, and growth of electrical and electronic industries in future. Management of such large and wide spread Region will require different methodology from Regions 1-6. Thoughtful consideration must be given especially for non-English speaking people. Balance between bottom-up and top-down management will be required."

MV Chauhan (B 1926 - D 1991)

Tsuneo Nakahara (B 1930 – D 2016)

Tsuneo Nakahara received the 2002 IEEE Alexander Graham Bell Medal 'For pioneering work on the design and development of manufacturing systems for optical fibers'; and also IEEE 2002 Eric E Sumner Award 'For pioneering contributions to the physical understanding, and deployment of optical fiber communications systems'. Dr. Nakahara served as 1996 IEEE Secretary, and also as member of the IEEE Foundation Board after his term as Region 10 Director-Delegate. The IEEE History Center recorded an oral history with Tsuneo Nakahara in 1994, which can be accessed online in the Engineering & Technology History Wiki – ethw.org.

Souguil Ann served as IEEE Secretary during 1993 after his 1991-1992 term as Region 10 Director.

After his term as R10 Director, Paul Cheung served as IEEE Secretary, Chair of IEEE Awards Board, and member of the IEEE Foundation Board. Paul Cheung was the first member from Region 10 to serve as IEEE Awards Board Chair.

Past Region 10 Directors Liew and Ann shared their thoughts during Region 10 Golden Jubilee year.

"It has been an honor to have served in this truly transnational organization - the IEEE.   It is the epitome of global knowledge sharing and friendships with no bounds, nor boundaries.   May it continue to grow in strength, purpose and significance in the next lap."   - Ah Choy Liew

Region Governance

Regional Committee meetings were held every year in different locations throughout the Region to allow maximum exposure and scope for interaction with local IEEE leaders. The emphasis during the decade was to promote and enhance awareness, among its members in Asia-Pacific Region, the international flavor of IEEE, and of Region 10 in particular. Wide publicity was given to the services available, and activities being conducted by the region for the benefit of members.

IEEE Activities

A particularly significant event during 1995 was the visit of an IEEE delegation to Hanoi and Ho-Chi-Min City in Vietnam. The delegation was led by 1995 IEEE President James T Cain, and included 1994 IEEE President Troy Nagle and Region 10 Director Paul Cheung. IEEE delegation met with high-ranking Vietnamese government officials, as well as the Minister for Science and Technology. Additionally, the IEEE delegation was warmly received by the leadership of Radio-Electronics Association of Vietnam (REV), with whom initial discussions regarding a 'Memorandum of Understanding' (MOU) was held between the two organizations, which outlined future cooperation agreements between REV, and IEEE Societies and other IEEE organizational units. The draft was also translated into Vietnamese. The MOU was formally signed during 1996, in the presence of 1996 IEEE President Wallace R Read, by James T Cain on behalf of IEEE, and REV's 1st Vice President Nguyen Van Ngo during a visit of the latter to USA.

Paul Cheung

Other significant IEEE activities during the decade include:

- Memorandum of Cooperation agreements were signed between IEEE and corresponding national engineering societies in Japan, India and China during 1993.
- Region 10 Outstanding Volunteer Award was introduced in 1994 to recognize significant contributions at the Section and/ or Region level. Information about this award, and a list of the recipients of this award can be found on the website of Region 10 Awards and Recognitions.
- TENCON, the Region 10 flag-ship conference was received with great enthusiasm, and became an annual event.
- An IEEE Technical Activities delegation led by Vice President Pete Morley and Executive Director Theodore Hissey, with representatives from a number of IEEE Societies, visited all Sections in Australia and New Zealand in 1995. The visits included technical seminars, round-table conferences with Section leaders, and visits to local industries and universities.

IEEE delegation visit to Vietnam (seated L to R Paul Cheung, 1995 IEEE President J T Cain, Vietnam Minister of MOSTE Dang Huu and REV's 1st Vice President Nguyen van Ngo; standing L to R IEEE Fellow Felix Wu, a Director of Vietnam MOSTE, 1994 IEEE President H Troy Nagle, and Pham Khac Di)

Region 10 meeting - 1988

Region 10 meeting - 1994

Region 10 meeting – 1995

Region 10 meeting - 1996

Region Development

Region 10 activities and growth continued throughout its fourth decade. Two Councils were added to the organizational structure. IEEE Korea Council was formed in 1997, and subsequently disbanded in 2000 due to bylaw issues. The IEEE Japan Council was formed in 1999.

Until 1998, IEEE Tokyo Section was the only one Section in Japan serving technical and professional interests of IEEE members located within the country of Japan. Creation of IEEE Japan Council in 1999, with eight Sections geographically spread over the country, provided the structure and scope needed to better serve Japanese IEEE members. New IEEE Sections in Japan, to augment the reach of the existing Tokyo Section, were formed in Fukuoka, Hiroshima, Kansai, Nagoya, Sapporo, Sendai, and Shikoku during 1998. New IEEE Sections were also formed in Islamabad, and Kwangju during 2000; Macau, Sri Lanka, and Tainan during 2003; and Chengdu, Harbin, Shanghai, and Shin-et-su during 2006. **By end of the 4th decade, IEEE had 4 Councils and 52 Sections in Region 10.**

A major accomplishment by this time has been the IEEE's success in discussions with several national engineering societies in different countries in Region 10. By 1998, IEEE signed cooperation agreements and Memorandum of Understanding with nineteen societies located in Australia, China, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, and Vietnam. These agreements strengthened IEEE's presence and importance in the Region, and typically provided for co-sponsorship of technical meetings, certain facilities to members on reciprocal basis, and a concessional rebate in member dues for those that are members of both.

Region Directors

During this decade, the following five members served with distinction as Region 10 Director-Delegates:

- Harbans L Bajaj (1997-98) from Delhi,
- Takuo Sugano (1999-2000) from Tokyo,
- Teck-seng Low (2001-02) from Singapore,
- Jung Uck Seo (2003-04) from Seoul, and
- Seichi Takeuchi (2005-06) from Tokyo.

H.L. Bajaj

Coming from different countries, cultures, and work experiences, Region 10 Directors brought rich expertise, technical leadership and vision for R 10.

Takuo Sugano received the 2016 IEEE Robert N Noyce Medal 'For contributions to and leadership in the research and development of the science and technology of semiconductor devices'. Director Sugano called upon the members of Region 10 to make a greater impact on the profession and the world when he said "Contribution of Region 10 to membership growth has been highly appreciated in the IEEE community. Now it is time for IEEE members in Region 10 to make more substantive contributions to the advancement of electrical and electronics engineering than they have done earlier. These contributions may not be in current science and technology fields alone, but also in path breaking emerging fields. Particular attention is required for new science and technologies relevant to global issues, including those to prevent global warming, and

T Sugano

"Congratulations on the 50th anniversary of establishing IEEE Region10. During my tenure, Region Annual Meetings were held at Bali, Indonesia and Langkawi, Malaysia. I recognized that the regional activities were very effective to establish and renew acquaintances, personal and professional, among our IEEE members in different countries and regions; and to encourage progress of technology in Region 10 as well as in the whole world. I hope IEEE Region 10 will help us bring prosperous future". - Takuo Sugano

Teck Seng Low

"As Director of IEEE Region 10, I initiated the IES/IEEE Joint Medal of Excellence Award to provide better recognition of achievements in the engineering field. This prestigious award continues to inspire young people to take up engineering as a profession. I also played a key role in strengthening the organizational processes in IEEE Region 10; and a comprehensive Operations Manual was developed to build knowledge transfer capabilities within the organization. The inaugural IEEE Region 10 Student Congress was also organized during my tenure to provide a platform for the exchange of ideas between members of Region 10 Student Branches, and to highlight the important role of IEEE to the engineering profession in the 21st century". - Teck-seng Low

J U Seo

"It was a great pleasure and an honor for me to serve IEEE as Region 10 Delegate/Director during 2003 and 2004. IEEE is a great transnational society with a vision to advance global prosperity by fostering technological innovation, enabling members' careers and promoting community worldwide. IEEE has a noble obligation to create, develop, integrate, share and apply knowledge and skills in electrical and electronics science and engineering. IEEE is also an institution of convergence of engineering science and social science in support of humanity and sustainable development of the earth".   -Jung Uck Seo

S Takeuchi

"It is my honor to send this note in celebrating Golden Jubilee for Region 10. During my term we celebrated Golden Jubilee for Tokyo Section, first in Region 10 and achieved the largest membership in all IEEE 10 Regions. The 1st R10 GOLD (Graduate of the Last Decade) Congress was successfully held together with the Student Congress in Beijing in 2006, and this originated the activities of YP (young professionals Affinity Group. Pictures show that we visited Japanese prime minister's office with IEEE President Michael Lightner to enhance IEEE activities, and our promotion visits to major cities in Region 10".   – Seiichi Takeuchi

new energy sources other than fossil fuel. Region 10 is spread over tropical through temperate zones in both northern and southern hemispheres, and IEEE members in Asia-Pacific have a variety of experiences and knowledge about environment and ecology. Further, Sections and countries in Region 10 have different levels of industrialization. These advantages offer unique opportunities for IEEE members in Region 10 to make path-breaking contributions for science and technology relevant to ecology, environment and energy sources."

Director Jung Uck Seo observed "There is language barrier and digital divide between countries in Region 10. We are responsible for not only developing individual excellence, but also for sharing opportunities for institutional activities, continuing education and career development with fellow members in the Region." During Region 10 Golden Jubilee, Past Region 10 Directors - Takuo Sugano, Teck-seng Low, Jung Uck Seo, and Seichi Takeuchi shared messages. Their messages to members are reproduced in insets.

Region Governance

Meetings of the Region Executive Committee and Regional Committee were held yearly around the Region. IEEE Presidents, other senior volunteer leaders and IEEE staff participated in these meetings, thus facilitating greater interaction with Section Chairs and volunteers from the Region.
IEEE Presidents also visited many Sections in Region 10 and met with members.

Commencing in 2000, Region 10 adopted the practice of electing a Director-elect for a two-year term, who then automatically became R10 Director-Delegate for the next two years. During this decade, Regional Committee and Region Directors were concerned about fast growth in student membership and number of Student Branches, and whether adequate mentoring was being provided by the parent Section(s).

Region 10 Committee meeting – 1998

Region 10 Committee meeting 1999

2001 Region 10 Meet, Singapore

Region 10 Committee meeting 2003

Region 10 Committee meeting 2005

Presentation of 2002 IES/IEEE Medalof Excellence in Singapore (L to R: Dr. Raymond Findlay, 2002 IEEEPresident; Singapore Minister Lim Swee Say; Prof. Low Teck Seng, 2002 R10 Director; Dr. Jung Uck Seo, 2003 R10 Director; Dr. Su Guaning, 1st recipient of the award

Visit of 2005 IEEE President Michel Lightner to Japanese Prime Minister's Office (1st row L to R Michel Lightner, Secretary General to Prime Minister Jun-ichiro Koizumi, Isao Iijima, IEEE staff Director Matt Loeb;   2nd row L to R Region 10 Secretary Kenji Hirakuri, IEEE Staff Director Jeffry Raynes, and R10 Director Seiichi Takeuchi)

IEEE Activities

Significant activities during the decade include:

- Technical conferences, meetings, lecture programs involving both the Society Distinguished Lecturers and Region Distinguished Lecturers; and educational programs organized in different Sections.
- Region 10 flag-ship conference TENCON has by now become a regular annual event, and was held each year at a different location.
- On-line R10 Newsletter was launched in 1997 to improve communications with members.
- Industry 2000 Workshop was held for the first time outside USA in Hong Kong during 1997.
- Region 10 launched its website in 1997 on the newly available EWH server. Councils, Sections and Chapters across Asia-Pacific region were encouraged to host their websites on the server. R10 website is the main window to publicize IEEE organization and activities in the Region.
- A new IES/IEEE Joint Medal of Excellence Award was instituted to provide better recognition of achievements in engineering in Singapore. First Award was presented in 2002.

- Region Distinguished Section Award was instituted in 1999 to recognize outstanding work by a Section during the previous year. From 2004 onwards, two separate Awards were given to Outstanding Large Section and Outstanding Small Section.
- Region Operation Manual was written and approved during 2003; and is available on website.
- Region 10 Students Congress was held in Singapore (2002), Hong Kong (2004), and Beijing (2006).
- Region GOLD Congress was organized for the first time in Beijing during 2006.
- R10 Director Takeuchi took a special initiative to conduct two Summer Promotion Visits by R10 key officers to China. In 2005, the team visited Beijing, Xian, Dalian and Hong Kong. In 2006, Chengdu, Wuhan, Harbin, Nanjing were visited. Cocktail receptions, meetings and seminars were organized during these visits in order to exchange thoughts and ideas about establishing Sections by local volunteers and members. Informal feedback strongly indicated that these Promotion Visits provided first opportunity of contact with IEEE for most members in China despite having been IEEE members for many years.

Seminar and Reception during IEEE Asia Pacific Region Workshop, Wuhan, China, August 2006

Region Development

Region 10 activities and growth continued. IEEE China Council was formed in 2007. Korea Council, which was earlier dissolved during 2000, was revived in 2009. New Sections were formed in Vietnam, New Zealand Central, Nanjing, and Wuhan, all during 2007; and Pune in 2010.

Region 10 has six Councils, 57 Sections and 26 Sub-Sections by the Region's Golden Jubilee Year. The Region had a total membership of 125,060 by December 2016; comprising of 69,699 higher grade members, 17,004 Graduate Student members, and 38,357 Student members. Total membership during this decade has nearly doubled from 67,442 members in December 2006. Membership growth during the 50-year history of the Asia Pacific Region has been robust, and total number of IEEE members has increased by 50 times (that is 5000%) steadily from the modest beginning of 2,509 IEEE members in 1966. During this half century, total IEEE membership worldwide increased from 160,070 in 1966 to 374,767 in 2006 and to 423,566 during 2016.

Region Directors

The following members served as Region 10 Director-Delegates during this decade:

- Janina Mazierska, (2007-08) from New Zealand / Australia,
- Yong Jin Park, (2009-10) from Korea,
- Lawrence Wong, (2011-12) from Singapore,
- Toshio Fukuda, (2013-14) from Japan, and
- Ramakrishna Kappagantu, (2015-16) from India.
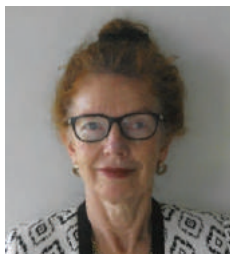
Coming from two continents and five different countries of a vast geographical area, each of them provided excellent leadership for development and growth of activity in the Asia-Pacific Region. By electing Professor Janina Mazierska as the first woman Director of Region 10, the Region recognized the presence of a vibrant WIE community in Asia-Pacific Region. There was also another feather in the cap for Region 10, with Professor Toshio Fukuda being awarded 2010 IEEE Robotics and Automation Award "For leadership and pioneering contributions to intelligent robotic systems and micro and nano robotic systems".

Kukjin Chun was elected in 2014 as R10 Director-elect for 2015-16, and automatically Region 10 Director-Delegate for 2017-18. His photograph and message are at page I of this book.

Region Governance

Region Committee meetings were held every year at different locations, with all Section Chairs attending. In addition, Region Executive Committee met every year at the beginning of the year to evolve a clear program of activity and timeline for its implementation. Several teleconference meetings were also held each year to conduct reviews and facilitate timely action. The focus of these meeting was on organizational improvement and better delivery of services to members. Budget forecasting and review was introduced. A process was also evolved for formally selecting and recommending suitable candidates from the Region for Institute-wide volunteer leadership positions.

Janina Mazierska

It was a great privilege to be elected and to serve as an IEEE Region 10 Director, especially as the first woman ever, and the only one in 50 years. Our Region went through significant expansion during my term: the IEEE was established in Vietnam (with Prof. Nguyen Thanh Son as the Foundation Chair), and seven new Sections in China. We introduced budget forecasting, modified procedures for OUs creation (adding a requirement of increased level of activities and membership growth), and managed to improve our election voting rate above the IEEE average. The biggest satisfaction in the role of the Region 10 Director I obtained from bringing to limelight achievements of our many outstanding volunteers, and from mentoring. Hence I put into action a formal recommendation process for positions on IEEE Boards and Committees that successfully continues today. Also a showcase of our Regional achievements in Humanitarian Projects and Activation of Student Branches was presented in two excellent Sessions at the Section Congress in Quebec in 2008. These Sessions revealed that the whole IEEE could benefit from our ideas, despite the R10 being the youngest in the IEEE family. Long Live Region 10! ☺☺ ☺ - Janina Mazierska

Yong Jin Park

"We all suffered from global economic crisis starting from September 2008. As the budget of the whole IEEE was reduced but fortunately Region 10 had no special relevance to this issue. We had solid membership growth during the two years of my term.

There were also significant events in Region 10. One of them was the 125th Anniversary of IEEE in 2009. We had three official anniversary events, which were held in Bangalore, Beijing, and Tokyo under the support of IEEE Headquarters. There was also the 125th Anniversary R10 Student Congress in Singapore, which was four days congress and had around 120 student volunteers participated" - Yong Jin Park

Lawrence Wong

"Congratulations to IEEE Region 10 (R10) on the occasion of her 50th anniversary. As the past Region 10 Director in 2011-2012, I had the honor and pleasure to work with an excellent team during which we launched a number of new initiatives. These include the restructuring of the R10 Executive Committee with the establishment of three tracks, namely Technical Activities, Member Activities and Professional Activities and with their corresponding Vice Chairs. We also launched the R10 Symposium (TENSYMP) conference series. To invigorate activities across diverse of interest areas, we started the co-funded open call for projects for a number of the committees, such as Student Activities, Women-In-Engineering, GOLD (now Young Professionals), etc. Indeed, the latter program has led to a stronger relationship between R10 and the sections". - Lawrence Wong

Toshio Fukuda

"Our thrust during 2013-14 has been to:

➢ *strengthen Distinguished Lecture Program by improving quality and frequency, and using this for membership promotion*
➢ *membership promotion in geographical areas with no IEEE Sections or Sub-Sections*
➢ *special IEEE membership fee program for extremely low income countries*
➢ *- strong support for Students, WIE and Young Professionals groups and activities encouragement to Humanitarian Technology activities*

- Toshio Fukuda

S Ramakrishna Kappagantu

"As our Asia-Pacific Region10 enters 51st year, I feel proud and delighted to celebrate this memorable IEEE milestone of Asia-Pacific Region. With the untiring efforts of many great volunteers, members and staff, we showcased R10 as first & fastest growing region both qualitatively and quantitatively - thanks to your spirit and zeal working with several R10 initiatives viz. Mobile App, Webinars, Twitter Chats, AIYeHum, specific activities focussed on YPs, Industry, Students, WiE and Entrepreneurs that allows us to settle for nothing less than the best. On this day, we rededicate and free ourselves from any bondages that may be controlling our flight to excellence, together to set out for a journey to make our planet Earth a better place for Humanity to live with the help of advancements of science and technology through IEEE". - Ramakrishna Kappagantu

Photographs of 2008 Region Committee meeting (Gandhi Nagar, India)

Photograph of 2010 Region Committee meeting (Philippines)

IEEE 125 year anniversary meetings in Beijing, Sept 2009

IEEE 125 Year celebration – 2009 Bangalore (Seated Dr. A.P.J Abdul Kalam – President of India (2002 -2007) and Honorory Member IEEE

Photograph of 2012 Region Committee meeting (Kolkata, India

Photograph of 2014 Region Committee meeting (Malaysia)

Photograph of 2015 Region Committee meeting (Bangladesh)

Inauguration of Xian Section (R10 Director Janina Mazierska and Jianguo Huang seen in picture)

IEEE Activities

Significant activities and achievements during this decade include:

- Full development and use of Region 10 website. Region Bylaws, Operations Manual, and information on Conferences and other major events were posted on this website.
- Complete information on Region 10 Awards and Recognitions Program, and list of awards recipients was posted on the Region website. Region gives 24 awards annually.
- Student activities received special encouragement. SAC continued with the conduct of annual UG/PG Student Paper Contests, and Website Contest. In addition to the three Region Students Congresses held during the previous decade, Region Students Congress was held in Chennai (2008), Auckland (2011), Hyderabad (2013), Colombo (2015) and Bengaluru (2016).
- A special Students Congress was held in Singapore in 2009, coinciding with 125-year celebration of the IEEE.
- High Visibility Programs and ceremonies were organized in Bengaluru, Beijing and Tokyo during 2009 to celebrate '125-years of IEEE' with direct IEEE support and participation. In addition, special

events were organized by many Sections during the year to celebrate 125-years of IEEE.
- Region GOLD / Young Professionals Congress, and Region WIE congress were also held during 2008, 2011, 2013, 2015 and 2016 together with Region Students Congress. These events provided great opportunity to these special interest affinity groups to network and organize activities of interest for benefit of members. This step has contributed to improved vitality of IEEE in the Region.
- Humanitarian Technologies activities received encouragement and financial support with the appointment of Region HTA Coordinator as a member of Region 10 ExCom. First Humanitarian Technologies Workshop was held during 2013 in Sendai, which was attacked by an earthquake and Tsunami in 2011. This knowledge and experience helped in extending swift assistance later in Philippines.
- R10 delegation visited Laos, Myanmar and Fuji during 2013-14, where no IEEE Sections or Sub-Sections exist, for membership promotion. Based on this study visit, R10 leadership was able to get MGA and IEEE Board of Directors introduce a special membership fee (at student rate) for

Visit of Toshio Fukuda to Fiji (for formation of Sub-Section)

2009 ExCom meeting in Hanoi

Technical Seminar at Hanoi University of Technology- February 2009

geographical areas where World Bank statistics indicate GDP of under US$ 1000 per person.

- Engagement with industries was emphasized by appointing an Industrial Activities Coordinator as a member of Region 10 ExCom, and institution of several Region 10 awards in this area.
- Region 10 annual conference series TENCON became very popular. A new annual conference TENSYMP and Region 10 Humanitarian Technologies Conference. Four new Sub-Sections were approved covering Afghanistan, Nepal, Brunei and Fiji. Each of these Sub-Sections covered the respective countries.

- Tragedy struck Nepal twice on April 25th and 12th May 2015. About 10,000 people perished and many were injured. Old (heritage) and weakly constructed buildings were affected most. The districts affected most were Sindhupal Chowk (April 25th) and Dolakha (12th May). The IEEE R10 formed an Ad Hoc Committee within a day of earthquake. IEEE R10 with help from IEEE SIGHT, IEEE HAHC, IEEE Foundation and several Sections in India contributed towards the Nepal rehabilitation project. The project was completed in Feb 2017 with active involvement from Nepal Sub section.

The Hybrid Micro Hydel and Solar System was ingurated at Simigau, Nepal

Solar panels installed on the reconstructed school building – Simigau, Nepal

Water purification systems were constructed for four schools in Nepal

2.
IEEE Region 10 Technical & Member Activities

China Offices (Beijing and Shenzhen)

The IEEE Beijing Office was inaugurated in 2007, now there are 10 staff members in the office working respectively on membership, standard, conference, publishing, IEL customer service, society support and social media, etc. The IEEE Beijing office has the commitment to increase visibility of IEEE and its members in China, further local engagement of and collaboration with IEEE members, industry, government, academia and related organizations, to maximize IEEE influence and impact locally through valued programs, products and services.

To develop business in South China, the IEEE Shenzhen Office was opened in April, 2016, currently there are 2 staff working in the IEEE Shenzhen Office. The major goals of the Shenzhen Office include facilitating IEEE standard activities and developing corporate market for the IEL products in South China.

IEEE also has a social media presence in China, its Weibo platform has attracted about 110,000 followers and its WeChat has 40,000 followers up to date. Also, IEEE has a Chinese language website (http://cn.ieee.org/index.php) and the monthly membership newsletter in Chinese, and has been publishing the Chinese versions of its magazines: IEEE Spectrum and IEEE Computer magazine.

Japan Office (Tokyo)

An IEEE Office in Japan started as Asia-Pacific Office of the IEEE Computer Society in 1988 with enormous volunteer effort by Dr. Akihiko Yamada, to provide services to the Computer Society members, recruit new members and ship press products to the customers not only in Japan but also to customers in the Asia-Pacific region. It was transitioned and restarted as the IEEE Japan Office in 2010, and it moved to its current location in minami-aoyama the next year.

The new office no longer handles shipping of printed products, but now provides services to IEEE members and customers only in Japan. Its activities includes membership development; working with volunteers and Sections; building Government, Industry and Academic relationships; enhancing public visibility; and serving as an operational base for all Operational Units of IEEE, including IEEE Standards Association. To introduce just a few, IEEE Japan Office assisted successful organizations of IEEE-SA Board of Governors meetings in Tokyo (2011) and the first Region 10 Humanitarian Technology Conference in Sendai (2013). In 2015 and 2016, following IEEE's direction to strengthen relationships with industry, the Japan Office efficiently organized industry outreach by IEEE Board of Directors throughout the country. Likewise, 2017 IEEE Region 10 Meet was successfully organized for the first time in 44 years in Japan.

IEEE Asia-Pacific Limited (Singapore Office)

On the 1st Nov 2010, the IEEE branch office known as IEEE Asia Pacific Operations Centre (IEEE APO) relocated from Science Park 1 to the Solaris@One North . This move to the hub of Singapore's science and engineering research newly created eco-system enables IEEE to collaborate with the Agency for Science, Technology and Research (A*STAR), and its many institutes, and the National University of Singapore (NUS) on world-class scientific research in biomedical sciences, physical sciences and engineering in Singapore.

The office re-location was opened by 2010 IEEE President, Pedro Ray, and attended by IEEE Executive Director, James Prendergast and IEEE Executives, A*STAR Chairman, Lim Poh Chuan and A*STAR Managing Director, Low Teck Seng and A*STAR Executives, IEEE Section and Chapter volunteers and members in Singapore. For the opening, IEEE and A*STAR took the opportunity to honor 3 of its technologists for winning IEEE awards; David Townsend for 2010 IEEE Medal for Innovations in Healthcare Technology, Dim-Lee Kwong for 2011 IEEE Frederik Philips Award and Tony Quek for IEEE GLOBECOM 2010 Best Paper and Gold Best Paper Awards.

(Left to right) Principal Investigator and Senior Research Engineer of Institute for Infocomm Research ASTAR, Dr. Tony Quek ; Executive Director of Institute of Microelectronics ASTAR, Prof. Dim-Lee Kwong ; Chairman of ASTAR, Mr. Lim Chuan Poh ; IEEE President, Mr. Pedro Ray ; IEEE Executive Director, Mr. James Prendergast and Managing Director of ASTAR, Prof. Low Teck Seng.

In line with IEEE Board's strategic plans for the global offices, the IEEE Singapore branch was de-registered, and registered on the 27 June 2012 as the IEEE Asia-Pacific Limited, and granted a 5 year tax exempt under the Singapore Economic Development Board's non-profit organization tax incentive (NPOTI) program on the 1 March 2013.

We serve as an operational centre for members, customers and volunteers, bridging the 12 hour time difference between the headquarters in Piscataway, New Jersey on the East Coast of the United States and the Asia Pacific. Staff strength has grown to 10 and includes functions for operations, volunteer services to the Region 10 leadership, its committees and Section and Chapter volunteers, contact center for member enquiries, business development, marketing and sales, client services and customer service center for sales support.

We strongly believe that the Asia Pacific region will continue to grow in membership and IEEE activities, and our office will support its vibrant communities of volunteers and members in contributing to research, entrepreneurial, creative and innovation technologies for a better world.

India Office (Bengaluru)

IEEE India Office was inaugurated in Oct 2010 and formally started its operation in June 2011 in Bengaluru. Initially Global Institute for Engineers (GIEEE) was registered as a Pvt. Ltd. Company later in 2014 it was converted into Section 25 Company (Not for profit), IEEE India has Tax and donations tax exemption in India. India office has 50 staff members working in various areas to further IEEE objectives and mission in India.

IEEE India office works very closely with IEEE Sections society chapters. India office manages all the financial needs of sections, Student branches and societies in India. India office manages collection of membership dues in local currency including group enrollments. India office also manages family group medical insurance program for members in India

The contact center in India office supports members and customers in India and around the world. The finance back office team provides auditing, accounting services to IEEE and the OUs around the world. The IT team in India office works on software development for IEEE OUs. India office staff support various technical societies and Standards Association functions.

India office has more 50 MoUs with organizations and government in India through which various joint initiatives are promoted.

India office manages Marketing and sales in India, Sri Lanka and Bangladesh and supports more than one thousand IEEE Xplore customers. The new products division develops educational products under the " Blended Learning program" in the emerging engineering discipline, which helps to enhance the skills of students and working professionals.

Society Membership Statistics - IEEE Region 10

Society	Society Code	Number of Assets										Total Memberships
		LF	F	LS	SM	LM	M	AM	GSM	StM	AF	
IEEE Aerospace and Electronic Systems Society Membership	AES010	6	9	8	112	14	396	10	35	37	2	629
IEEE Antennas and Propagation Society Membership	AP003	28	45	21	375	34	1430	38	284	117	20	2392
IEEE Broadcast Technology Society Membership	BT002	6	11	6	56	8	237	4	15	33	1	377
IEEE Computer Society Membership	C016	65	101	89	964	185	9210	294	684	2090	1071	14753
IEEE Circuits and Systems Society Membership	CAS004	46	82	24	467	34	2069	41	472	192	25	3452
IEEE Consumer Electronics Society Membership	CE008	11	12	5	141	12	410	15	38	71	10	725
IEEE Computational Intelligence Society Membership	CIS011	18	51	11	392	23	1283	28	253	175	22	2256
IEEE Communications Society Membership	COM019	71	125	71	1064	117	6210	116	609	388	126	8897
IEEE Components, Packaging, and Manufacturing Technology Society Membership	CPMT021	3	31	10	104	10	367	14	22	14	4	579
IEEE Control Systems Society Membership	CS023	20	50	18	310	30	1300	27	197	89	20	2061
IEEE Dielectrics and Electrical Insulation Society Membership	DEI032	12	10	7	71	6	322	10	57	18	14	527
IEEE Education Society Membership	E025	8	7	16	149	16	412	10	36	10	13	677
IEEE Electron Devices Society Membership	ED015	57	87	29	461	48	1861	38	358	263	24	3226
IEEE Engineering in Medicine and Biology Society Membership	EMB018	9	26	21	246	36	1327	35	327	301	210	2538
IEEE Electromagnetic Compatibility Society Membership	EMC027	10	16	12	122	27	450	17	19	18	3	694
IEEE Geoscience and Remote Sensing Society Membership	GRS029	8	16	10	169	10	679	49	142	55	42	1180
IEEE Industry Applications Society Membership	IA034	22	22	28	288	34	1248	18	413	1226	14	3313
IEEE Industrial Electronics Society Membership	IE013	25	55	11	401	19	1376	30	315	145	14	2391
IEEE Instrumentation and Measurement Society Membership	IM009	10	6	3	135	23	548	22	53	53	7	860
IEEE Information Theory Society Membership	IT012	15	29	8	120	24	501	6	68	37	8	816
IEEE Intelligent Transportation Systems Society Membership	ITSS038	4	9	3	64	2	345	5	27	16	8	483
IEEE Magnetics Society Membership	MAG033	10	14	7	93	20	530	17	66	13	26	796
IEEE Microwave Theory and Techniques Society Membership	MTT017	35	51	31	433	58	1584	24	273	196	9	2694
IEEE Nuclear and Plasma Sciences Society Membership	NPS005	5	7	5	44	11	287	9	55	20	9	452
IEEE Oceanic Engineering Society Membership	OE022	4	3	2	51	5	316	9	37	29	6	462
IEEE Professional Communication Society Membership	PC026	1		4	8	4	68	3	4	15	1	108
IEEE Power & Energy Society Membership	PE031	43	38	57	654	72	2890	82	1042	2078	76	7032
IEEE Power Electronics Society Membership	PEL035	19	26	16	285	20	1367	33	306	304	8	2384
IEEE Photonics Society Membership	PHO036	37	72	14	266	33	1032	24	174	34	52	1738
IEEE Product Safety Engineering Society Membership	PSE043		2		12	2	74	2		34		126
IEEE Robotics and Automation Society Membership	RA024	16	46	12	277	22	2241	44	679	973	28	4338
IEEE Reliability Society Membership	RL007	1	10	3	27	6	280	11	23	9	6	376
IEEE Society on Social Implications of Technology Membership	SIT030	2	3	8	52	13	150	1	10	38	5	282
IEEE Systems, Man, and Cybernetics Society Membership	SMC028	16	55	10	354	18	1138	31	218	72	13	1925
IEEE Signal Processing Society Membership	SP001	36	99	28	754	45	2646	62	680	538	62	4950
IEEE Solid-State Circuits Society Membership	SSC037	25	52	14	260	22	1659	32	331	168	40	2603
IEEE Technology and Engineering Management Society Membership	TEM014	3	3	8	80	11	315	6	6	13	7	452
IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society Membership	UFFC020	9	11	5	51	10	295	6	102	33	14	536
IEEE Vehicular Technology Society Membership	VT006	14	46	8	244	32	752	8	102	38	7	1251
Total Memberships		730	1338	643	10156	1116	49605	1231	8532	9953	2027	85331

Table 2.1   Society membership statistics for Region 10   - 31 Dec 2016

Society Membership Statistics - IEEE Region 10

Section	Total	SP001	BT002	AP003	CAS004	NPS005	VT006	RL007	CE008	IM009	AES010	CIS011	IT012	IE013	TEM014	ED015	C016	MTT017	EMB018	COM019	UFFC020	CPMT021	OE022	CS023	RA024	ED25	PC026	EMC027	SMC028	GRS029	STV030	PE031	DEI032	MAG033	IA034	PEL035	PHO036	SSC037	ITSS038	PSE043	
Australian Capital Terr Section	470	33	7	23	9	3	5	1	7	4	13	31	6	5	2	9	108	13	6	66	2	0	3	19	23	2	1	4	16	11	2	11	1	1	1	2	0	13	2	4	2
Bangalore Section	1955	146	3	45	74	4	25	9	23	12	35	47	21	29	27	63	312	51	70	251	20	2	33	44	27	2	25	36	15	20	233	9	7	35	63	41	81	28	8	3
Bangladesh Section	430	30	2	6	4	1	5	0				5	1	3	1	31	34	9	16	27		0	0	5	17				3	0	2	38		1	1	118	28	11	1		
Beijing Section	5417	514	20	159	186	53	102	48	25	77	60	187	42	171	4	170	373	112	106	569	40	36	0	5	166	540	13	0	58	199	259	1	442	77	44	103	189	98	84	65	2
Bombay Section	1177	68	6	30	41	7	15	4	6	12	6	20	16	90	13	35	137	50	21	115	3	5	5	38	49	16	3	8	38	39	7	115	7	13	53	45	20	15	3	2	
Changwon Section	292	16		5	25	3	4	1	3	1	1	6	3	36	0	7	8	3	11	15	2	4	3	13	20		0	3	8		1	18		13	24	19	4	10	1	1	
Chengdu Section	635	51	2	32	24	4	16	20	2	11	8	41	9	12	1	19	14	50	2	69	5	1	0	6	32	2	0	6	51	30	1	40	6	6	8	11	8	31	5	5	0
Daejeon Section	877	51	18	21	62	7	19	3	17		9	13	25	41	1	37	57	36	31	102	9	24	1	25	45	3	1	13	12	9	2	28	2	12	17	24	21	64	4	4	0
Delhi Section	1519	81	4	62	28	5	13	6	9	15	8	54	10	44	20	104	213	72	19	129	10	6	4	39	48	19	1	4	26	19	2	223	20	7	102	52	18	20	2	1	
Fukuoka Section	985	49	1	33	55	26	11	1	8	7	3	49	21	43	0	37	99	35	35	49	6	5	0	6	44	64	11	0	41		9	25	17	34	30	57	18	41	4	4	0
Gujarat Section	444	57	0	29	11	5	2	2	2	3	11	38	1	15	0	10	38	12	4	23	3	3	0	3	49	5	4	1	3		4	71	3	2	46	17	2	7	0	1	
Harbin Section	688	59	2	12	11	4	24	4	2	11	10	29	10	61	1	15	18	5	6	62	1	3	8	49	116	2	0	6	52	32	1	22	1	12	16	20	4	3	4	0	
Hiroshima Section	620	37	0	15	35	1	7	5	11	3	2	28	6	16	0	24	99	24	31	39	2	3	3	32	33	8	1	4	64	1	3	64	3	7	10	12	10	23	2	0	
Hong Kong Section	8259	115	12	45	490	7	28	7	35	10	10	62	43	62	33	58	4391	36	62	2127	21	23	3	38	71	29	7	26	55	11	4	123	6	12	19	46	43	60	8	21
Hyderabad Section	1259	96	4	62	51	2	13	9	4	16	19	41	9	54	16	35	185	39	13	110	6	2	2	32	42	6	2	13	22	16	3	144	7	3	45	59	21	25	4	1
Indonesia Section	1051	52	10	38	20	3	14	3	12	18	15	55	10	28	12	20	159	20	31	105	1	7	7	48	65	39	2	2	32	21	16	78	10	4	37	26	10	11	9	9	
Islamabad Section	401	27	0	20	18	0	6	0	16	8	10	17	2	10	9	6	50	18	8	50	0	2	0	21	20	4	0	3	1	2	0	45	2	2	14	14	3	4	0	
Kansai Section	2532	145	4	55	121	27	43	9	30	13	14	93	42	60	18	185	300	135	135	184	43	31	10	86	160	15	0	22	99	12	2	53	15	37	50	68	78	117	19	2
Karachi Section	271	12	1	7	5	3	0	1	2	16	9	6	1	9	9	1	43	8	18	24	0	0	0	6	40	8	1	3	2	1	5	39	0	0	3	5	1	1	1	0	
Kerala Section	1017	62	1	33	23	0	7	0	2	12	0	12	0	20	8	19	113	11	34	74	3	0	4	46	58	7	1	7	7	2	17	231	2	1	90	28	23	65	1	0	
Kharagpur Section	229	28	0	17	7	0	0	2	0	4	2	4	3	9		4	14	7	41	18		1	1	13	13	1	0	0	0	3	4	25	1	1	13	13	2	1	0	0	
Kolkata Section	1336	102	0	121	61	2	9	5	4	26	1	61	1	42	2	182	113	16	16	104	2	2	3	45	18	8	0	28	28	23	3	118	25	7	42	31	35	23	4	0	
Kwangju Section	147	19		5	4	1	3	0	4	1	2	6	1	5	4	1	5	8	7	13	1	1	2	3	3	6	0	1	2	2	0	11	0	0	5	5	5	4	3	2	
Lahore Section	335	15	0	5	8	0	4	0	2	5	0	11	3	5	3	1	55	4	7	31	0	0	0	12	30	9	1	0	5	1	0	67	0	0	34	8	2	5	2	0	
Macau Section	234	14	1	19	26		1	0	1	2	3	5	0	7	1	0	15	10	13	13	0	0	0	4	6	4	0	2	23	1	1	11	0	0	3	6	1	34	0	0	
Madras Section	1759	114	45	61	82	4	23	3	19	32	24	65	22	73	21	71	191	29	61	145	2	7	43	66	84	23	8	13	13	14	21	132	11	12	59	90	18	39	9	10
Malaysia Section	2108	135	4	72	95	8	30	6	31	51	12	72	4	49	20	98	211	70	101	196	3	37	27	84	100	53	1	13	43	41	8	188	21	15	64	47	63	30	6	0
Nagoya Section	1566	85	2	49	61	23	30	7	13	19	6	26	29	77	2	109	128	76	62	81	15	15	0	54	126	6	2	29	48	14	1	40	34	49	62	48	49	38	43	4
Nanjing Section	1905	189	3	97	71	12	54	16	7	25	21	74	26	131	2	44	98	103	30	238	7	10	11	80	83	10	0	22	52	34	3	116	3	21	53	83	46	24	9	0
New South Wales Section	2489	143	17	72	62	20	32	10	27	27	34	61	27	66	28	30	483	68	106	292	7	7	22	60	96	39	9	22	36	28	25	222	22	11	106	72	43	30	22	5
New Zealand Central Section	242	15	2	3	2	0	7	1	1	0	2	29	5	1	21	19	5	3	5	40	2	0	2	1	1	10	2	3	2	3	2	30	1	0	7	2	0	1	3	0	
New Zealand North Section	475	25	2	11	11	1	5	1	9	20	4	19	5	23	7	1	76	8	37	44	2	0	1	8	26	8	1	3	10	10	2	47	4	5	13	21	5	6	1	1	
New Zealand South Section	189	15	1	1	7	3	2	0	0	11	4	5	1	4	1	3	29	5	10	19	0	0	0	5	6	1	0	1	2	5	0	25	0	1	10	4	2	1	0	2	
Northern Australia Section	144	3	3	3	1	2	0	1	6	1	1	8	0	8	2	0	11	3	1	18	0	0	5	7	9	3	0	1	0	0	4	42	1	0	5	16	0	1	0	0	
Pune Section	378	27	3	7	6	0	16		3	9	9	4	2	9	5	5	62	8	5	46	1	1	0	22	12	17	0	0	0	7	2	39	2	3	28	19	2	4	2	0	
Queensland Section	995	40	3	34	6	0	16	9	2	14	22	32	3	26	14	15	184	27	21	90	2	1	3	36	70	9	3	11	16	10	7	173	10	2	27	26	13	1	1	15	2
Reg 10-Countries Outside Sections	125	8	0	2	2	0	0	1		3		1	1	1	2	2	6	2	2	10	0	0	0	5	3	2	1	0	1			34	3	0	15	6	1	1	0	0	
Region 10 - Apo/Epo	49	3	2	9	0	0	1	1	1	2	1		0	0	0		15	2	1	6	1	0	1	0	4	1	0	1	1	0	1	2	0	0	1	1	0	0	0	0	
Republic Of Philippines Section	281	19		3	12		3	1	2	5		16	1	4	1	7	43	3	4	22	0	1	0	1	7	19	0	3	5	3	2	42	1	0	10	5	5	32	1	0	
Sapporo Section	290	23	0	15	8	1	9	1	3	5	1	6	1	4	0	7	14	19	4	22	3	2	1	7	19	6	1	4	14	1	0	11	0	8	3	5	23	5	1	0	
Sendai Section	791	50	1	17	28	8	11		3	7	1	24	3	8	1	64	94	26	36	82	23	11	1	16	48	4	2	20	26	14	9	15	9	52	16	6	30	27	3	0	
Seoul Section	2668	158	21	52	287	32	29	22	27	27	19	38	19	86	7	136	210	99	93	281	33	33	8	59	98	14	1	26	43	26	3	130	1	29	53	78	52	201	27	10
Shanghai Section	1290	85	7	42	67	7	29	22	5	5	11	30	11	62	2	18	78	54	31	148	7	18	18	38	58	3	2	13	39	36	1	75	13	13	34	53	30	68	13	2
Shikoku Section	274	11	1	4	40	3	2	0	3	1	1	18	9	6	3	6	27	4	9	21	1	1	3	12	18	9	2	1	14	3	2	6	4	6	4	2	12	4	2	0	
Shin-Etsu Section	286	17	1	11	15	6	12	1	7	1	0	17	0	15	1	17	22	10	12	17	0	0	0	8	13	2	3	2	1	14	4	19	9	2	4	16	0	16	0	0	
Singapore Section	2587	174	12	72	155	12	35	11	22	19	22	71	16	119	32	96	254	88	72	193	8	38	35	70	121	26	2	32	56	20	4	192	7	47	76	77	90	176	28	1
South Australia Section	528	54	1	27	8	1	1	3	0	7	7	36	12	6	8	2	106	20	14	50	0	0	16	18	23	4	0	5	8	4	6	36	0	2	6	5	7	6	2	1	
Sri Lanka Section	429	18	6	11	3	1	3	0	6	1	1	1	3	10	7	4	60	26	13	58	1	2	0	11	38	3	3	1	2	8	3	64	3	0	34	9	4	3	1	0	
Taegu Section	256	9	1	5	27	3	6	0	6	7	1	3	3	17	0	21	21	7	17	23	4	1	5	7	15		0	1	2	1	1	8	1	4	4	11	5	15	1	0	
Tainan Section	943	48	9	56	90		26	3	12	9	3	35	7	45		36	55	22	14	90	7	22	7	21	25	6	0	9	52	5	2	24		13	30	32	31	58	3	10
Taipei Section	3498	228	17	90	270	8	152	38	76	57	11	86	50	98	13	298	259	167	64	354	34	48	12	60	77	20	5	44	199	35	5	66	5	20	55	91	93	266	19	10
Thailand Section	599	25	14	31	22	1	8	7	3	7	7	25	2	26	3	9	58	23	29	45	2	2	2	23	19	14	0	3	6	5	0	76	2	5	39	41	6	19	0	0	
Tokyo Section	8777	456	39	310	293	72	169	50	77	77	69	186	133	227	33	572	1074	448	302	893	115	127	57	198	386	53	14	125	195	100	21	300	60	153	175	200	450	489	68	11
Uttar Pradesh Section	1004	51	1	58	21	1	8	2	2	5	4	37	5	35	3	107	137	96	23	54	0	0	1	23	30	6	1	2	8	14	1	157	8	2	45	24	10	35	2	1
Victorian Section	1667	77	6	42	31	5	33	4	11	17	15	52	23	46	26	11	351	47	77	230	1	2	9	41	58	21	4	25	41	14	25	143	8	6	66	39	37	10	10	3
Vietnam Section	220	14	5	14	10	6	7	1	5	1	1	9	7	4	11	3	23	11	5	23	0	0	0	1	9	9	4	1	5	1	0	10	0	0	4	2	3	8	11	1	0
Western Australia Section	591	27	2	7	17	0	5	4	2	12	1	22	1	15	4	9	115	12	12	61	6	0	2	24	33	6	0	3	13	8	3	94	4	7	27	14	8	5	7	1	
Wuhan Section	477	40	1	6	6	0	7	6	3	1	7	17	1	26	0	17	38	5	5	44	7	3	7	11	26	8	0	0	17	37	0	42	7	13	24	38	14	2	3	0	
Xian Section	885	84	13	50	24	14	13	9	3	21	17	38	10	27		12	38	29	11	76	31		11	36	27	1		16	27	60	0	61	24	8	10	61	5	13	4	0	
	73345	4349	343	2255	3235	423	1206	361	644	800	590	2058	771	2232	432	2489	2939	2026	8381	489	561	427	1952	3336	654	92	673	1840	1083	239	4878	495	757	2073	2072	1652	2395	459	92		

Table 2.2 Region 10 Higher grade membership statistics – by Society, by Section 31 Dec 2016

Society Membership Statistics - IEEE Region 10

Section	Total	SP001	BT002	AP003	CAS004	NPS005	VT006	RL007	CE008	IM009	AES010	CIS011	IT012	IE013	TEM014	ED015	C016	MTT017	EMB018	COM019	UFFC020	CPMT021	OE022	CS023	RA024	EV025	PC026	EMC027	SMC028	GRS029	SIT030	PE031	DEI032	MAG033	IA034	PEL035	PHO036	SSC037	ITSS038	PSE043
Australian Capital Terr Section	3																			1												1								
Bangalore Section	692	62	1	4	26						6	6			1	26	186			45	24		1	1	40	1					25	227		1	1		6	2		
Bangladesh Section	713	20		1			1				1	1				3	23	9	8		1		1		34				18	15	1	28			454	58		67		
Beijing Section	322	26	3	8	5		12	5	2	7	2	9	3			16	22	9	7	21	3			10	20	1	8				1	34	3	1	13	14	4	1	4	
Bombay Section	596	10		1	2				1	3	3				4	2	497	3	2	3					18				4			36			1	1	3	1		
Changwon Section	11	1			3	1													2					1	1										1	1				
Chengdu Section	33				1	1		1	1		1	5								1					2				8			1				1		5		
Daejeon Section	37	2			5	1						1	1	1	1		3		4	5			1							1					1	1		7		
Delhi Section	547	15		6	3			1	1		2	2	1	34		4	158	45	1	4					38				1			194		1	30	2	2	1		3
Fukuoka Section	18	1									1						4				1		1		1										4	2	1	1		
Gujarat Section	574	92		8				1					36			1	29			1	1			1	3							179	1		212	7	1	1		
Harbin Section	19	2					1	1		1							3			1				1	2				1			1			3	1			1	
Hiroshima Section	3								1								1				1																			
Hong Kong Section	25	1			1							2					4		2	2			10		2							1			1	1	2	8		
Hyderabad Section	634	35	3	27	20	1	2	2	2	3	4	13	14		3	13	163	13	3	45	1	2	5	5	17	2	6	1	3	2		179	1	1	24	12	2		2	27
Indonesia Section	157	3	2	5	2	1				1	3	3			2	1	48		12	8	2		4	4	5		1			1		4	1	1	26	17			2	1
Islamabad Section	119	3			1				7								48						4	15	15							37			2	1				
Kansai Section	39	2		2	5							1			2		6	2	1	3	10		1	1	1							1		1	1	1		1		
Karachi Section	165	3		1		1				11							34	5	23	8			5		17							60			1	1				
Kerala Section	1577	30		1	3				1	4	3	1		1		14	377	1	20	16				1	376	1				1	2	508			176	18	24			
Kharagpur Section	14	2								1						3			2	2												4			2					
Kolkata Section	283	10	1	5	15					1	1	9			3	100	19	2	7	29					19		1		1	12	6	30	7		3	2	1	1		
Kwangju Section	6	2			1															1	1			1												1				
Lahore Section	161	5			3				2								48		1	9	9		1		11							60			20	2				
Macau Section	6	1															1		3	1	1		3									1								
Madras Section	1744	105	19	15	28	2	4		42	12	3	58	10	30	5	38	259	12	123	145	1	1	7	43	289	3	6	1	14	5		251	2	1	83	93	2	3	2	27
Malaysia Section	111	2			3	1	1				1	4					7	1	4	2			3	5	5	1			1	1	1	38			29	9				
Nagoya Section	28			4	1								1	3		3	1	2	1	1	1	1		1	3			1					1				2			
Nanjing Section	82	20		1	2		3					1		5		1	4	1	10	10		1		3	7				1	2		6		1	7	3	1		2	
New South Wales Section	45	8		1	2							3		2		8	8	1	3	1				1	2		2		2	1		5			1	1			1	
New Zealand Central Section	2											1													1															
New Zealand North Section	15	1			1							1					2		2						3							3			2					
New Zealand South Section	2		1																													1								
Northern Australia Section	5																		2																5					
Pune Section	39	4			1										1	1	22		1	1				1	1	1			1			5			1	2		1		1
Queensland Section	40	4	1	1	2					1	1			1	2	1	5	1	1	1	1			1	3				1	2	6	6			1	1				
Sections	8	2			1												1								1							1								
Region 10 - Apo/Fpo	4		1							1														1	1				1			2					1			1
Republic Of Philippines Section	9	1							4																				1	1										
Sapporo Section	7	1																		1																				
Sendai Section	4											1							1	1				1					1			2								
Seoul Section	91	12			30								1	4	4	2	1	1	1	1	2	1			3					2		3	1	1	8	6	1	12	1	
Shanghai Section	43	6	1	1	2	1	2						1	1		4	2			1			4		3			5	11	3		2	1		2	3	3			
Shikoku Section	10				7								1							2																				
Shin-Etsu Section	3											1		2					2	2																1				
Singapore Section	40	3	1		4		2		1			3			6	1	4		1	1				2	2		2		2			5		1		1		2	2	
South Australia Section	20	3		2	1							1		1		1	5	1	1	1					2					2		2			4	1				
Sri Lanka Section	157	8		2			2			2		1		1		18	18	11	10	1	1				8	1						16			74	2				
Taegu Section	5				1											2		2						1																
Tainan Section	37	1		5	4									1		1	1	1	1	1	1			1	1				1	2					9	1	1	5		
Taipei Section	152	11		6	4		6		3			2		14		19	4	4	1	2	1			1	3		5		11			6			19	17	4	8	1	1
Thailand Section	14	2				2						1				2	2		1	2															4	2	2	2		
Tokyo Section	77	2		6	2		1		1					17		1	5	5	2	2	3		2	1	1	2	2		2			1	1	1	2	6	2	7		
Uttar Pradesh Section	261	8		1							2	2				1	40	48	4	1				2	8					2		125			4	1		2		1
Victorian Section	48	3					2					4					16	1	19	3	1		1		3						1	8			3					
Vietnam Section	22	1					6											12	1	1				1								1					1			
Western Australia Section	13				2				1		1						1					1	1	1	2						1	3			1	1	1	1		
Wuhan Section	24	1										2	1	2		2	3		1	2	1	1	1	1					1	2		1			3	3		1	1	
Xian Section	36	1		3						4	1			1		1	1		1	1	1		1	1	2				1			1		1	11	11		1	1	34
Total	**9952**	538	33	117	192	20	38	9	71	53	37	175	37	145	13	263	2090	196	388	301	33	14	29	89	973	10	15	18	72	55	38	2077	18	13	1226	304	34	168	16	34

Table 2.3 Region 10 Student membership statistics – by Society, by Section 31 Dec 2016

Table 2.4: IEEE Region 10 Conferences 1990 – 2018

Year	Events	Host Section	Place of Events
2018	TENCON	Seoul	Jeju, Korea
	R10-HTC	Sri Lanka	Colombo, Sri Lanka
	TENSYMP	New South Wales	Sydney, Australia
2017	TENCON	Malaysia	Penang, Malaysia
	R10-HTC	Bangladesh	Dhaka, Bangladesh
	TENSYMP	Kerala	Kochi, Kerala
2016	TENCON	Singapore	Singapore, Singapore
	R10-HTC	Uttar Pradesh (Nepal subsection)	Kathmandu, Nepal
	Student/YP/WIE/LM Congress (IEEE R10 50th Anniversary)	Bangalore (Lead), Pune, Delhi, Hyderabad, UP & Bangladesh (supporters)	Bangalore, India
	TENSYMP	Indonesia	Bali, Indonesia
2015	TENCON	Macau	Macau, China
	R10-HTC	Philippines	Cebu, Philippines
	TENSYMP	Gujarat	Ahmadabad, India
	Student/YP/WIE Congress	Sri Lanka	Colombo, Sri Lanka
2014	TENCON	Thailand	Bangkok, Thailand
	R10-HTC	Madras	Chennai, India
	TENSYMP	Malaysia	Kuala Lumpur, Malaysia
2013	TENCON	Xi'an	Xi'an, China
	R10-HTC	Japan Council	Sendai, Japan
	TENCON Spring	NSW	Sydney, Australia
	Student/GOLD/WIE Congress	Hyderabad	Hyderabad, India
2012	TENCON	Philippines	Cebu, Philippines
2011	TENCON	Indonesia	Bali, Indonesia
	Student/ GOLD/WIE Congress	New Zealand North	Auckland, New Zealand
2010	TENCON	Fukuoka	Fukuoka, Japan
2009	TENCON	Singapore	Singapore, Singapore
	Student/ GOLD/WIE (IEEE 125th Anniversary) Congress	Singapore & Kerala	Singapore, Singapore
2008	TENCON	Hyderabad	Hyderabad, India
2007	TENCON	Tainan/Taipei	Taipei, Taiwan
	Student/ GOLD/WIE Congress	Madras	Chennai, India
2006	TENCON	Hong Kong	Hong Kong, Hong Kong
2005	TENCON	Victorian	Melbourne, Australia
	Student Congress	Beijing	Beijing, China
2004	TENCON	Thailand	Chiang Mai, Thailand
	Student Congress	Hong Kong	Hong Kong
2003	TENCON	Bangalore	Bangalore, India
2002	TENCON	Beijing	Beijing, China
	Student Congress	Singapore	Singapore
2001	TENCON	Singapore	Cruise Liner Super Star Virgo
2000	TENCON	Malaysia	Kuala Lumpur, Malaysia
1999	TENCON	Seoul	Jeju, Korea
1998	TENCON	Delhi	New Delhi, India
1997	TENCON	Queensland	Gold Coast, Australia
1996	TENCON	Western Australia	Perth, Australia
1995	TENCON	Hong Kong	Hong Kong, Hong Kong
1994	TENCON	Singapore	Singapore, Singapore
1993	TENCON	Beijing	Beijing, China
1992	TENCON	Victorian	Melbourne, Australia
1991	TENCON	Delhi	New Delhi, India

Sri Niwas Singh & Arokiaswami Alphones

IEEE Region 10 (Asia-Pacific) has three technical conference Series: TENCON, TENSYMP and R10-HTC. Apart from these, IEEE R10 also organises Student, YP, WIE and LM Congress known as SYWLMC. The major objectives of the TENCON conference series are as follows:

- 🔴 To provide a prestigious international forum for specialist presentations and interactions in one or more areas of Electrical, Electronics, Computer and Information technology through papers, exhibitions, plenary talk, tutorials, etc; To contribute to the development, progress and welfare of countries in the Asia-Pacific region by disseminating technological knowledge and experience;
- 🔴 To encourage the study and discussion of technology and technological applications in a broad social, political and human context;
- 🔴 To polish and boost the interpersonal and professional skills of volunteers with the guidance of leaders and the renowned personalities in the respective field of Engineering & Technology.
- 🔴 To enable Sections within Region 10 to develop as mature IEEE entities by accepting the responsibilities of major conference organization.

TENCON

The first TENCON conference was held in Hong Kong in 1980. This inaugural conference was organized with a view to having Region 10 – one of the fastest-growing regions within IEEE – more prominently represented in the calendar of IEEE events. Since that time TENCON has become firmly established as a major regional and international activity, and is now an annual event. The conference has been held in over 50% of the countries represented within Region 10. Usually these conferences have addressed broader areas of Engineering and Technology, relevance to countries in the Asia-Pacific region. To ensure high standards of conference organization and management, planning activity typically commences some two-three years before the event.

In business terms, the major objective is to provide attendees with a well-organized, high-quality technical forum which represents "good value for money". The TENCON conferences are normally expected to be financially self-sufficient and often return a net surplus. However, it is **not** IEEE policy to deliberately aim for large profits from conference activities. On the contrary, profit-taking should be deliberately curtailed by keeping registration fees etc. to moderate levels, so as to minimize any financial barriers to the members to participate. Conference organizers should always bear in mind the wide range of professional incomes encountered in the Asia-Pacific region.

In professional term, the key consideration is "Quality". Organizers of TENCON are strongly urged to benchmark their performance from other recent conferences in the TENCON series and elsewhere; to set demanding (but realistic) objectives; and to strive at all times towards the goal of *continual improvement* in the standards achieved. The previous TENCON events can be seen in Table 2.4.

TENSYMP

Looking the interest of R10 TENSYMP in a large geographic area, TENSYMP (spring) was started in 2013. In 2014, TENSYMP (Spring) was renamed as TENSYMP to distinguish from TENCON. Since that time TENSYMP has become firmly established as a major regional and international activity, and is now an annual event. It is normally organized in 2nd quarter (March-June) of every year. Usually these conferences have addressed specific areas of Engineering and Technology, relevance to countries in the Asia-Pacific region. To ensure high standards of conference organization and management, planning activity typically commences some one-two years before the scheduled date.

R10 – HTC

R10- Humanitarian Technology Conference (HTC) is a premier annual cross disciplinary conference that provides a common platform for technologists, engineers, academicians, scientists, manufacturers, investors, NGOs and industry people to discuss the recent advances in humanitarian technology to foster a sustainable way of life. It was started in 1993 by Japan Council. It is normally organized during December in the countries that need the humanitarian

technologies. It is also planned two years in the advance.

Conference Assignments

The Region 10 Conference and Technical Seminar (CTS) Coordinator invites the section/council chairs to show the Expression of Interest (EoI) to organizing the R10 flagship events (TENCON, TENSYMP, R10-HTC and Student/YP/WIE/LM Congress). After getting EoI, CTS asks sections to submit the detailed proposal. The CTS Coordinator will then seek approval to the Region 10 Conference and Technical Seminar Committee for endorsement of the host for the particular year. The Section selected then bears full responsibility for the organization and conduct of the conference. The terms and conditions of Bid Proposals and the basis on which they are assessed are outlined in the following section. In cases, when there is more than one Section bidding to host the conference, a recommendation by the TCS Committee is made for approval of Director R10.

Criteria for Assessment

Two-stage procedure is adopted for selection of host section. Every year, expression of interests (EoI) is invited by CTS Coordinator during March-June. Based on the available EoI, CTS committee will decide the probable host section based on following criterion:

- Host section history of previous R10 events, if any
- Accessibility from various part of Region 10
- Sponsorship possibilities
- IEEE membership promotional drive
- Past experiences in international conferences
- Tourism possibility

One or more section will be asked to submit the detail budget proposals. These proposals will be assessed according to criteria determined from time to time by the Region 10 Committee, based on the recommendations of the Regional Conference Committee. Particular attention will be paid to the following aspects:

- The appropriateness and timeliness of the proposed conference Scope and/or Theme;
- Evidence of broad-based technical interest and support, both within the IEEE and elsewhere;
- Evidence of the financial viability of the proposed conference, including any associated activities (seminars, workshops, exhibitions, etc.);

- The availability of local skills, knowledge and experience in organizing an event of the type proposed, to the requisite standards of Quality;
- The accessibility and suitability of the proposed geographical location and the proposed conference venue.

The proposed conference should offer a good discount to IEEE members compared to non-members. In addition student members of IEEE should be given at least 50% discount than ordinary IEEE members in order to encourage participation by IEEE student members.

The conference organizer should make sure that the conference be held within the laws of IEEE conference series.

Subject to the above criteria and the general Professional and Ethical guidelines outline earlier, submissions based on creative "new" themes are encouraged. Also, as far as is practicable, successive TENCON allocations will be moved in an equitable manner between the different countries and geographical regions of Region 10.

The recommendation of CTS committee is forwarded to R10 OpsCom for their consideration. Director R10 can approve.

Financial Responsibilities

An express condition of TENCON assignment is that the responsible unit is made fully accountable for all financial aspects of the conference planning, management and operation. Although the conference Treasurer need not have formal accounting qualifications, it is highly desirable that he/she should be familiar with general accounting practices. The Treasurer should also have had financial or commercial experience of some appropriate form. For Conference Financial Management and Reporting information, please visit the conference website at http://www.ieee.org/web/conferences/organizers/financial.html .

Since TENCON is normally organized as a sectional activity, it will need to be included in the Section financial report submitted to IEEE HQ, New Jersey, for the year of the conference. For Financial Reporting for Geographic Units, please visit the MGA Geographic Unit website at

http://www.ieee.org/web/geo_activities/units/Required_Reporting/L50_Financial_Report_.html.

Reference should be made to these documents before any major conference expenditure is incurred. Certain additional responsibilities for TENCON finances have been established by Region 10, as follows:

Budgets

In addition to the preliminary budget submitted with the Bid proposal, the successful section must submit an updated budget not later than six (6) months and 2 weeks prior to the conference. This budget should not contain unnecessary detail but must show all major categories of income and expenditure, and carefully-considered estimates pertaining thereto. The use of three-level estimates, corresponding to OPTIMISTIC-EXPECTED-PESSIMISTIC outcomes respectively, is strongly recommended.

Seed Money

Organisers may ask for seed money of USD 5000/- for the organizing the events and the same should be return in USD back after the organizing the events.

Surplus

Where a TENCON conference returns a net surplus after the payment of all debts and the repayment of all loans, the surplus shall be shared between the Section and Region 10 according to the formula determined from time to time by the Region 10 Committee, with a minimum of at least 30% to Region 10. The intention of any formula adopted is to maintain equity between Sections of differing size and financial viability, while providing adequate funds for the ongoing role of the Region in promoting and coordinating conferences. (A statement of the current Region 10 policy regarding surpluses is available from the TCS and R10 Treasurer). The Region 10 share of any surplus becomes due and payable immediately, and should be confirmed by the TCS and received by the Treasurer, IEEE Region 10, not later than ninety (90) days after the conclusion of the conference. (If the final conference accounts are not available at this stage, the estimated amount of the surplus must be advised to the CTS and Treasurer and payment of the Region 10 share must be made as soon as practicable thereafter).

Losses

In the event of the conference returning a *net loss*, the appropriate details must be furnished to Region 10 as soon as practicable. The fate of any loan monies owing to IEEE Region 10 will then be determined by negotiation between the Section, Regional CTS Coordinator and the Region 10 Treasurer. It should be noted that, except in truly-exceptional circumstances, the financial liability of IEEE Region 10 will not exceed the amount of the seed loan(s) provided. A statement of the current Region 10 policy in regard to TENCON losses is available from the CTS and R10 Treasurer.

Assistance Available

Organizing Units intending to submit a proposal are advised to seek assistance from one or more of the sources noted below:-

The Regional 10 Conference and Technical Seminar (CTS) Coordinator may be able to provide factual information on past conferences, and may also be able to give some advice as to suitable themes, etc. All such CTS advice is tendered in good faith but is not based on an intimate knowledge of the circumstances or requirements of particular Sections.

Sections who have organized a conference in the past may be able to offer suggestions and advice based on their own experiences. (Care must be taken to consider any such advice in the proper technical, economic and cultural contexts). The initial approach should be to the Chairman of the IEEE Section or Council involved.

Subject to certain conditions (see preceding section) an interest-free Seed Loan can usually be made available from Region 10 funds. The amount budgeted for this purpose in a given year should be determined from the CTS, IEEE Region 10. (Regardless of the amount budgeted; loans will only be approved on the basis of an acceptable conference Proposal containing all relevant information).

The IEEE Conference Organization Manual can be found at

<*http://www.ieee.org/web/conferences/mom/index.html* >. Please use this manual along with "How to organize an IEEE Conference: Checklist & Timeline" at

<*http://www.ieee.org/portal/cms_docs_iportals/iportals/conferences/organizers/timeline.pdf* >

Insurance coverage for an IEEE Conference begins once the Conference Information Schedule is approved. *Conference Insurance Information* details the types of coverage IEEE Conference Organizers receive, and provides information on additional event cancellation insurance.

The Required Documentation for IEEE Conference can be found at

<*http://www.ieee.org/web/conferences/organizers/required_documentation.html* >

IEEE HQ may be able to assist with conference publicity and certain other aspects. TENCON is an international Conference according to established IEEE criteria, and is therefore eligible for inclusion in all international conference listings. Outline details are given in the IEEE Conference Manual; any further inquiries should be made directly to the IEEE Conference Business Services at < conference-services@ieee.org >

Recommended Procedures

Every conference will have its own specific features and requirements. However, the following general procedures are recommended for the preparation of a Proposal, and subsequently:

Appoint a suitably-experienced Convener and set up an interim conference committee; assign responsibilities for all key functions;

Explore various concepts and themes which might apply; attempt to gauge the degree of technical support within IEEE as well as the likely "outside" (non-IEEE) interest. Decide whether displays, exhibitions, workshops, tutorials, student contests, or other peripheral activities are to be included;

Draw up an outline plan (and associated budget) including: likely Sponsors and collaborating organizations; possible venue(s); the probable level or range of registration fees; seed funds required; prospective Keynote Speakers; technical theme(s) and specialties to be covered; associate delegates program; ground transportation requirements; promotional strategies; catering and accommodation requirements; conference management arrangements and responsibilities; etc. etc.;

Prepare the formal Proposal with the emphasis on simple, easily-absorbed, factual, information. Avoid loose, unqualified or ambit claims of any type. Make the presentation and formatting as attractive as reasonably possible, but without any resort to ostentation;

If successful - recruit additional volunteers, assign detailed responsibilities, and implement the plans as previously devised. Undertake frequent reviews to enable problems to be identified and solved on an ongoing basis (see Organizing, Planning and Scheduling the Conference at

http://www.ieee.org/web/conferences/mom/mom_sect4.html.

Signing of Agreements

Successful section needs to sign two agreements: one with IEEE HQ and one with Region 10. IEEE agreement is filled on-lined and it is approved by the R10 director. The agreement between Region 10 and section is signed offline.

Tencon 2016, Singapore

Member Activities – IEEE R 10 Students Activities

Zia Ahmed

An Overview

The IEEE Region 10 has 38357 Student members as of December 2016, and 1365 IEEE Student Branches. It remains a matter of concern that nearly half of these Branches (650 Branches) have been classified as 'dormant'. Table 2.5 gives details about the number of Student members and Student Branches in each Section.

The R10 Students Activities Committee (SAC) conducts regular, and special, activities to enhance students' technical knowledge and management skills, and provide opportunities for networking among members and Student Branches. Regular activities organized by the R10 SAC include Undergraduate & Post-graduate Paper Contest, Website Contest, Larry Wilson Award and Exemplary Student Branch Awards. R10 SAC also sponsors the first prize winner of the paper contest for the post-graduate category to present this paper at TENCON. Many new activities are specifically designed to energize the dormant Student Branches, and encourage their participation in IEEE programs.

Since the Branch Counsellors play a vital role in keeping the Student Branches active, and assist in a smooth changeover in student leadership of the Branch, meetings are organized with Section Chairs, Student Branch Counsellors and Mentors. In 2015, such meetings took place with R10 sponsorship at Delhi and Hyderabad in India and at Islamabad in Pakistan.

Flagship event to promote R10 students activities is the R10 Students Congress held every second year. This activity provides opportunities to network, learn about the latest IEEE programs, and share strategies for enhancing membership value. The R10 Students Congress, Young Professionals (YP) meeting, and Women in Engineering (WIE) meetings are all usually arranged together to provide opportunities for exploring wider ideas and developing skills, and discussion on issues of professional interest.

As R10 celebrates its 50th anniversary in 2017, we note that we have come a long way from the initial start of student activities in the Asia-Pacific region. To reflect this growth, we recap the history of R10 Student Congress below.

In 2002 the then R10 Student Activities Coordinator Late Professor Marzuki Bin Khalid and Student Representative Darrel Chong planned for a regional student congress. As always, the first step to launch a new program needed a great deal of planning to lay a solid foundation for the endeavor to be successful. Plans for a R10 Students Congress were endorsed by the R10 Executive Committee.

The first IEEE Region 10 Students Congress was held in Singapore from the 16 - 20 July 2002, and was hosted by two local Student Branches, the NUS SB and NTU SB. Main objective of this Students Congress was to provide a platform for exchange of ideas between members of R10 Student Branches. The

Marzuki Bin Khalid

Congress concluded with several suggestions to improve membership and services, and effectiveness of Student Branches.

The second R10 Students Congress was held in Hong Kong on 16-18 July 2004. This was attended by around 90 students, R10 Director Jung Uck Seo, R10 Director-elect Takeuchi, and Cecilia Jankowski from IEEE Headquarters. Several keynote speakers from industry also attend the Congress and gave

Darrel Chong

talks. Host for the second R10 Students Congress were the three Student Branches of Hong Kong University, Chinese University of Hong Kong and Hong Kong Polytechnic University. Key features of the Congress included brainstorming on several issues of interest for student members and presentations by guest VIPs from IEEE and industry. An unexpected challenge

faced by the Congress organizers and delegates was a strong typhoon, which forced a rescheduling of the program in real-time, and yet the Congress turned out to be a successful event.

The third IEEE Region 10 Students Congress was held during 13-17 July 2006 in Beijing China. This Congress focused on broadening the outlook of R10 Student Branches covering entire Asia-Pacific region and creating opportunities for them to know about China. The main objectives for the Congress were:

How to improve communication and cooperation among SBs and student members to tackle issues of common interest identified by the previous two Student Congresses, such as Student Branch success and membership retention, sharing experiences of Student Branch activities, and improving student members academic abilities.

Nurture management and leadership capabilities of student representatives with emphasis on developing communication skills, especially for members from non-English speaking countries.

A key development of the third R10 Students Congress was the broadening of attendee base by including a two-day R10 GOLD Congress in conjunction with Students Congress. The GOLD Congress was held on 14-15 July 2006. The GOLD Congress was jointly organized by R10 and IEEE Beijing Section. A main purpose of the GOLD Congress was for students and GOLD members to work together and address issues relating to transition from student to GOLD member. GOLD Congress gave student delegates an opportunity to meet recent graduates and discuss matters relating to Student Branches. The Congress had several international speakers from industry and academia including 2005 IEEE President Michael Lightner.

The GOLD Congress featured a diverse and exciting program, which included workshops and social activities.

The Student-GOLD Congress 2006 was sponsored by the Beijing University of Posts and Telecommunications, Beijing Jiaotong University, Peking University and Tsinghua University. The Organizing Committee consisted of representatives of four Student Branches from each university with more than 100 volunteer students to make the event successful.

In 2008, the fourth Students Congress was further expanded to include WIE along with the GOLD to become the R10 SGW Congress. The joint Student,

GOLD and WIE Congress was held at Chennai, India from 27-30 January 2008. The theme of the congress was "IEEE for Youth – Leveraging Social Networking for Professional Development".

The 2008 Congress was attended by around 300 delegates from across Asia-Pacific. The Students Congress was from 27 – 30 January, with the GOLD and WIE Congresses were held from 28 – 30 January 2008. The SGW Congress program combined serious technical and leadership topics with fun filled activity sessions. IEEE President Lewis M. Terman attended the event and gave inaugural address for GOLD/WIE Congress. Also present at the Congress were R10 Director Janina Mazierska and IEEE WIE Chair Karen Panetta, IEEE 2008 President-elect John Vig, VP TAB Roberto De Marca, IEEE Foundation President Richard Gowen, Staff Director Matthew Loeb, MGAB Managing Director Cecelia Jankowski and IEEE Executive Director Jeffery Raynes.

Students, GOLD and WIE affinity Group leaders worked together during the R10 2008 SGW Congress on a joint effort to discuss aspects related to Student Branch organization and leadership, as well as transitional issues of GOLD/WIE.

The fifth R10 Students Congress was held to mark the IEEE 125th Anniversary. It was held from July 16-19, 2009 at the National University of Singapore. The event was jointly organized by National University of Singapore, and College of Engineering Chengannur, Kerala, India. The event was also attended by student volunteers from across the world as well as leaders from IEEE, industry and academia. This was one of the most significant student events for the 125th Anniversary of IEEE. Also present at the Congress were IEEE 2008 President Lewis M. Terman, IEEE Foundation President Richard Gowen, Vice President and Chair MGAB Joe Lillie, R10 Director Yong Jin Park, R1 Director Howard Michael, R8 Director-elect Marko Delimar, R10 Director-elect Lawrence Wong, Past R10 Director Tek Seng Low and many leaders from IEEE and industry. The MGAB Students Committee members from all IEEE Regions also attended the event making it a truly global Congress.

The 2009 R10 Students Congress was a huge success where students from R10 had an opportunity to network at global level and get inspired by learned IEEE leaders.

The next R10 Students Congress, the sixth one in the series, was again a joint Congress with GOLD and WIE held from July 7-10, 2011. The event took place over 4

days at University of Auckland and was a great opportunity for GOLD, Student and WIE member and volunteers to develop their leadership skills and network with each other. In attendance were 150 delegates from 36 Sections and 15 countries around the Asia-Pacific (Region 10), of which approximately 30 per cent were females. They were joined by 20 industry professionals and 16 IEEE dignitaries from local, regional and global levels of IEEE leadership.

Theme of the R10 Students Congress was "Emerging Technologies: Realizing innovative ideas that will give a better tomorrow for humanity", which aligned well with the important new direction for the IEEE, highlighted by its tagline "Advancing Technology for Humanity". Attendees took part in a diverse programme which consisted of over 80 speaker sessions which included: professional skills workshops, forums for IEEE volunteers, sessions on career development and panel discussions. Also included were a series of seminars related to the R10SC theme, "Emerging Technologies".

The seventh R10 Students/GOLD/WIE Congress was hosted from 11-14 July 2013 in Hyderabad, India, and was organized around the theme "Empowering Women and Youth to Create a Better Tomorrow." The R10 SGW 2013 Congress brought together members from across Region 10, where they had an opportunity to network, learn about the latest IEEE programs, and share strategies for enhancing membership value. More than 250 people attended the event including IEEE President Peter Staecker, and three former IEEE Presidents. Moshe Kam, 2011 IEEE President spoke about IEEE's global reach and its humanitarian activities, and leadership in research and standards. At the awards ceremony, top volunteers in the region were recognized with awards.

The 2015 R10 Students/Young Professionals/WIE Congress 2015 was held from 09 - 12 July 2015 at the Galadari Hotel Colombo, Sri Lanka and hosted by the IEEE Sri Lanka Section. The Congress had all three tracks for Students, Young Professionals and WIE running in parallel with sessions on skills development, leadership and latest trends in technology. For promoting friendship and networking, IEEE Sri Lanka Section organised IEEE cricket league. This was a super hit for all the delegates since Asia Pacific region consists of many cricket fans. Many delegates enjoyed participating in the cricket tournament which brought out team spirit and breaking the ice for more friendly and interconnected conduct of the IEEE R10 SYWC 2015.

Participants of First R10 Students Congress with 1996 IEEE President Wallace Read

2015 R10 SYW Congress delegates

Table 2.5: R10 Student membership and Student Branches – by Section

Section Name	Total	GSM	StM	hgm	S Branches
	1,25,060	17,004	38,357	69,699	
Australian Capital Terr Section	486	66	11	409	2
Bangalore Section	7,243	742	4,071	2,430	87
Bangladesh Section	2,473	161	1,667	645	27
Beijing Section	8,569	2,133	962	5,474	24
Bombay Section	6,262	581	3,690	1,991	156
Changwon Section	285	89	21	175	3
Chengdu Section	1,505	633	287	585	1
Daejeon Section	1,046	304	97	645	2
Delhi Section	4,599	655	2,400	1,544	104
Fukuoka Section	876	151	38	687	2
Gujarat Section	1,204	101	704	399	28
Harbin Section	874	178	65	631	4
Hiroshima Section	519	59	11	449	1
Hong Kong Section	9,021	423	85	8,513	7
Hyderabad Section	5,730	569	3,469	1,692	158
Indonesia Section	1,484	175	458	851	22
Islamabad Section	1,003	78	492	433	28
Kansai Section	2,244	250	72	1,922	7
Karachi Section	998	50	638	310	26
Kerala Section	7,897	617	6,170	1,110	90
Kharagpur Section	373	151	67	155	3
Kolkata Section	3,457	618	1,248	1,591	46
Kwangju Section	157	38	11	108	1
Lahore Section	818	74	440	304	29
Macau Section	222	44	29	149	2
Madras Section	8,619	866	5,237	2,516	271
Malaysia Section	3,319	516	431	2,372	23
Nagoya Section	1,307	134	55	1,118	3
Nanjing Section	2,676	574	227	1,875	8
New South Wales Section	2,683	405	102	2,176	7
New Zealand Central Section	285	42	6	237	1
New Zealand North Section	670	92	91	487	3
New Zealand South Section	267	28	61	178	2
Northern Australia Section	266	11	123	132	3
Pune Section	1,268	135	729	404	20
Queensland Section	1,123	142	78	903	7
Reg 10-Countries Outside Sections	242	52	13	177	1
Region 10 - Apo/Fpo	56	2	4	50	0
Republic Of Philippines Section	457	118	61	278	6
Sapporo Section	278	41	12	225	1
Sendai Section	711	105	7	599	1
Seoul Section	3,365	996	327	2,042	17
Shanghai Section	1,661	331	109	1,221	4
Shikoku Section	254	52	21	181	2
Shin-Etsu Section	242	23	12	207	0
Singapore Section	2,895	545	121	2,229	5
South Australia Section	528	41	19	468	3
Sri Lanka Section	2,404	59	1,589	756	12
Taegu Section	284	94	16	174	0
Tainan Section	852	100	81	671	2
Taipei Section	3,060	381	193	2,486	12
Thailand Section	806	90	106	610	8
Tokyo Section	7,835	593	173	7,069	12
Uttar Pradesh Section	2,237	596	690	951	62
Victorian Section	2,113	303	207	1,603	8
Vietnam Section	206	29	32	145	2
Western Australia Section	720	70	41	609	4
Wuhan Section	803	210	81	512	2
Xian Section	1,223	288	99	836	4

Member Activities – IEEE R 10 WIE Activities

Ramalatha Marimuthu & Celia Shahnaz

IEEE Women in Engineering (WIE) advocates women empowerment by encouraging active participation and vibrant engagement of women in its career and outreach activities. With a membership of over 15,000, and with more than 600 affinity groups (AG) from 70 countries, this twenty-two year old 'Group' within the IEEE is making its mark as a special interest group for addressing career related issues in engineering. Region 10 has a vibrant and active WIE group.

Jyotji Ramaswami was the 2002 Chair of Kerala Section WIE Affinity Group, the first Section WIE AG formed in Region 10. First WIE Students Branch AG in R10 was formed at Chengannur College of Engineering in IEEE Kerala Section in 2003, and its Chair was Seenu Chrispin. By 2006, there were 10 Section WIE AGs and 20 WIE Student Branch AGs. The total Number of Section WIE AGs and WIE SB AGs in R10 grew to 38 and 290+, respectively by 2016. Women engineers, who are IEEE members from different parts of the Region (photographs shown in Fig. 1) served as Region 10 WIE Coordinators in the past; and the current Coordinator is Jing Dong.

R10 WIE marked a milestone in 2008 by organizing the world's first Women in Engineering Congress, and this event contributed to the visibility and growth of WIE. R10 WIE 2008-10 Coordinator Ramalatha Marimuthu launched a project called Sangamam to popularize appropriate technologies (elelctricity and smokeless Chula) in rural areas, and received wide attention.

Sections Congress 2008 had a session on humanitarian activities, where Sangamam project was featured as a case study.

Region 10 has organized WIE Congress during 2008 (Chennai, India), 2011 (Auckland, New Zealand), 2012 (Bhimavaram, India), 2013 (Hyderabad, India), 2015 (Colombo, Sri Lanka) and 2016 (Bengaluru, India). These events were generally organized simultaneously with R10 Students Congress and R10 YP Congress to provide opportunities for wider interaction. 2016 R10 WIE coordinator and her team have designed 2-day WIE tracks for R10 students/young professionals/ WIE/Life Member congress in August 2016 at Bangalore, India with a theme "R10 WIE-A unique platform to create smart women to lead the smart world"

Introducing WIE awards like "Inspiring Engineer of the year award" in 2009 was also a hallmark of Region 10 WIE, which brought recognition and visibility to volunteers. Similar awards have now been introduced in global WIE Committee awards program from 2014 as Inspiring Member and Student Member awards. In 2015, this award was given to 2016. R10 WIE Coordinator Celia Shahnaz and the Student award went to Kiran Abbas from R10.

In 2016, the awards have been won by Ramalatha Marimuthu and Hiba Latifee from R10. 2016 R10 WIE Coordinator compiled a description of four R10 WIE

Miki Haseyama
(2006)

Angkew Tuptim
(2007)

Ramalatha
Marimuthu
(2008-2010)

Takako Hashimoto
(2011-2014)

Supavadee
Aramvith
(2015)

Celia Shahnaz
(2016)

Figure 1: IEEE Region 10 WIE Coordinators

First R10 WIE congress 2008 and Sangamam

awards (scope, purpose, criterion, basis, schedule and others, list of past award recipients with citations, year of inception of each award, revised nomination forms). This information is now available on R10 WIE and R10 awards websites.

Another initiative which was started by R10 WIE in 2009, and which has now been implemented successfully across other Regions, is the introduction of Women in Engineering Track in Technical flagship conferences of R10 like TENCON, TENSYMP and HTC.

IEEE Women in Engineering International Leadership Conference organized by WIE Committee is recognized as one of the most popular conferences for Women. Similar events are periodically held since 2014.

R10 WIE organized an IEEE WIE Global Summit with the theme Embracing Engineering and Technology, Breaking Barriers during August 2016 at Bangalore, where Janina Mazierska, Past and only female IEEE

Region 10 Director served as Chair and 2016 R10 WIE Coordinator served as Co-chair and Program Chair.

It was the first event of R10 50th years anniversary celebration and also the first ever one-day global summit in R10. Immediate past, current and president-elect of IEEE, many leaders from MGA and more than 230 engineers and scientists attended the event. The summit was designed to provide inspiration, ideas to better balance the career and family life, and to stimulate career advancement through presentations by successful leaders from industry and academia. This was followed by IEEE WIE Summit Pune in September 2016. In 2017, IEEE WIE is organizing four WIE summits in Goa, Srilanka, Malaysia and Islamabad of R10.

Above activities have ensured that R10 WIE has gone from strength to strength. From 2007 onwards, every year Region 10 WIE has been on the Awards dashboard at least winning two or three awards through its affinity groups and members.

WIE tracks of R10 SYPWL Congress 2016 at Bangalore SYPW Congress 2015 at Sri Lanka

Takako Hashimoto who took over in 2011 increased the impact of Women in Engineering in Region 10 through PROGRESS Project. Supavadee Aramvith WIE Coordinator 2015 and 2016 WIE Coordinator Celia Shahnaz are instrumental in sustaining its growth, and currently R10 holds the leading position with 50% in WIE membership. The number of affinity groups also has also shown positive growth over the years. Now the number of affinity groups in the region is more than 300. IEEE Women in Engineering International Leadership Conference organized by WIE Committee is recognized as one of the most popular conferences for Women. Similar events are periodically held since 2014.

R10 WIE organized an IEEE WIE Global Summit with the theme Embracing Engineering and Technology, Breaking Barriers during August 2016 at Bangalore, where Janina Mazierska, Past and only female IEEE Region 10 Director served as Chair and 2016 R10 WIE Coordinator served as Co-chair and Program Chair. It was the first event of R10 50th years anniversary celebration and also the first ever one-day global summit in R10. Immediate past, current and president-elect of IEEE, many leaders from MGA and

more than 230 engineers and scientists attended the event. The summit was designed to provide inspiration, ideas to better balance the career and family life, and to stimulate career advancement through presentations by successful leaders from industry and academia. This was followed by IEEE WIE Summit Pune in September 2016. In 2017, IEEE WIE is organizing four WIE summits in Goa, Srilanka, Malaysia and Islamabad of R10.

Above activities have ensured that R10 WIE has gone from strength to strength. From 2007 onwards, every year Region 10 WIE has been on the Awards dashboard at least winning two or three awards through its affinity groups and members.

Takako Hashimoto who took over in 2011 increased the impact of Women in Engineering in Region 10 through PROGRESS Project. Supavadee Aramvith WIE coordinator 2015 and 2016 WIE Coordinator Celia Shahnaz are instrumental in sustaining its growth, and currently R10 holds the leading position with 50% in WIE membership. The number of affinity groups also has also shown positive growth over the years. Now the number of affinity groups in the region is more than 300.

TENCON 2012

HTC 2016

WIE tracks of R10 SYPWL Congress 2016 at Bangalore SYPW

WIE Leadership Summit 2015 at Chennai

IEEE WIE Global Summit 2016 at Bangalore

Member Activities – IEEE R 10 GOLD/YP Activities

Nivas Ravichandran

The IEEE Young Professionals (previously GOLD) is an international community of innovative members and volunteers. Members of this community are interested in elevating their professional image, expanding their global network, connecting with peers locally and giving back to the community. The Young Professionals comprises of over 120,000 members with more than 172 Affinity Groups across the world. IEEE Region 10 comprises the largest base of the Young Professionals Membership with about 36,000+ members (30%) and 40 Young Professional Affinity Groups.

IEEE Region 10 entered the Young Professionals community with the formation of IEEE Kolkata Section in the year 2000. From then, the Young Professionals community in Region 10 has seen a significant upswing in the number of Affinity Groups spread across different parts in Region 10. As of 15th April 2017, there are 41 Young Professional Affinity Groups in Region 10 spread across Asia Pacific. In 2016 for operational efficiency, IEEE Region 10 Young Professionals formed 4 zones - North Asia (Japan, China, South Korea), South Asia(India, Pakistan, Sri Lanka, Bangladesh), Southeast Asia (Singapore, Malaysia, Thailand, Vietnam, Taiwan, Philippines, Indonesia) and ANZ (Australia & New Zealand).

Yasuharu Ohgoe (IEEE Region 10 Young Professionals Coordinator 2006 – 2007) recalls his experience of organizing the first ever GOLD Congress in 2006 in Beijing.

"It is my great pleasure to have the opportunity to express my congratulations on the IEEE R10 50 years anniversary celebration.

I was involved in young professionals' program as a R10 Graduate of the Last Decade Coordinator in 2006 - 2007. The 1st R10 GOLD (Graduate of the Last Decade) Congress was successfully held together with the Student Congress in Beijing in 2006. R10 young professionals' activity is very active and I hope these activities provide opportunities development of technical career building, soft-skills training, networking / mentoring etc. for young professional member including graduate students with LMAG, WIE, and Students, for the advancement of technology for humanity.

Finally, let me conclude by extending once again my heartfelt congratulations, as a past R10 GOLD Coordinator, and by expressing my wishes for the further development of the Asia Pacific Region."

The inaugural GOLD Summit was held in Quebec City, Quebec, Canada over one and a half days immediately before the 2008 Sections Congress.

Yasuharu Ohgoe was the lead organiser of the inaugural Summit. The timing and location of this event provided great networking and learning opportunities for GOLD Summit delegates at both the GOLD Summit and Sections Congress. With the support of the 2008 Region 10 director Janina Mazierska and Region 10 GOLD Coordinator, Helene Fung, five delegates from Region 10 were funded to attend and participate in this summit. This investment in volunteers has been highly successful with some notable volunteers advancing into higher level committee and board positions.

Multiple guest speakers including Joe Lillie, 2008 MGA Vice President enlightened and inspired attendees, and several breakout sessions were held catering to various topics to recruit and retain IEEE members and volunteers. A poster session was held where each Region showcased their respective GOLD Affinity Groups and regional initiatives by capturing key events, lessons learnt and success stories.

In 2011, the GOLD Summit was once again held and led by Brian Roberts and Elizabeth Johnston. The event received generous support from the 2011 Sections Congress committee and the regions. Region 10 once again funded five delegates to attend the 2011 GOLD Summit and Sections Congress. This event provided a great opportunity for 2008 attendees to regroup and revaluate inter-regional collaboration plans and for new attendees to network and receive

additional training to take back to their respective regions and sections.

Tim Wong (IEEE Region 10 Young Professionals Coordinator, 2011 – 2012) recalls his memories from the 2008 GOLD Summit - *"It is now 2017, ten years since the first GOLD Summit. I can honestly say that many of the professional relationships established at the 2008 summit are still going strong. Silos have been broken down, ideas have been exchanged between regions and inter-regional cooperation has improved.*

I was personally involved with the 2011 Region 10 Student/GOLD/WIE congress This event provided delegates throughout region 10 sections with the opportunity to meet other like-minded volunteers, exchange practices and ideas and build their professional networks. Representatives from industry were invited to speak on topics related to the Emerging Technologies theme. Several plenary sessions were combined with Women in Engineering and Students to encourage cross collaboration. Delegates were free to attend WIE, Student and GOLD presentations and encouraged to continue their engagement with volunteers from other sections and affinity groups."

IEEE Young Professionals in Region 10 organized an IEEE HardTech summit in line with the largest IEEE Conference in Region 10 – IEEE TENCON at Nanyang Technological University, Singapore. The summit had a variety of sessions, demos and exhibits with a

participation of 150+ attendees from across the Asia Pacific region. The summit saw speakers & participants from top organizations like Rolls Royce to Entrepreneurs to Researchers.

The IEEE HardTech Summit brought the latest technologies under its banner, and accelerated the knowledge exchange among the masses, which was well appreciated by all the sponsors, partners, speakers, attendees and volunteers who were associated with this event as well as the rest of the IEEE community.

List of IEEE MGA Young Professionals Hall of Fame Award Winners from Region 10

Malaysia Section - 2011	Lahore Section - 2015
Lahore Section - 2011	Tokyo Section - 2016
New Zealand North Section - 2012	Kerala Section - 2016
Kerala Section - 2012	
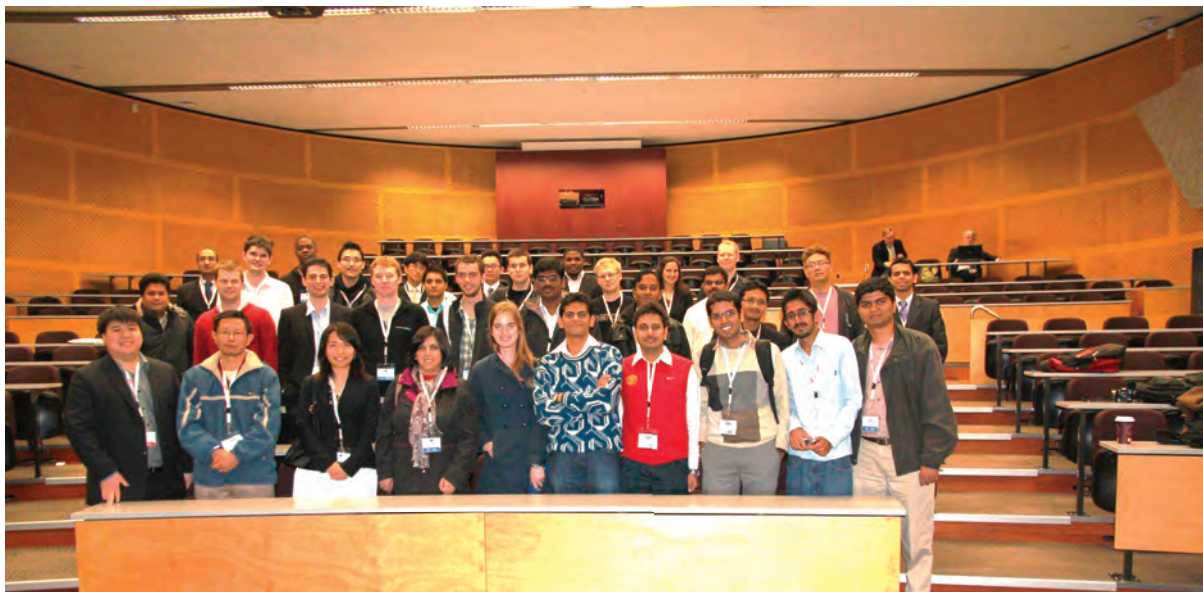
List of IEEE MGA Young Professionals Achievement Award Winners from IEEE Region 10

Rafaeel Akbar Chaudhry, Lahore Section 2010	Manjunath Iyer, Bangalore Section 2013
Kartik Kulkarni, Bangalore Section 2011	Rayees Amar Nishad, Kerala Section 2013
Noel Gomes, New Zealand North Section 2011	Ajin Baby, Kerala Section 2013
Ranjit Nair, Kerala Section 2012	Ahsan Saeed, Karachi Section 2014
Barnabas Muthu, Madras Section 2012	Nipun Manral, Bangalore Section 2015
Jaison Abey Sabu, Kerala Section 2012	Edhem Custovic, Victorian Section 2015
Mithun Bhaskar, Hyderabad Section 2012	Shahim Baker, Kerala Section 2016
Muhammad Maroof Raza, Lahore Section 2013	Hussain Mahdi, Malaysia Section 2016
North Section 2013	Nivas Ravichandran, Madras Section 2016
Josheel Pranlal, New Zealand	Preeti S. Kovvali, Hyderabad Section 2016

3.
IEEE Region 10 Councils & Sections

Editor - A. Ravikiran

Early History of IRE/AIEE/IEEE in AUSTRALIA

David E Burger

Early Years (1890-1972) in Australia

The first Australian member at Associate grade of the AIEE was Mr. Wilfred Joseph Spruson (1870~1939) pictured opposite, of Hepburn and Spruson Patent Attorneys, Sydney. His membership was recorded in 1890. Wilfred attended The University of Sydney from 1886 to study engineering and electricity. He won the Legislative Assembly seat of Millers Point in 1898, and was active in the formalities of Federation. He was an advisor to Cardinal Moran, and was awarded the cross of Leo in 1908, and was appointed a Papal Chamberlain in 1929. He died on 16 August 1939 while still in active practice.

Mr. Gustav S Fisher of Tramway Construction, Sydney joins AIEE in 1891.

The "Local Honorary Secretaries" of 1917 listed Mr W.G.T. Goodman of Adelaide, South Australia in the AIEE transactions XXXVI.

Sir Ernest Thomas Fisk (1886-1965) was a member of the Institute of Radio Engineers from 1915, a fellow from 1926, and a life

Wilfred Spruson circa 1892

fellow from 1951. Fisk was the founder of AWA and a monument was erected to commemorate the first radio communications message between UK and Australia. It is located at Wahroonga (cnr Stuart & Cleveland) in 1935 by Fisk, with a replica presented to Caernarfon Council in 1997.

Raymond Cottam Allsop, (1898-1972) was a Sydney radio pioneer and engineer. Ray received an experimental radio license on 3 June 1911 and joined the Wireless Institute of Australia. On 10 June 1929 Allsop publicly demonstrated his 'Raycophone' system of synchronized sound for motion pictures at the Wintergarden Theatre, Rose Bay.

Eric Khu at 2003 Section AGM

During the World Radio Convention he demonstrated his stereo equipment at the Plaza Theatre, Sydney, on 10 April 1938. A foundation member (1932), fellow (1940) and president of the Institution of Radio Engineers, Australia, Allsop was a fellow (1934) of the Society of Motion Picture and Television Engineers, United States of America; he was also a member of the American (1946) and British (1947) institutions of Radio Engineers, and of the Australian Broadcasting Control Board (1953-54). He was appointed O.B.E. in 1971.

Dr Matt Darveniza was known to be active in the IEEE PES as a "IEEE Member at Large" in the late 60's and early 70's, more information may become available at the IEEE Queensland Section web-link. Mr (Dr) Eric Khu joins IRE in 1951, becomes an IEEE life member in 1990. Eric attended the 35 year anniversary celebration held in August 2007.

Australian Section (1972–1985)

Formal IEEE involvement occurred when there was only one Section in Australia, aptly called the 'Australian Section'. Jim Vassleu had originally consulted with David Hutt of Auckland about the launch of the Australia Section.

The first meeting of IEEE Australian members was organized by James J. (Jim) Vasseleu in early 1972 and held at the Cell Block Theatre, Darlinghurst NSW. It was agreed, by those attending, that the formation of an Australian Section would be highly desirable and Mr. Vasseleu should proceed with the preparation and submission of a petition. Mr. Len Clemenson, Jim Vasseleu, Reg Ryan, Phil Amos, Allan James and Leo

Port were a signatories to the Australia Section formation.

Wilfred Spruson circa 1892

Leo was a partner at Port Warren & McCaskell engineers, he later became Mayor of Sydney and was a host to the original (Australian) ABC TV series of 'The Inventors'. Leo died in 1978.

The area to be encom-passed by the proposed section was all Australian States and Territories comprising New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania, Australian Capital Territory, Northern Territory and the Territory of Papua New Guinea. The petition was signed by 63 members and submitted to IEEE Headquarters at the beginning of June 1972. Dr. Tatsjui Nomura from the Tokyo Section (who was the Region 10 Director) supported the petition and the Australian Section was established on 16 August 1972. At the first official meeting, which was held at Neutral Bay Junction, NSW, on 12 September 1972, James Vasseleu was elected Chair, Lennox J. Clementson Vice Chair and James Deans Secretary/Treasurer.

Jim Vasseleu (2005)

Shortly afterwards, the 1972 IEEE President, Dr Robert Tanner, visited Australia and, accompa-nied by officers of the newly formed Australian Section, had discussions with representatives of the two chartered Australian National Societies, the Institution of Engineers, Australia, and the Institution of Radio and Electronics Engineers, Australia.

Australian Section By-laws were prepared in October 1972 and submitted to IEEE Headquarters.

During 1973, a number of technical meetings were held in cooperation with the National Societies and, in early October, Dr. John D. Ryder; 1973 Chair of the IEEE Fellows Committee, visited the Section and conducted a seminar at the University of New South Wales, Kensington.

Mr. Vasseleu retired as Australian Section Chair at the end of 1973 and Mr. Clementson was elected 1974 Chair.

A full program of technical meetings was again arranged in cooperation with the National Engineering Societies during 1974 and 1975.

From 1974 onwards, one very active IEEE person, Colin Kline, lecturer at the then Ballarat College of Advanced Education (now University of Ballarat) was very actively promoting student memberships to the newly accredited engineering degree streams in this regional Victorian college. Colin became the 1st IEEE Student Councilor at the BCAE in 1986.

In September 1975, Papua New Guinea achieved independence, but was only dropped from the Australian Section in 1979. IEEE Members located in Papua New Guinea are still registered on the Australia Council member database, with a total of 10 listed May 2005.

The 1975 IEEE President, Arthur Stern, visited the Section in October 1975. In late 1975, as a result of an earlier petition, the Victorian Sub-Section was formed. The Victorian sub-section was active for around 3 years, and then became dormant. Mr Clementson retired at the end of 1975 and was succeeded as Chair by Dennis Bradshaw, who had been secretary of the Section.

During 1976, the Australian Section nominated Mr Vasseleu for the position of Region 10 Director for 1977-78. The IEEE Board of Directors appointed him Director in December the same year. Peter Greenwood was the corresponding member located in Papua New Guinea. The local Newsletter name was changes simply from IEEE NEWS to the current newsletter title of "CIRCUIT". The "CIRCUIT" logo was derived from a printed circuit interpretation of the word.

Dr. Ivan Getting, the 1978 IEEE President, visited and met with the Section members in October 1978.

Mr. Bradshaw retired in 1978 and was succeeded as Chair by Dr. Ramutis Zakarevicius. Mr. Clementson died in November 1978 and, in early 1979, the L.J. Clementson Memorial Student Prize was established.

In June 1981, Brian Love was appointed Chair of the Victorian Sub Section, which had been inactive for several years. An inaugural meeting was held in October 1981. A new committee was elected and the Victorian Sub Section was reactivated.

President Damon visit to Sydney, Australia 1981 (left to right, Prasad Kodali, Richard Damon, Ramutus Zakrevicius and Max Simons)

The 1981 IEEE President, Dr. Richard Damon, visited the Section in August 1981.

At the end of 1981, Dr Zakarevicius retired and was succeeded by Max Simons, who had been Secretary of the Australian Section. Mr Tuan Bui was the new 'Circuit' newsletter editor, and was working with Cochlear. Tuan later moved to the USA.

Dr. Robert Larson, the 1982 IEEE President, visited the Victorian Sub Section in the latter part of 1982 as well as the Australia Section in NSW.

Dr. Harry Green was the first "elected" Region 10 Director – Delegate from Australia for 1983-84 elected by members. Earlier Director James Vasseleu was elected as the Region 10 director by the IEEE assembly for the 1977-78 term. While Harry was never represented on the Australia Section committee, he was the Canberra liaison and host for many international visitors to the Australia Capital Territory (ACT).

A petition to upgrade the Victorian Sub Section to full Section status was prepared and submitted to IEEE Headquarters by Brian Love in mid1983; approval was obtained in September 1983, but was not initiated until 1984.

The 1983 IEEE President, Dr. James Owens and the IEEE General Manager, Eric Herz, visited the Victorian and Australian Sections during September 1983. They also visited the Canberra headquarters of the Institution of Engineers, Australia, for discussions about formalizing a cooperative agreement.

Although no student branches had yet been established in Australia, Australian students participated in all the Region 10 student prize competitions held since 1972. Dr. Robert Radzyner was responsible for student activities including submission of entries for the Region 10 competitions. By 1984, the Centenary year of IEEE, the IEEE

Australian Section membership had grown over five-fold since its inception.

The combined total of the Australian and Victorian Sub-section was in excess of 1700 members. Based on this membership, eight Australians were awarded the 1984 Centenary Medal. They were:

- Ian P. Bates
- Louis W. Davies
- Robert Henry Frater
- Douglas G. Lampard
- Hugo K. Messerle
- Peter I. Somlo
- Sir A.W. Tyree
- James J. Vasseleu.

A Region 10 Centenary 'blue book' compilation was produced in 1984 with material from that document used here. The Australian contribution to this book was prepared by Jim Vasseleu and Max Simons.

Max Simons retired as the Australia Section Chair in 1984 and was succeeded by James Vasseleu with Alan Rister as Secretary.

Early 1985, Jim Vasseleu petitioned for the formation of an IEEE Australia Council (AC). The first AC meeting was on 30th May 1986. Max Simons was the founding Chair of the IEEE Australia Council, with Richard Clark being Secretary / Treasurer.The initial plan for the section structure in Australia was:

- Queensland / Papua New Guinea
- New South Wales / Australian Capital Territory
- Victoria / Tasmania
- South Australia / Northern Territory
- Western Australia.

With the formation of the Victorian Section and the desire for other states to be equally represented, eventually lead to a change in the way IEEE operated in Australia and in New South Wales in particular. Approval for the formation of an Australia Council was granted in Dec 1985. Refer to the IEEE AC website: http://ewh.ieee.org/r10/australia/council/

Sections were then formed elsewhere in Australia as follows:

Section Name	Inauguration Date
Victoria (VIC)	12 August 1983
Western Australia (WA)	24 May 1984
Queensland (QLD)	22 February 1985
South Australia (SA)	23 August 1985
Australia Capital Territory (ACT)	18 November 1988
North Queensland (FNQ)	29 January 1994

Early History of IRE/AIEE/IEEE in INDIA

V Prasad Kodali

S R Kantebet of Bombay received IRE Fellow Award in 1949 'For his services as an educator, engineer and administrator in the fields of radio and cable communications in India'. He was also later elected as IRE Vice President for 1953. Maneklal S Thacker was elected Fellow of AIEE in 1949 (there was no citation with AIEE Fellow Award in those years). A Srinivasan was elected IEEE Fellow in 1968 'For contribution to education and research in electrical power engineering'. These are the recognitions received by members of IRE/AIEE/IEEE from India before 1969.

Formation of an IRE India Section was approved in November 1959; but there is no record of any activities of this Section, or who the Section officers were.

IEEE India Section

IEEE India Section was formed during 1969, with Faqir C Kohli as founding Chair. T R Subrahmanyan was the Vice Chair, and H B Shah was the first Secretary of the Section.

IEEE Sub-Sections were formed in Bangalore, Madras, Kanpur and Delhi in the next three years. IEEE Student Branches were formed at the Regional Engineering College, Warangal; and later at Indian Institute of Technology, Bombay. By December 1971, there were 575 IEEE members throughout India (2 Fellows, 109 Senior Members, 390 Members, 42 Associates and 32 Student members).

An important activity initiated during 1972 was the publication and distribution of a quarterly news bulletin 'IEEE News', starting from April 1972. IEEE 1972 President Robert H Tanner visited India during June 1972, and addressed meetings in different cities. His technical talk on 'Recent developments in communications in North America' held at Homi Bhabha Auditorium, Bombay on 6th June was attended by about 70 IEEE members and 600 other invitees.

1972 IEEE India Section Executive Committee (seated from left: V Prasad Kodali (Secretary), N Subramanian, H L Gidwani (Treasurer), Ravi Kirloskar (Bangalore Sub-section Chair), M G K Menon (Chairman, Electronics Commision & Chief Guest at ACE), K R Ramnath (Delhi Sub-section Chair), F C Kohli (Section Chair) and D N Purandare (Section Vice Chair). Standing at far right is the Founder Secretary of IEEE India Section H B Shah

Inauguration of IEEE India Annual Convention and Exhibition by Prof MGK Menon, Chairman, Electronics Commission (also seen seated are FC Kohli, Section Chair and VP Kodali, Section Secretary)

Ravi L Kirloskar inaugurating the exhibition at ACE 1973

During 1972, planning and preparation was also done to conduct an Annual Convention; and this activity culminated in the organization of first 'Annual Convention & Exhibition (ACE) of IEEE India Section during 31 January – 2 February 1973. Two one-day Tutorials were also conducted as part of ACE on 31 January 1973. These activities held during 1972-73 increased the visibility of IEEE in India, and projected IEEE as a professional forum organizing high-quality technical programs in the country.

There was a rapid growth in IEEE membership in India after 1972. Visits of IEEE Presidents John Guarrera (1974) and Arthur P Stern (1975) provided further momentum to growth of IEEE activities in India. These dramatic events, and large physical distances in India, led to the creation of IEEE India Council in 1976 (first IEEE Council established in Region 10) with Faqir C Kohli as the founder Chair, and formation of IEEE Sections in Bombay, Delhi and Bangalore.

Flagship activities, viz., publication of IEEE News, and organization of IEEE-India ACE have been continued since their inception in early 1970s, and contributed very substantially to the growth of IEEE's visibility in India, as well as generation of surplus funds to support IEEE activities throughout India.

IEEE –India ACE was renamed INDICON in 2004, and continues to be conducted annually by the IEEE India Council now, nearly 50 years after the first IEEE-ACE was conducted in 1973.

IEEE Society Chapters

The first IEEE Society Chapter to be formed in India was the PES Chapter in 1970. After that, Joint ED/MTT Societies Chapter and Joint AES/Com Societies Chapters were formed during 1974 and 1976; both of them with V Prasad Kodali as the Founder Chair.

Vijay K Bhargava & Whitfield Diffie delivering a 10-day intensive lecture course on secure communications, Hyderabad 1983

Continuing education programs and intensive tutorials by top experts from industry and academia of North America have been the hall-mark events conducted by IEEE Society Chapters during 1970s and early 1980s. Intensive Tutorials of seven days duration in the field of Radar by Dr. Eli Brookner during 1980 and 1984 in Madras and Bangalore; and by Dr. Charles Cahn, Dr. NS Jayant, Dr. Witfield Diffie and Prof VK Bhargava in the field of Communications conducted in Bombay and Hyderabad for 10-days each during 1982 and 1983 attracted more than 100 registered participants each, and projected IEEE as a source of high quality continuing education programs. IEEE-India Joint AES/Com Societies Chapter was awarded "1978 Outstanding Chapter of the Year Award" by the IEEE Aerospace and Electronic Systems Society.

NS Jayant from Bell Telephone Labs lecturing at the 10-day Intensive Lecture Program held in Hyderabad, 1983

Early History of IRE/AIEE/IEEE in JAPAN

Toshihiko Sugie

Prof. Motoji Shibusawa (Left side) at Electrical Laboratory, Ministry of Communications, Tokyo, Japan around 1910
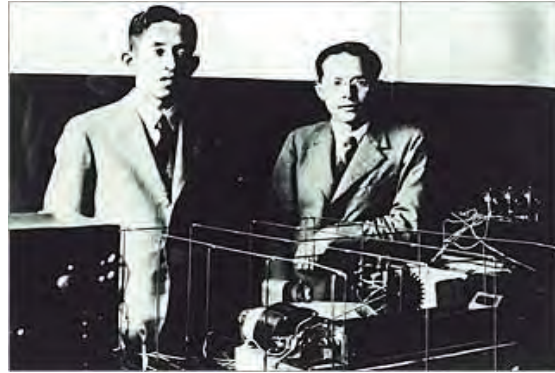
Prof. Yasujiro Niwa (Left) and Mr. Syoujiro Kobayashi(Right) at NEC, 1928

Historical beginnings before establishment of IRE Section

1929: The world Engineering Congress was held in Tokyo. At that time, Prof. Motoji Shibusawa was elected an Honorary Member of AIEE (American Institute of Electrical Engineers).
1953: Prof. Hidetsugu Yagi was elected a Fellow of the IRE (Institute of Radio Engineers).
1954: Prof. Yasujiro Niwa was elected a Fellow of the IRE.

Establishment of IRE Section

1955: By the recommendation of Dr. George W. Bailey and Prof. Ernst Weber, Dr. Fumio Minozuma held a meeting to form a Tokyo Section on 20th October. The petition to establish Tokyo Section of the IRE was approved by the Board of Directors in December, 1955. At this time, total membership of Tokyo Section was 50.

1956: First Section Executive Committee Meeting was held on 6th February.
1956: First Section Meeting was held on 4th April. Chairman: Prof. Hidetsugu Yagi, Vice Chairman: Prof. Yasujiro Niwa, Secretary/Treasurer: Dr. Fumio Minozuma.
1957: Prof. Yasugiro Niwa was elected to the Vice President of the IRE.
1958: MTT Chapter was organized as the first Chapter in Tokyo Section in November.
1958: Publicity Committee was established June 1958, and "Denshi TOKYO"-Bulletin of Tokyo Section was issued March 1959. The "Denshi TOKYO" is published until number 33 of 1994.
1963: With the merger of IRE and AIEE to form the IEEE, Tokyo Section of the IRE was renamed as IEEE Tokyo Section. Section covered entire country.
At the time of establishment of IEEE Tokyo Section, the total membership was 573 (F:6, SM:84, M:252 ,A:90, St:141).

Distinguished gathering at the Eiichi Shibusawa House with the World Engineering Congress participants, 1929. Eiichi Shibusawa in the center of the front row, Motoji Shibusawa in the back.

Mr. Harold. B. Richmond and Prof. Hidetsugu Yagi, 1958 Spring, at Tokyo Univ. Campus

Tokyo Section meeting on 19 May, 1964

Section Officers of Tokyo Section: 1955–1984

Year	Chair	Vice-chair	Secretary
1955-1956	Hidetsugu Yagi	Yasujiro Niwa	Fumio Minozuma
1957-1959	Yasujiro Niwa	Issac Koga	Fumio Minozuma
1960-1961	Issac Koga	Miyaji Tomota	Fumio Minozuma
1962-1963	Miyaji Tomota	Kiyoshi Morita	Fumio Minozuma
1964-1965	Kiyoshi Morita	Miyaji Tomota	Takashi Okada
1966-1968	Koji Kobayashi	Takashi Otsuki	Yukimatsu Takeda
1969-1970	Tatsuji Nomura	Osamu Nishino	Ichiro Tagoshima
1971-1972	Hiroshi Shinkawa	Sakae Yamamura	Shintaro Oshima
1973-1974	Sjigeo Shima	Sogo Okamura	Tetsuo Tsukamoto
1975-1976	Toshifusa Sakamoto	Kenji Kakizaki	Takashi Nakagawa
1977-1978	Noboru Takagi	Toshihiko Kubo	Tadamasa Hirai
1979-1980	Satoshi Kojima	Zen'ichi Kitamura	Kaneyuki Kurokawa
1981-1982	Eiji Sugata	Takashi Kitsurekawa	Hiroshi Yokohama
1983-1984	Kenji Ogata	Michiyuki Uenohara	Yoshio Miyagi

After Establishment of IEEE Section (up to 1984)

1964: International Conference on Microwave, Circuit Theory and Information Theory (ICMCI) was held in Tokyo, Japan 7th-11th September 1964, as the first international conference sponsored by IEEE Tokyo Section.

1965: Dr. Hanzo Omi was appointed as a member of the IEEE Board of Directors in charge of Region 9.

1966: Membership Directory of Tokyo Section was published.

1967: Special Certificate was delivered from the President of the IEEE for having achieved the largest percentage net increase in IEEE membership in Region 10 during 1966.

1967-68: Mr. Shigeo Shima was elected and served as Director of Region 10.

1968: Shizuoka University Student Branch was established, as the first student branch in the Asia-Pacific Region.

1971-72: Mr. Tatsuji Nomura, Mr. Ichiro Tagoshima and Prof. Sakae Yamamoto were appointed and served as Director, Secretary and SAC Chairman of Region 10, respectively.

1972: Tokyo Section Bylaws were framed.

1973:3rd Region 10 Meeting was held in Tokyo on 31st August, and 1st September.

1975: Strong and long lasting support of the industry has started for the IEEE operation in Japan.

1975: Total membership of Tokyo Section was 1,915 (F:46, SM:173, M:1,400, A:99, St:197).

1975-76: Dr. Hiroshi Shinkawa and Mr.Takashi Nakagawa were elected and served as Director and Secretary/Treasurer of Region 10, respectively.

1977-79: Prof. Masaharu Okochi was appointed as a member of the Membership Development Committee of the IEEE, and also served as the Chairman of R 10 MDC.

1981-82: Prof. Hiroichi Fujita was appointed and served as Chairman of R 10 EAC.

1983: Total 3,664 (F:115, SM:292, M:2,900, A:117, St:240)

F: Fellow, SM: Senior Member, M: Member, A: Associate Member, St: Student Member

IEEE President Tanner (front, left side), Prof. Koga, Prof. Niwa, Prof. Shibusawa, and R10 Director Mr. Nomura (from left to right), on June 14 1972 at Tokai Univ., Tokyo.

Key Conferences conducted by section

International Conference on Microwave, Circuit Theory and Information Theory (ICMCI) was held in Tokyo, Japan 7th-11th September 1964, as the first international conference sponsored by IEEE Tokyo Section

Key achievements in Industry collaboration

Strong and long lasting support of the industry has started for the IEEE operation in Japan in 1975.

Awards and Recognitions (by 1984)

Major Annual Medals: Founders Medal

1972: Mr.Masaru Ibuka, 1979:Dr. Hanzo Omi, 1982: Mr.Shigeru Yonezawa, 1984: Dr. Koji Kobayashi. Total of 4 Medals were awarded.

Technical Field Awards

1961: Dr. Lro Esaki, et.al. Total of 10 field awards.

Prize Paper Awards

1961: Prof. Eiichi Goto, 1969:Toshiro Koga. Total of 2 awards.

Other IEEE Awards

Total 17 awards were presented.

IEEE Society Chapters

1958: MTT Chapter was organized as the first Chapter in Tokyo Section in November. The formation of new chapters has been continued up to now. By 1983, 27 chapters were established (see table next page) A total of 68 technical society chapters have been formed under various Sections and Council by 2017.

Student Branches

IEEE Student Branch of Shizuoka University was established on 25th March 1968, by Dr. Seichi Okamura with the advice and help from Dr. Shizuo Mizushina. This is the first student branch in the Asia-Pacific Region. The first general meeting was held with more than 20 attendees in June 1968. Today, there are 30 Student Branches in Japan. They conduct regular and special activities to improve technical knowledge and management skills, and to enhance networking among young professionals and senior members in academia and industry.

The first general meeting of Shizuoka University Student Branch in Jun 1968

Chapters established: 1955-1984

Established		Chapter	Organizer
1958	Nov.	MTT	KiyoTomiyasu
1965	Feb. 27	PE	Takashi Ohtsuki
1967	Feb.	C	Masaharu Okochi
1970	Mar. 10	EMB	Toshifusa Sakamoto
1971		ED	Jun-ichi Nishizawa
	Apr. 21	CT(CAS)	Yoshio Moriwaki
	Oct. 14	BTR(BCCE)	Gentaro Miyazaki
1972	15-May	AP	Yasuto Mushiake
1973	Apr. 6	COM	Yasuo Taki
		IM	Osamu Nishino
		IA	Senichi Masuda
1974	Aug.	SMC	Masaharu Okochi
	Nov.	EI(DEI)	Hideo Okamoto
1975	Jan.	PHP(CHMT)	Hajime Sasaki
1977	Jun. 20	MAG	Yoshifumi Sakurai
1979	Jul. 17	VT	Morio Akitama
1980	Jun. 16	EMC	Risaburo Sato
1981	Apr. 8	IT	Yasuo Taki
	Jull. 1	E	Hiroshi Koga
	Jul. 20	NPS	Shiro Hohki
	Sept. 18	CS	Shinzo Kodama
1982	Jul. 7	GRS	Sadao Fujimura
	Nov. 19	ASSP	Hiroya Fujisaki
	Nov. 19	IE	Tung Hai Chin
1983	Aug. 5	SIT	Hisao Kimura
	Aug. 5	SU	Nobuo Mikoshiba
	Nov. 14	R	Noboru Takagi

IEEE Australia Council

Council Chair Name: Dr Zia Ahmed
Year Started: The Australian Section was formed on 16 August 1972, which transformed into NSW Section and with the establishment of new Sections in Australia led to the formation of IEEE Australia Council on 30 May 1986.
Current member strength: 7,756 members in Seven Sections (Australian Capital Territory, New South Wales, Northern Australia, Queensland, South Australia, Victorian, Western Australia)

Council history

The Australian Section was established on 16 August 1972 and James Vasseleu was elected as the Chair. In 1976 the Australian Section successfully nominated Mr Vasseleu for the position of R10 Director for 1977-78. In 1975 the Victorian Sub-Section was formed and by 1984 the combined total of the Australian and Victorian Sub-section was in excess of 1700 members. By 1985, the Victorian, Western Australia, Queensland and South Australia Sections had been formed. In 1984 James Vasseleu again became the Chair of the Australian Section and in 1985 petitioned for the formation of an IEEE Australia Council (AC).

With the formation of the new Sections and plans for all Sections to be equally represented, eventually lead to a new structure of IEEE in Australia. Approval for the formation of an Australia Council was granted in December 1985. The Australian Section was renamed as the New South Wales Section and the Australia Council was formed. The first AC meeting was held on 30th May 1986. Max Simons was the founding Chair of the IEEE Australia Council, with Richard Clark being the Secretary/Treasurer. The primary role of the Council is to provide a forum where the Australian Section can discuss matters of common interest and co-ordinate responses to common problems.

Key achievements

- Successful coordination of IEEE activities among member Sections and

- Establishment of awards, open for student activities across whole Australia.

James Vasseleu

Key conferences conducted by Council

One of the main activities of the Australia Council, in conjunction with the New Zealand Council, is to organise the Australia and New Zealand Student and Young Professionals Congress (ANZSCON). The first ANZSCON was held in Melbourne, Australia in November 2010, with subsequent congresses held in Auckland (2012), Brisbane (2014) and Sydney (2017). The main objective of the Congress is to enhance the Australia-NZ contribution to activities in IEEE Region 10. Usually, these congresses address particular themes of relevance to countries in the Asia-Pacific region, with particular reference to the needs and aspirations of students, recent graduates, and those at an early stage of their professional career

Awards and Recognitions

The IEEE Australia Council has established two awards for student activities:

Australia Council Outstanding Student Branch Competition – To recognize outstanding Student Branch achievements by student members engaged in activities conforming to IEEE objectives and purposes.

Australia Council Student Paper Contest – To encourage research and enhancement of writing skills for the publication of research paper.

2005 Australia Council members with Prof Janina Mazierska

2007 Australia Council members

2014 Australia Council members

IEEE India Council

IEEE INDIA COUNCIL representing all 11 Sections in India
http://sites.ieee.org/indiacouncil/
Council Chair Name : Dr Sivaji Chakravorti
Year Started : 1976 [20 May 1976]
Current member strength : 48,889 as of December 2016

Council history

IEEE India Council is the umbrella organisation which coordinates IEEE activities in India. Its primary aim is to assist and coordinate the activities of local "Sections", in order to benefit mutually, and avoid duplication of effort and resources. IEEE India Council comprises eleven sections and nine subsections across India. IEEE India Council succeeds the IEEE India Section which itself was formed in 1967. The Council is one of the six councils in the Asia Pacific Region (Region #10 of IEEE). All members of IEEE, resident in India, are automatically members of the India Council. The India Council is managed by an Executive Committee elected annually by all the members of India Council.

Key achievements

2015: IEEE India Council has been registered as a Society under the Karnataka Society Registration Act, 1960 as of April 2015 and has statutory and tax compliance with Indian Law

2016: India Council Execom has published on the IC website special norms for conference organisation and technical co-sponsorship which require robustness of the technical program committee and care in review of submissions.

2015
25 April, 2015: 1 day workshop for 'Conference Organizers' Hyderabad

8-9 August, 2015: AISYC 2015 Rajagiri, Kochi 211 students and 38 Young Professional members.

22-23 August, 2015: 3rd National Workshop on Cyber Security SJB Institute of Technology, Bangalore

7-8 November, 2015: IEEE WIE SYMPOSIUM 2015 at Amrita School of Engineering, Bangalore

Dec 2015 MV Chauhan Paper contest

2016
25th June, 2016: Virtual Astronaut Appearance with Sunita L. Williams as the speaker.

7-9 October, 2016: AISYWC 2016 at LNMIIT, Jaipur, Rajasthan JAIPUR Over 270 delegates

12-13 November, 2016: 4TH NATIONAL CYBERSECURITY WORKSHOP @ TCS MUMBAI 100+ online

Dec 2016: MV Chauhan Paper contest

Key conferences conducted by Council

The annual India Council Conference which began as ACE and which was rebranded as INDICON from 2004 continues from strength to strength. Over the past few years, INDICON has emerged as a well-recognized and an eagerly anticipated event in the country because of its high quality technical sessions, keynotes and also for the networking opportunities. INDICON compares favourably with other Regional IEEE Conferences.

INDICON 2014 PUNE, INDICON 2013 BOMBAY, INDICON 2012 KOCHI, INDICON 2011 HYDERABAD are a few of the series over the past five years.

INDICON 2015 was hosted by IEEE Delhi Section at Jamia Milia Islamia University between 17-20 December 2015.

INDICON 2016 was hosted by IEEE Bangalore Section 16-18 Dec at IISc Bangalore was 13th in series.

http://www.indicon2016.in/

Key achievements in Industry collaboration

Industry collaboration was more at the Section Level during the period

Key highlights from Young professionals

A team of young professionals is in place and had taken active part in the organisation of AISWY conferences during the period.

Membership Details												
Dec 2014												
Membership	H	LF	F	LS	SM	L	M	AM	GSM	HiGr	StM	Total
Active	3	24	42	106	1,555	24	12,184	547	6,217	20,702	27,551	48,253
Dec 2016												
Membership	H	LF	F	LS	SM	L	M	AM	GSM	HiGr	StM	Total
Active	1	24	42	119	2,036	31	12,218	312	5,631	20,414	28,475	48,889

Key highlights from WIE

IEEE WIE SYMPOSIUM 2015 7/8 November 2015 at Amrita School of Engineering, Bangalore

Closely involved in AISYWC at Jaipur, and R10 SYWL Congress in Bangalore as also WIECON in Pune.

Other Events supported by R10 WIE

- 🔴 "Spread the Word, for prevention is Better than Cure" in association with GRIET SB (Hyd)

- 🔴 "WIE National Leadership Conference" in association with SPIT Mumbai

Awards and Recognitions

Outstanding Student Branch awards were initiated during the period 2015 and 2016 based on criteria of regular annual reporting and consistent upward trend in membership

Special initiatives/programs started by Council

Two IEEE Events of significance to members all India, during 2016 -

(1) The 2nd Admissions & Advancement Senior Member elevation panel for 2016 was held on 19 March 2016 in Mumbai at which Dr JB Cruz, Chair A&A Committee was joined by Ms Fanny Su of Singapore Office and 20 senior members of IEEE Bombay Section. In all the panel cleared 307 elevations. This was the second such meeting in India after the one held a couple of years ago in Bangalore.

(2) IEEE Board India Outreach to Mumbai and Bangalore (22-26 August 2016) on the occasion of the R-10 Golden Inaugural celebrations at Bangalore on August 24.

Seven members of the IEEE Board led by President Barry Shoop visited Indian Institute of Technology (IIT) Bombay, Society for Innovation and Entrepreneurship (SINE), Larsen & Toubro Group Companies and Tata Group companies in Mumbai. In Bangalore the outreach was to Indian Institute of Science (IISc), TIE Young Entrepreneurs, India Electronics & Semiconductor Association, Intel India Incubation Center, Indian Space Research Organization.

IEEE Japan Council

Section Chair Name : Toshitaka Tsuda
Year Started : 1999
Current member strength : 14,266

Section history

IEEE activities in Japan started as IRE Tokyo section with only 50 members in 1955 (prior to IEEE), and was renamed IEEE Tokyo section with IEEE establishment in 1963, covering all IEEE members in Japan until 1998 when 8 IEEE sections were established. Japan Council was established in 1999, aiming at coordinating and harmonizing section activities in Japan. Currently 9 sections are active and membership has expanded beyond 14,000. Japan Council celebrated the 60th anniversary of IEEE Japan sections activities jointly with the Region 10 Golden Jubilee celebration at Makuhari, Japan on 3rd March 2017, Japan.

Key achievements

Japan Council Industry Promotion Committee (JC-IPC) was established in 2014 to promote strong relationships with industry.

Key conferences conducted by section

R10 Humanitarian Technology Conference (HTC) held in Sendai in 2013 was IEEE's first humanitarian conference organized in the Asia-Pacific Region; it focused on how engineering could contribute to the victims of and minimize the damages caused by natural disasters.

Key achievements in industry collaboration

IEEE Japan Council arranged tight discussions on IEEE contributions with engineers in industry when IEEE BoD Industry Outreach delegation visited Japan in May 2015 & August/September 2016. The delegation visited a telecom operator, major electronics/robotics companies, the Cabinet Office, the Federation of Economic Organizations, the National Institutes (NICT, AIST) as well as Institute of Electronics, Information & Communication Engineers. The 2016 Supporting Friend of IEEE Member and Geographic Activities Award was presented to 8 companies in the Tokyo Section, with sincere appreciation, in recognition of their long lasting and extensive support of IEEE Section activities in Japan.

Key highlights from Young Professionals

We started Japan Students/YP/WIE/LMAG workshop in 2015 for personal interaction across the borders of area, generation, position, and technical field. In 2017, we established the Japan YP coordinator to form a more powerful network. This coordinator will support all YP active members in Japan and help to establish new YP Affinity Groups.

Key highlights from WIE

IEEE Japan Council WIE celebrated its 10th anniversary in 2015.

We continuously promote WIE activities such as WIE Conference focusing on future technologies, Career Development Workshop, Networking and Essay Contest to facilitate the global inspiration, engagement and advancement of women engineers in Japan.

Awards and Recognitions

We have aggressively promoted nominations of various awards and recognition programs in IEEE by Sections in Japan. For this purpose, we established the Japan Council Awards Committee (JC-AC) in 2014, which consists of representatives of all sections in Japan; it exchanges information related to promotion.

Special initiatives/programs started by section

History Committee was established to promote IEEE Milestone recognition in 2006. Members received a number of IEEE medals and awards, while companies received more than 30 Milestones. Currently, Japan Council is assisting sections in promoting the stronger involvement of industry engineers, student, YPs, WIE and LMAG. Thanks to the MGA support as a part of Japan initiative project, we started MAW in 2014 aiming to increase IEEE value for industry engineers. MAW became a series of events hosted by each section. Tokyo MAW and Kansai MAW were held in 2014 and 2015, respectively. Nagoya MAW is scheduled for 2017. Today, 30 Student Branches have been established in Japan and counsellors assist student activities in their branch. Moreover, 68 chapters (distributed among the sections) have been conducting vigorous activities.

IEEE Techical Tour of Japan May 2012.

IEEE Techical Tour of Japan May 2012.

The IEEE BoD Industry Outreach delegation visited Japan in May 2015

IEEE Japan Council WIE 10th anniversary ceremony in 2015.

IEEE Japan Section's 60th anniversary celebration held jointly with the Region 10 Golden Jubilee celebration at Makuhari, Japan on 3rd March 2017.

A Ravikiran & Mehvish Zahoor

IEEE Australian Capital Territory Section

Section Chair Name: Ross Summerfield
Year Started: 1988
Current member strength: 500

Section History

The Australia Capital Territory (ACT) region was geographically covered by the original IEEE Australia Section from 1972 to 1985, and was part of the IEEE NSW Section from 1985 through to 1988. The ACT is fully geographically bound by the state of New South Wales. Dr Harry Green of the ACT was first "elected" Region 10 Director for 1983-84. This coincided with the Region 10 boundary adjustments. While Harry was never represented on the Australia Section committee, he was the key Canberra liaison person and host for many international visitors to the ACT. The 1983 IEEE President, Dr James Owens and the IEEE General Manager, Eric Herz, visited the Canberra headquarters of the Institution of Engineers (now known as Engineers Australia), Australia in 1983 for discussions about formalising a cooperative 'Australia wide' professional institutions member agreement. (To be known as the tri-partite Agreement).

Dr Lal C. Godara prepared the section petition and became the Australian Capital Territory Section's first Chair. When Lal started section formation petition, Professor Harry Green had already left Canberra for Adelaide. Lal noted, "I obtained the list of members whose address were in our region from NSW Section Chair. After two three reminders I got the required number of signatures. These documents I sent to IEEE HQ and that was it. In the petition document I also asked people who were willing to help and from there I formed our first committee, we opened a bank account, and started a newsletter. In those days we used to fold the newsletter and used to stuff in the envelope ourselves as we were short of funds. We used to have our monthly meetings at ADFA after work. I used the ADFA facilities for photocopying, printing, postage and so on. Any way that was the starting of its history." The ACT Section was established on 21 August 1987 and officially recognised as having been formed on 18 November 1988.

Achievements in Industry Collaboration

Fairly regular annual industry events are held. The following are examples of the past 2 years: In 2015, one industry visit was organized to DamSmart, a company specializing in digitization of content, on April 9, 2015. In a 2016, YP and WIE joined forces and organized an industry event where 4 representatives of local industries attended, presenting their companies (Thales Group, Dyesol, CEA Technologies and NSW Health and APS HR.).

Highlights from Young Professionals:

ACT Section 25 Years Celebrations: Quite a number of activities were held in 2013 to celebrate the section's 25th anniversary. Most notable was probably the Lake Burley Griffin Clean-up Australia day rubbish clean-up (held on 12 October), thanks to Elias Lopez for IEEE GOLD as it was known then. This venture included canoeing around the edge of Lake Burley Griffin at Black Mountain Peninsula to collect rubbish that had lodged itself into the vegetation at the bank of the lake and also on a nearby island, as well as the Peninsula's recreational areas.

Key Highlights from WIE in Section:

Local chapter formed in 2014 with Assoc. Prof. Girija Chetty of the University of Canberra organizing its formation in 2013, being its first chair.

IEEE Bangalore Section

Section Chair Name: Dr Debabrata Das
Year Started: 1976
Current member strength: 7243

Section History

Digging into the IEEE organization records uncovered a letter dated 15 Dec 1971, from Emily Sirjane, Manager, Membership services to Mr. HB Shah, Bombay informing the approval of IEEE President's visit (1974): From L to R Dr. B.I. Gururaj, Prof. Paramashivaiah, Dr. R.P. Shenoy, Mr. Guarrera, IEEE President, Mr. Ravi Kirloskar, Chairman Bangalore Subsection, Mr. P.N. Hiriyannaiah, Dr. HV Gopalakrishna the petition to establish Bangalore Subsection of the India Section on 14 Dec 1971. The letter goes on to add that the territory of the new Subsection was all the state of Mysore. Mr. P.N. Hiriyannaiah, founder secretary/treasurer of Bangalore Section recounting the establishment of Bangalore subsection and initial activities said, "IEEE Bangalore sub-section was established at the instance of the then India Section and the initiative of two senior members, Mr. L. Subramanyam of Bombay Section and Dr. HV Gopalakrishnan. When they thought about it, they wanted a firm ground to start and a dynamic person with a professional attitude to take over the chairmanship. Hence Mr. Ravi. L. Kirloskar was approached and he not only accepted to become Chairman but also contributed to its growth. He attended all the committee meetings and gave both secretarial help and financial support. The India Section found the growth phenomenal. Bangalore sub-section was asked to host Annual Convention and Exhibition (ACE) during 1975, which turned out to be very successful with technical sessions at the premises of the Institute of Engineers and the exhibition at Banquet Hall of Vidhana Soudha."

The number of members as on 31 Dec 1976 was 313 consisting of 240 higher grade members and 73 students. In comparison, as on 31 Dec 2000, membership stands at 1657 (Higher grade: 1188 and Students: 469). The higher grade members include 4 Fellows, 99 senior members, 744 members and 341 Associate Members. There were 18 Life members in the higher grade members.

The founder-Chairman of the Section was Mr. Ravi Kirloskar. Other officers of the Section were Dr. HV Gopalakrishna, Vice Chairman and Mr. PN Hiriyannaiah, Secretary/Treasurer, Mr. KPP Nambiar, Chairman, Kerala sub-section and Mr. EN Naraynaswamy, Chairman Tamilnadu sub-section. At that time, the All India council Chairman was Mr. F.C. Kohli. Tamilnadu became a Section in 1978 and Kerala became a Section in 1983. Mr. Ravi Kirloskar steered the Section till 1979.

Key Conferences

A major event of the Section was the International Conference that was organized jointly by the Indian Institute of Science in December 1984, to commemorate both the IEEE Centennial and the Platinum Jubilee of the IISc. The conference was titled "International Conference on Computers, Systems and Signal Processing". This conference featured a large number of papers (more than 300), by a galaxy of very prominent researchers, and was scheduled in 7 parallel tracks.

A subsequent International conference on Communications, Control, and Signal Processing, held in July 2000, was also well attended. The conference was inaugurated by Dr. APJ Abdul Kalam, the then Principal Scientific Advisor to Government of India, who later became 11th President of India. Plenary talks were given by Prof. T Kailath and Dr. Narayan Hingorani. 82 technical papers were presented in 18

Mr Hiriyannaiah addressing ACE 75

On the Inaugural dias: L to R Prof. Khincha, Dr. Seo, Sri. Inamdar, Prof Mehta, Prof. Rajaraman, Prof. Sankaran

sessions over three days. In the year 2003, Bangalore Section organized a flagship international conference of IEEE R-10.

The conference, with its theme of CONVERGENT TECHNOLOGIES FOR THE ASIA-PACIFIC, brought in excellent response in terms of paper submissions and tutorial proposals. From the year 2004, Section is organizing International Symposium on Microwaves every alternate year, In this series, the section has already organized ISM-04, ISM-06, and ISM-08 which were very successful and drew a lot of international participation. The section has technically co-sponsored around 50 international conferences over the years.

Awards and Recognitions

IEEE Fellows who belong to the Section includes Dr. M. Ramamoorty, Dr. M. Vidyasagar, Prof M.A.L. Thathachar, Prof L.M. Patnaik, Dr. Paulraj and Prof N. Viswanadham and Prof. V.U. Reddy. Several IEEE awards for technical excellence were won by several members. Some of the notable awardees include by Prof LM Patnaik, Dr. Anurag Kumar, and Dr. Kumar N Sivarajan.

Mr. Ravi L. Kirloskar became the Chairman of the India Council after Mr. F.C. Kohli's term. Later Mr. P.N. Hiriyannaiah succeeded him. Prof. H.P. Khincha, Chairman of the Section during 1986-87 has been Secretary of Region 10, Chair of India Council and also held several IEEE Headquarters posts. Prof. H.P. Khincha, Prof. Lawrence Jenkins, Mr. S. Parameswaran, Prof. K. Rajgopal, Mr. S.V. Sankaran, Dr. Surendra Pal and Mr. K.N. Srinivasan were awarded IEEE Millennium medals. The GOLD group was awarded IEEE Gold leadership recognition award during 2001. Several members received awards and recognition from other professional societies such as IETE.

Achievements in Industry Collaboration

Bangalore section has led industry collaboration with several initiatives and notable ones are:

IEEE Industry Day in 2009, organized by the IEEE Comsoc Industry team.

IEEE SmartTech Workshop / Metro area workshop from 2014-2017 on various emerging technologies.

Special Initiatives /Programs Started by Section

IEEE Bangalore celebrated the 125 years of IEEE through a special event in 2009 with over 700 participants and chaired by Ex-President of India Hon. Dr. Abdul Kalam.

IEEE Bangalore celebrated 50 years of IEEE in Region 10 with a special ceremony in August 2016 with over 750 participants attending the event.

Women in Engineering

Women in Engineering was started during 2008 in IEEE Bangalore Section. There are 15 affinity groups with around 500 student members and 50 professional members. During 2016, WiE Global Summit was organised by IEEE Bangalore section along with R10. During 10th IEEE Advanced Networks & Telecommunication Systems, WiE Mini Conference was introduced for the first time which was a huge success. Every year many affinity groups get support from R10 to take up funded activities in their Student branches. Section Level WiE activities starts with""Parichaya" – Get to know each other, followed by one event in each of the hubs. "Prathibimba"- Newsletter depicting the activities organised in various affinity groups. Women's Day & Ada Lovelace Day are celebrated as common events across all affinity groups. On an average in a year around 30 WiE activities are organised amongst all affinity groups. Some of the affinity groups adopt schools to conduct STAR Program. The first hub level activity for the year 2017 was "Building Skills for Women Entrepreneur".

IEEE Bangladesh Section

Section Chair Name: Dr. QUAZI D.M. KHOSRU

Year Started: 1993

Current member strength: 2500

Section History

IEEE Bangladesh Section (BDS) was formed in Nov. 1993 with 56 members chaired by Prof. S.I. Khan. Gradually the membership reached the landmark of 1000 in 2014 when Prof. P.K. Saha was Chair. During 2015-16, due to massive initiatives taken by Chair Prof. S. A. Fattah and ExeCom members, numerous quality events were organized, membership reached 2,500 and BDS was awarded "Outstanding Section Membership Recruitment Performance" in 2015 and 2016. In 2015, for the first time BDS organized IEEE R10 Meeting and then first ever section sponsored conference IEEE WIECON-ECE 2015. BDS has 4 societies: COMSOC, PES, EDS/SSCS, and EMBS, very dynamic WIE and YP AGs, 30 student branches, and two SIGHT groups. At present, every year BDS organizes SYW Congress, ProTalks, Mini- POCO, provides sponsorship and technical co-sponsorship to about ten conferences.

Key Achievements

2017: Fifth IEEE R10 Humanitarian Technology Conference (R10-HTC) to be organized in Dec., for the first time any R10 conference will be held in Bangladesh.

2016: First time getting a position in R10 ExeCom (WIE Coordinator Dr. Celia). Received MGA and R10 level awards. Served as a support section in IEEE R10 SYWLC.

2015: First time, R10 Meeting was organized (110 foreign dedicates). IEEE WIECON-ECE

2015, first ever section sponsored conference was organized (90 foreign delegates).

Key Conferences:

Bangladesh Section Sponsored Conferences:

- Fifth IEEE R10 Humanitarian Technology Conference, Dec 21-23, 2017
- IEEE WIECON-ECE 2016, held at Pune, India, organized by BDS & Pune Section
- IEEE WIECON-ECE 2015, BUET, Dhaka
- IEEE ICIVPR 2017, DU, Dhaka
- Conferences where BDS is a Technical Co- sponsor
- ICECE: (First technically co-sponsored biennial conference since 2001)
- ICCIT: (organized every year, 19 times)

ECCE, EICT, ICAEE, ICCIE, ICECTE, ICEEE, ICEEICT, ICISET, IWCI, MediTec, NSYSS

Key Achievements in Industry Collaboration.

- IEEE Pro Talks – A professional Course- ware on Soft-skills by IEEE Bangladesh Section and top industry professionals from Bangladesh
- Workshop on Industry and Academia collaboration, IIUC, Chittagong -2016
- Regular dialogues between Industry and Academia in various workshops, also joint initiatives in several occasions.

Key Highlights from Young Professionals

- -YP Summit is being organized every year
- -Workshops, Training, Seminar and Technical Tours
- -Young Professionals Graduation Dinner
- -Programs with different IEEE Societies

Key Highlights from WIE in Section

- Regular Workshops, forums, brainstorming sessions for inspiring women engineers.
- Flagship Conference launched: IEEE WIECON-ECE
- Mentoring female engineers/students, empowering them to become a future leader.

Srilanka_congress BDS

R10 meeting BDS

BDS Exe-com receiving HTA Award from IEEE President

WIECON-ECE 2015

IEEE Bangladesh Section Congress 2016

⬤ Conducting STAR and AGE programs

⬤ Outreach programs to inspire female students to join engineering education

Awards and Recognitions

2016: MGA Achievement Award (Fattah), MGA Leadership Award (Celia), R10 HTA Outstanding Activities Award; R10 WIE Section AG Award; Outstanding Section Memb. Recrt. Perf. Award '16, 15, MGM Award; 2015: WIE Inspiring Member Award (Celia); WIE AG of the Year Award-HM; MGA

Achievement Award (Azad), MGM Award, 2014: 1st Prize-R10 Website Contest, IAS Outstanding New Chapter Award (AIUB); '13: R10 WIE Prof. Volunteer Award (Celia), IEEE Day Photo Competition (NSU), 2011: R10 MIMI Award

Special Initiatives /Programs Started by Section

⬤ ProTalks – Professional Couse-ware for Soft skills

⬤ Humanitarian Technology Initiatives for autistic children.Funding unorthodox community projects and reaching out initiatives such as Solar Rickshaw projects, Inspiring K-12 Students about Engineering

⬤ Transparency, Openness and Democratic Process in operations

⬤ The fully democratic election process and budget allocation via voting by members and ex-com in a regular basis.

IEEE Beijing Section

Section Chair Name: Qiuqi Ruan
Year Started: 1983
Current member strength: 8569
Website: http://cie-china.org/index_en.asp

Section History

Among Chinese scientific and technological researchers, there are many people who has joined the IEEE as early as the 30-40s. In the late 1970s, the Chinese academic society began to contact with IEEE and to establish academic exchanges with IEEE. There were delegation visiting each other since then. In 1984, Chinese Institute of Electronics together with Chinese Society for Electrical Engineering, China Institute of Communications and China Electro Technical Society began to prepare for the establishment of IEEE Section in the mainland of China. At the end of 1984, Academician Luo Peilin made a special trip to the United States, and sent the establishment application of the Beijing Section to IEEE. In December of 1984, IEEE approved the establishment of IEEE Beijing Branch. After the approval from the relevant authorities, On July 17 of 1985, IEEE Beijing Section held a formal establish-meeting. Many delegates attended the meeting, include Vice President of Chinese Association for Science and Technology, Wang Shuntong, Chairman of the Chinese Institute of Electronics, Sun Junren, Vice Minister of the Ministry of Electronics Industry, Chairman of the China Society of Electrical Engineering, Vice Minister of Water and Electric Power Mao Heian, President of Beijing University of Posts and Telecommunications Ye Pei-da, China Branch Associate Professor, Lin Zhenshen, four other directors, secretary- general and contact secretary of the four societies, and the first 70+ IEEE members from the mainland of China. The IEEE headquarters sent a delegation to congratulate, and the members of the delegation included Mr. Eldon, Executive Director, Secretary General Mr. Herz, and Director of Academic Affairs, Mr. Engelson. In addition to their congratulations to the establishment of IEEE Beijing Section, they also held a two-day special report to introduce the IEEE regulations, systems, organization, operation and activities. IEEE Tokyo Section also sent a special trip to congratulate.

After the establishment of IEEE Beijing Section, the section conference was held and executive committee was Elected. The members of the 1 st Executive Committee include:

Luo Peilin as the first chairman of the IEEE Beijing section, Yu Enying, Ye Pei-da, Wang Shoujue and Ding Shunnian as the vice chairman, Yu Minji, Xie Gaojue, Shen Dexiong, Li Rucheng and as the executive committee members, Sha zong as the chief secretary and director of the office, Zhou Mengqi as the full-time secretary and deputy director of the office, Ma Guobin, Jiang Huizhen and Wang Ziqiang as the contact secretary. The office space and equipment of Beijing Section were freely provided by the Chinese Institute of Electronics. Shortly after the establishment of Beijing Section, Luo Peilin and Zhou Mengqi on behalf of IEEE Beijing Section attended the IEEE Asia Pacific Region 10 annual meeting. They introduced the reform and opening policies in Chinese mainland, and their speech received great concern from the delegates of R10.

In 1986, the China Computer Federation and the Chinese Association of Automation became the local supporting society of the IEEE Beijing section. In 1987, the Chinese Council of Electricity, Information Science and Technology was established under China Association for Science and Technology. This Council became the strong support organization of IEEE Beijing Section. In 2001, the Chinese Association for Artificial Intelligence also became the support society of Beijing Section. At this point, IEEE Beijing Section has won the strong support of eight national key societies.

There were only more than 70 members when IEEE Beijing Branch was established in China. Up to now, the national membership increased to 6,500+, including 2 Honorary Members, 65 IEEE Fellow and 727 Senior Member. If including the former member who failed to pay the annual fee for various reasons, the total number is more than 8,500. IEEE Beijing Section has established 3 key conferences include ICSICT since 1986, ICSP since 1990, and MAPE since 2005, and hosted two IEEE Asia-Pacific Regional Technology Conferences (TENCON). Each year, she also sponsors or co-sponsors a variety of international academic conferences, and receives a variety of delegations to visit and exchange.

IEEE is a society with history of a hundred of years, which has accumulated a wealth of technical association management experience and more mature rules and regulations. We pay attention to absorbing useful things among it, which has played a certain role in the reform of our society. We hope that during the construction of China's harmonious society in the future, IEEE Beijing Section will play a greater role.

Key Conferences

IEEE International Conference on Signal Processing (ICSP). http://cie-china.org/icsp16/index.asp

Sponsored by IEEE Beijing Section, IET Beijing Local Network and Beijing Jiaotong University, the ICSP 2016 has been the 13th one of the ICSP conference series, which began from 1990 in Beijing. During the past 27 years theory and technology of signal processing have been advanced extremely quickly and spread widely in all the disciplines of engineering and scientific fields. Signal processing has also a great effect on the day-to-day life of the human beings. To keep the pace with the technology development and the state of art of applications, the ICSP is being held once every two years. The IEEE ICSP will bring together diversity of authors and speakers from many nations and regions to share ideas and new perspectives in both theoretical and practical aspects of signal processing.

International Conference on Solid-State and Integrated Circuit Technologyhttp://www.icsict.com/index.asp

ICSICT is sponsored by the IEEE Beijing Section, Fudan University and Peking University. The ICSICT-2016 conference was the 13th in the series aiming to provide an international forum for the presentation and discussion of recent advances in solid-state and integrated circuit technology. The conference was held on Oct.25-28, 2016 in Hangzhou, China. All aspects of solid-state devices, circuits, processing technologies, materials and other related research were within the scope of the conference. The three days of contributed and invited presentations on the latest developments in diverse fields given in oral and poster sessions, panel discussions on leading edge technology issues, and other activities provided extensive opportunities for technical information exchange as well as a stimulating environment for mutual communication among participants. An exhibition of equipment and materials for solid state and integrated circuit technologies were held concurrently with the conference. In addition, there were discussions devoted to opportunities for cooperation and joint ventures in the microelectronics business in China.

Awards and Recognitions

Winning Sections in Region 10 for Highest Voting in IEEE Election 2011

2nd Highest Voting percentage: Beijing Section (17.5%)

MMI Award 2011: Beijing Section

Annual and High Performing Chapter Award

Large Chapters (> 100 HG members) 2012 Award

BEIJING   Section   62% $1,000   (R10)

IEEE Bombay Section

http://ieeebombay.org
Section Chair Name: Anthony Lobo
Year Started: 1976
Current member strength: 6262 as of December 2016

Section History

Bombay Section, along with Delhi and Bangalore Section was carved out in July 1976 from the erstwhile India Section (estd. 1967). The expanse of the Section included the states of Maharashtra, Goa, Madhya Pradesh (including Chhatisgarh), Gujarat (which later separated to form a Section on 15th August 1990), and Union territories of Diu & Daman. Pune Metropolitan City formed a separate Section on 26th June 2010). Madhya Pradesh Subsection was formed in the year 2001, presently celebrating 40 years as of 2016, IEEE Bombay section counts 6262 High Grade and Student Members and has 11 active chapters. There is a good blend of Industry and Academia. The Life Members Affinity Group was among the first to be formed in R10. There are also active WIE, Young Professionals, and SIGHT Affinity Groups. IEEE Bombay section currently has 140+ Student Branches.

Key Achievements

1984 SMC International Conference simultaneously held in Bombay & Delhi 1000 miles away

2013 Dec INDICON at IIT Bombay scaled the IC annual conference to unprecedented heights. Conducted 200+ SKEP (Skills & Knowledge Enhancement) across Section, cited for 2016 MGA award

Key Conferences

IEEE Bombay Section Symposia IBSS 2015 UMIT Mumbai

IBSS 2016 Baramati near Pune

INDICON Dec 2013 hosted by Section on behalf of India Council

Renewable Energy & Energy Efficiency, May 2013

Internal Security PTP, Oct 2013

ICVES Vehicular Electronics, Nov 2009

WIMAX Conference, Oct 2007

Electric & Hybrid Vehicles Conf 2006

EMS Power Conf – Electrifying India 2004

VLSI 2004 – with IIT Bombay, VLSI Soc. (800 attendees incl from overseas)

ACE 2000 – India Council conf Dec 2000

TENCON89 – The largest international conference in India with more than 2900 participants

Achievements in Industry Collaboration

Industry interaction for IEEE Board Outreach August 22-23, 2016 in Mumbai at which Board members visited IIT Bombay SINE (Society for Innovation & Entrepreneurship) along with prestigious organizations like Tata Group, Larsen & Toubro, Tata Institute of Fundamental Research. Special Industry outreach meets in Mumbai 2014 with key representatives from Public & Pvt sector. The section has a good balance in Industry membership and active links with Professional Societies sharing common programs.

SKEP in progress

IBSC 2017 Shegaon

IBSS 2016 Baramati

Key Highlights from Young Professionals

A dynamic team of Young Professionals is the asset to the Section. Organized Internship and Entrepreneurship programs along with MGA India Initiative and STEP program for students. Speakers for the SKEP Programs under Bombay Section (Mumbai, Nagpur, Kopargaon). Assisting R10 SAC committee with revival of dormant student branches within the section. Assisting the formation of strong WIE team of Bombay Section and Student branch administration. Key highlights from WIE in section.

Section WIE is among the early AGs to be formed in R-10. Recent activities included

One week TECHNICAL OUTREACH program in August 2016 for young women from less privileged communities were provided special inputs combining IT and Non-IT technical skills.

WIE NATIONAL LEADERSHIP CONFERENCE October 2016: around the theme of Leadership and entrepreneurship in professional life supported by IEEE Bombay Section, R 10, WIE affinity group. 153 participants from 15 Engineering colleges.

Awards and Recognitions

2016 MGA Achievement Award to Dr. B Satyanarayana, Technical & Professional Activities Chair

MGA 2016 Outstanding Branch Counselor Award 2016 to Prof Ms. Gejo George, Branch Counsellor of Student Branch of Don Bosco Institute of Technology

2016 Membership Retention Award to Bombay Section for meeting Section Retention Goals

Special Initiatives/Programs Started by Section

IEEE Bombay section has conceived the Skill and Knowledge Enhancement Program (SKEP) during the year 2013. Main goals of SKEP include professional skills development, disseminating useful knowledge from current fields of interest to the beneficiaries and inculcating technical and logical thinking among the student community. SKEP sessions are conducted by invited experts on the state-of-the-art topics. The venues of SKEP programs span colleges and other institutions spread accross length and breadth of this Section's geography. Till date over 200 SKEP programs has been conducted across the Section.

Bombay Section hosted the Bombay Section Student Congress in January 2017 at Shegaon where over 250 students from all over the Section were present for a 3-day training in IEEE as well as individual capacity building programs.

IEEE Changwon Section

Section Chair Name: Prof. DoHoon Lee, Ph.D
Year Started: 1991
Current member strength: 285

Section History
Changwon section was established on February 3, 1991. In the early days, the section started as an activity group of researchers of universities in Changwon and Masan. As it has grown larger, the center of its activities has also moved to Busan, a nearby metropolis. Busan is the second-largest city of South Korea, and the center of Korean ocean and maritime industry.

Key Achievements
2012. The main activity area was moved to Busan and the connection with other domestic academic societies such as Korea Multimedia Society.

2017. New section chair and secretary were appointed to achieve more active organization expansion and membership development.

Key Conferences
● Technical sponsor for International conferences

● 11th International Conference on Multimedia Information Technology and Applications (MITA2015) : June 30-31, Uzebekistan

● International Conference on Industrial Engineering, Management Science and Application (ICIMSA2016) : Jeju Island, Korea

● International Conference on Software Networking (ICSN2016) : Jeju Island, Korea Technical sponsor for National conferences

● Spring Conference for Korea Multimedia Society : Andong, May 28~30 - Autumn Conference for Korea Multimedia Society : Daegu, KNU, Nov. 6~7

Achievements in Industry Collaboration
Collaboration with ICT industry : LG-U+, Shinsungtelecom, ETRI, Mobile Center, DIP, Kyungpook TP, Busan TP, GigaKorea, SingongTech, Korea Oracle, Ciber LogiTech, PCN, Neighbor Systems, etc.

MTA 2015

MTA 2016

IEEE Chengdu Section

Section Chair Name: Shaoqian Li
Year Started: 2007
Current member strength: 1500

Section History
Established in 2007; comprised of members mainly from University of Electronic Science and Technology of China, Southwest Jiaotong University, and Sichuan University

Key Conferences

PROF. YANRONG LI
CHENGDU (CHAIR)

No specific flag conferences, but sponsoring dozens of conferences over the years within her territory

Achievements in Industry Collaboration
A wide range of members from industry, striving to increase visibility in local industry

IEEE Daejeon Section

Section Chair Name: Dr. Yong-Seok Choi
Year Started: 1991
Current member strength: about 1,500 members

Section History

The IEEE Daejeon Section has been making the second largest Section in Korea over a number of decades since its establishment on June 17, 1991. Late 1970, as Daedeok Science Town formed to occupy many nationwide research centers at the northern part of Daejeon city, the number of scientists and researchers has increased dramatically, especially in the area of electronics and information technology. This helped the Daejeon Section accelerate its activities between universities and research institutes.

Key Achievements

As of 2017, the Daejeon Section has over 1500 members. The fact that 60% of them are the student members shows that the possibility of increase not only in member numbers but also in exuberant activities.

Key Conferences

The Daejeon Section has been accelerating many accomplishments such as hosting and sponsoring technical conferences and encouraging student activities. IEEE Daejeon Section has sponsored a number of major conferences in Korea including annual International Conference on Advanced Communication (ICAT). Each year ICACT consisted of about 80 technical sessions with more than 400 papers from many countries.

Highlights from Young Professionals

In 2016, the Daejeon Section also co-sponsored IEEK (Institute of Electronics Engineers of Korea) Daejeon Branch Conference and gave the best student presenters the IEEE Daejeon Section Best Student Paper Awards.

Key Highlights from WIE in Section

Summer engineering programs started for high school students during summer vacation. The main objective is providing girls for experiences to spark high school girls interest in the future study of engineering. This program was designed to inspire the girls to find the role models, especially in the fields such as computer science and engineering.

Awards and Recognitions

◉ 25 Years Anniversary Pennant for DAEJEON Section on 2016.

◉ Certificate of Recognition for the IEEE Member Recruitment and Recovery Committee recognizes of DAEJEON Section during 2016.

Special Initiatives/Programs Started by Section

For the aim of helping students be familiar with IEEE and give more chance of activities relating to the spirit of the Institute, the Daejeon Section founded 5 Student Branches at the major universities within the area of Daejeon city and Chung-Nam province. As of 2016, the Daejeon Section has Student Branches at Chungnam National University, Kongju National University, Hanbat National University, and KAIST(Korea Advanced Institute of Science and Technology).

DAEJEON Section 2010 Operations Committees

DAEJEON Section 2011 Operations Committees

DAEJEON Section 2009 Student Branch
at Kongju National University

DAEJEON Section 2013 Operations Committees

IEEE Delhi Section

Section Chair Name: Prof K Subramanian
Year Started: 1976
Current member strength: 3101

Section History

IEEE Delhi Section covers entire northern part of the India consisting of the National Capital Territory of Delhi, Union Territory of Chandigarh and the five states of Rajasthan, Haryana, Punjab, Himachal Pradesh, and Jammu & Kashmir. The Section was formed after initially starting as a Subsection of India Section and then becoming a full Section on 13 May 1976. The IEEE Delhi Section is now the parent Section of two Subsections at Chandigarh & Rajasthan. The growth of membership in Delhi Section has been steady over the last forty years.

The IEEE Delhi Section has as many as 14 Technical Society Chapters and 3 Affinity Groups to meet the professional needs of the members and promote IEEE objectives. These Chapters, as per date of formation,

include Joint Chapter of Circuits & Systems Society and Control Systems Society, Computer Society, Joint Chapter of Power & Energy Society and Industrial Applications Society, Communications Society, Technology & Engineering Management Society, Joint Chapter of Instrumentation & Measurement Society and Engineering in Medicine & Biology Society, Joint Chapter of Power Electronics Society and Industrial Electronics Society, Electron Devices Society, Microwave Theory & Techniques Society, Computational Intelligent Society, Geoscience & Remote Sensing Society, Solid-State Circuits Society, Education Society, and Signal Processing Society.

The volunteers from Delhi Section have always been actively engaged at all levels of IEEE, from local to international. Mr. Harbans L. Bajaj, FIEEE, served as Delhi Section Chair (1989-90), India Council Chair (1993-94), and Region 10 Director (1997-1998).

Key Conferences

The Section and its Technical Society Chapters regularly organize international and national level conferences. Delhi Section has launched its own flagship events, such as,

IEEE International Conference on Power Electronics, Drives and Energy Systems (*PEDES*),

IEEE Power India International Conference (PIICON),

IEEE India International Conference on Power Electronics (IICPE).

Awards and Recognitions

The dedicated services of volunteers have been regularly acknowledged by IEEE awards. In February 2001 the IEEE Millennium Awards were presented by IEEE President Bruce A Eisenstein to the following volunteers for commendable services: Man Mohan S Puri, Subrata Mukhopadhyay, Harbans L Bajaj, Promod K Srivastava, Pratap N Choudhary, A Velayutham and Raj Kumar Vir.

Prof. Bhim Singh has been awarded IEEE PES Nari Hingorani Custom Power Award.

IEEE PES IAS Delhi has been awarded PES Outstanding Chapter Award for the year 2016.

In the year 2016 Delhi Section got all three Darrel Chong awards and the Winners: Gold: IEEE NIEC; IEEE IGDTUW WIE AG, Silver: IEEE PEC Student Branch; Bronze: IEEE Student Branch, LNMIIT; IEEE DTU, BVPIEEE.

The Richard E. Merwin Scholarship of $1000 was awarded to 7 students from Delhi Section. Upsilon Pi Epsilon Scholarship of $1000 was awarded to Ayushi Jain from Mody University, Laxmangarh, and Rajasthan.

Workshop on Circuit Simulation and Realization was held on 3-4 November with support of $500 from IEEE India MGA Student Retention Initiative. Himanshu Sahdev from IEEE NIEC won the first IEEE Open Engineer Mobile Application award.

Delhi Section received the 2016 Outstanding Section Membership Retention Performance for Delhi Section.

In 2015, R-10 Darrel Chong Award to MSIT-GOLD, DTU-Silver, NSIT-Bronze. Vaibhav Vats and Mansi Tripathi were awarded a 2015 IEEE Computer Society Richard E. Merwin Student Ambassadors!

Ms Aparna Neelkanth Mahajan and Prof. Poonam Bansal from MSIT got the 2015 Outstanding Branch Counselor Award from HQ.

Mrs. Aparna Mahajan for her exceptional recruiting efforts in the IEEE Member-Get-a-Member (MGM) program during 2015 and have earned the Delhi Section an additional award of $300.She is in the third place as recruiter in the Asia and Pacific Region.

IEEE PES-IAS Delhi Chapter is one of the 84 chapters listed to meet the HPCP criteria and received funding through this program.

Prof. Mini S Thomas has been awarded 2015 IEEE Educational Activities Board Meritorious Achievement Award in Continuing Education.

IEEE PES-IAS Delhi Chapter: The nomination form was excellent and the chapter has been selected as the Continued Performance Outstanding Large Chapter 2015. Our sincere congratulations to the team. The award was presented at the IAS Annual meeting.

IEEE PELS-IES Delhi Chapter has won outstanding chapter award from PELS Society USA, many times.

Prof. Prerna Gaur received IEEE PES Outstanding Chapter Engineer Award for 2015 from Delhi.

Many branch counsellors have won R10 outstanding branch counsellor award and Global outstanding award in last 20 years.

Achievements in Industry Collaboration

The team of 7 members who travelled from Delhi on 8th April: Industry visits: RMS technologies, Panchkula, and International Switchgear Pvt Ltd. Mohali. Prof Mridula Gupta took 15 research scholars to CSIO & SCL in Chandigarh for Industry visit. During the journey to Chandigarh, Mr V K Dutt arranged a visit to the Electrical End on Generation (EOG) on board the Shatabdi Express.

Highlights from Young Professionals

Young Professionals and Consulting networks affinity groups have also organized many talks and workshops this year. Many activities were performed under HTC.

Key Highlights from WIE in Section

Every year WIE students congress is organised in the section.

Section and many branches are regularly receiving the support fund from R 10 for various activities.

WIE submitted proposal "Skill Development program for rural women" has been awarded a funding support of USD 250.

Special Initiatives/Programs Started by Section

We are glad to report that we have finally achieved real humanitarian action by providing 12 Solar Lamps to needy in Nepal. We have received thanks mail for all IEEE Delhi Section members from Mr. Bigyan Shrestha, Project Chief, Upper Tamakoshi Hydropower Ltd Upper Tamakoshi Hydroelectric Project, Gyaneswar, Kathmandu, Nepal.

Section conducted web EXECOM meetings.

Quarterly meets, Bi annual meets and Two day Delhi Section Congress are the initiatives for networking of students.

IEEE Fukuoka Section

Section Chair Name: Tanemasa Asano
Year Started: 1999
Current member strength: 894

Section History

IEEE Fukuoka section, which started in 1999 is charge on the whole IEEE activities throughout the Kyushu region and Okinawa prefecture. Fukuoka was the first chair of the section. The number of members has been growing up from 314 (1999) to 894 (2017). Currently Fukuoka section has six chapters, Circuits and Systems (CAS) Chapter, Computer Society (C) Chapter, Antennas and Propagation (AP) Chapter, Engineering in Medicine and Biology (EMB) West Japan Chapter, Power Electronics Society Chapter, and Photonics (PHO) Society Chapter.

Key Achievements

2017, IEEE Milestone "Outdoor large-scale color display system" produced by Mitsubishi Electric Corporation.

Key Conferences:

IEEE Fukuoka section conducted and supported 12 conferences in 2016.

For example,
(1) The 2016 International Conference on Artificial Life and Robotics (ICAROB 2016), 1/29/2016 - 1/31/2016, Okinawa Convention Center, Okinawa,

(2) International Forum on I&E Sensing Network and Environment Monitoring ieSNEM2016, 3/22/2016, Kyushu University, etc.

Awards and Recognitions

2016, Outstanding Section Membership Retention Performance

2016, Outstanding Section Membership Recruitment and Retention Performance

2017, IEEE Milestone "Outdoor large-scale color display system" produced by Mitsubishi Electric Corporation.

Special Initiatives/Programs Started by Section

IEEE Fukuoka section has awarded "Excellent Presentation Award of the IEEE Fukuoka Section Award" for students who presented at the Joint Conference of Electrical, Electronics and Information Engineers in Kyushu since 2011. A few students win the award every year, which energizes the young researchers.

IEEE Gujarat Section

Section Chair Name: R. Jadeja
Year Started: 1990
Current member strength: 1204

Section History

The IEEE Gujarat Section is one of the small and active Sections of the Asia-Pacific region. IEEE Gujarat Section is headquartered in Ahmedabad from where Mahatma Gandhi, a Gujarati by birth, had spearheaded the Indian Freedom Struggle from his ashram. IEEE activities in Gujarat first started in 1988 in the city of Vadodara (earlier known as Baroda), Gujarat when first unit of IEEE Student Branch was established at the Dept. of Electrical Engineering, Faculty of Technology & Engineering, M. S. University. Dr. A. K. Aggarwal was the Branch Counsellor. Mr. J. S. Negi, the then Chief Executive of M/S Jyoti Ltd, had taken the initiative for submitting the petition for forming the Vadodara sub-Section under the Bombay Section. IEEE accepted the petition and the Vadodara sub-Section was formed with Mr. J. S. Negi as the interim Chair in the year 1988. Later IEEE agreed to change the name of the entity to Gujarat sub-Section. On 15th August 1990 the sub-Section was upgraded to a full-fledged Section to take its place as one among the 300 other Sections in the world spread out over 150 countries. The IEEE Gujarat University Student Branch was the next Student Branch established in 1994. The IEEE Gujarat Section was carved out from the IEEE Bombay Section mainly for logistic reasons. Mr Nirbhay Chaubey, present treasurer of the Section, helped all Chairs in establishing and expanding the Section. Gujarat Section was first brought to international attention in 1997 with the holding a twin conference on 'Internet Security' and EEE in the petroleum sector. This twin conference was held in the premises of the Institute of Reservoir Studies of the Oil and Natural Gas Corporation. Prominent IEEE figures who attended included Dr. Charles Rubenstein then the editor of the IEEE Transactions in Engineering Management. The conference was followed by the visit of the Technical Activities Board (TAB) of the IEEE led by IEEE President Dr. Kenneth Laker, President-Elect Dr. Mike Adler, Mr. Pete(Wes) Spencer a Power Utilities owner, Mrs. Mary Ward-Callan the Managing Director of the TAB and Ms. Fanny Su Behn Hoi of the IEEE Region 10 HQ at Singapore. Dr. Vijay Bhargava, present candidate for the post of President IEEE Communications Society and Mrs. Laker also accompanied the group. On this occasion, a Student Branch was inaugurated at the Nirma Institute of Technology, Ahmedabad.

Gujarat Section has always been pioneer in organizing programs for professionals and students. Its annual event 'Sampark' gives a platform to student members to design IEEE events of the year as per their own need and requirement. This helps IEEE student members of the Section to be their own leader. 'Sampark' had also been featured in one of the issue of 'The Institute'.

Awards

⬤ 2004 Outstanding Small Section Award of Region 10.

⬤ 2006 Outstanding Volunteer Award for its very dedicated volunteer and an architect of Gujarat Section Mr Mayank M Pande. Mr Pande had been instrumental in steering Gujarat Section activities and motivating members and volunteers of the Section.

⬤ 2007 Outstanding Branch Councillor Award for Dr Anil K Roy for excellent performance of DAIICT Student Branch.

⬤ Larry K Wilson Award for its student member and best paper awards on many occasion.

The venue for 2008 Region 10 Annual Meet was at Gandhinagar, Gujarat and it was held on 2nd and 3rd February 2008. Currently we have three societies Chapters and 8 IEEE Student Branches.

Gujarat today is India's most progressive State and houses the Indian Institute of Management, Ahmedabad & several important government laboratories. Deepak Mathur Chair Gujarat Section Main contributors

Key Conferences

National Conference on Vision, Pattern Recognition, Image Processing and Graphs, 11-13 January 2008.

International Conference on Advance Computing

Twin International Conference on Internet Security and EEE in petroleum industry, 1997

National Workshop on Big Data Analytics, 7 Dec, 2015

New Trends in Signal Processing, 3-4 Oct, 2015

TenSymp 2015 (IEEE International Conference on Internet of Things), 13-15 May, 2015

National Workshop on Cyber Security (16-17 Nov, 2013)

INDICON 2009 (an IEEE conference, 18-20 Dec, 2009)

Awards and Recognitions

The Gujarat Section has bagged many awards and recognitions:

2004 Outstanding Small Section of Region 10.

2006 Outstanding Volunteer Award for Mr. Mayank M Pande, Past Chair IEEE Gujarat Section

2007 Outstanding Branch Counselor award for Dr. Anil Roy (DA-IICT SB)

2007 Larry K Wilson award for its student member Mr. Mohit Malhan.

2008 Outstanding Volunteer Award for Mr. Deepak Mathur, Past Chair IEEE Gujarat Section.

Dr. Anil K Roy, Chair IEEE Gujarat Section nominated in 3 Adhoc Committees formed at HQ level for the year 2009.

2009 Outstanding Volunteer Award for Dr. Anil K Roy

2010 Outstanding Branch Counselor Award for Mr. Nirbhay Chaubey (ISTAR SB)

2011 MGA Achievement Award for Mr. Deepak Mathur

2012 R10 Outstanding Branch Counselor Award for Prof. Mehul Rawal (DA-IICT SB)

2012 MGA Leadership Award for Dr. Anil K. Roy

2013 Outstanding Branch Counselor Award for Prof. Rakesh Patel (GCET SB)

2013 Outstanding Volunteer Award for Mr. Arup Dasgupta

2015 R10 Outstanding Volunteer Award - Dr. Nirbhay Chaubey

SPS Chapter of Gujarat Section won consecutively second time the "**2016 Best Chapter of the Year**" Award.

SPS Chapter of Gujarat Section won the "**2015 Best Chapter of the Year**" Award.

Special Initiatives/Programs Started by Section

SAMPARK (Reach out and engage) is a unique model of Gujarat Section for engaging student members. It started in 2006 under the guidance of Mr. Deepak Mathur, the then Chair of the IEEE Gujarat Section and Dr. Anil K Roy, the then Vice-Chair.

Achievements in Industry Collaboration

The IEEE-SA Standards Board approved Gujarat Section's Industry Connections Activity Initiation Document (ICAID) "IC15-003 Smart City Compliance Indicators" in 2015 under its ICCom (Industry Connection Committee) program.

Key Highlights from WIE in Section

2010 MGA WIE Affinity Group of the Year for DA-IICT Student Branch

2011 R10 WIE Student Branch Affinity Group of the Year for Institute of Technology, Nirma University Student Branch

IEEE Harbin Section

Section Chair Name: Dianguo Xu
Year Started: 2008
Current member strength: 874

Section History

Located in Harbin of capital city of Heilongjiang province, the IEEE Harbin section was founded in 2007, which convers Heilongjiang, Liaoning and Jilin three provinces in geographical administration. IN the year of 2014, there are a total membership number of 350.In 2015, the total number is up to 815, which is just 2 times of 2014 year, and it is nearly 200% increasing. So the chair Prof. Dianguo Xu and vice chair Prof.Qun Wu of Harbin section received an award for outstanding achievement in member recruitment for the 2016 membership year, which is recognized by the IEEE member recruitment and recovery committee. Up till now, under Harbin section, we established over 10 chapters, and one YP and WIE groups ,and two student branches. In 2016, Harbin section held a grand celebration ceremony for the R10 50th anniversary, at the same time, the 10th anniversary celebration activity of Harbin section's foundation was organized. In 2016, Harbin section held a grand celebration ceremony for the R10 50th anniversary, at the same time, the 10th anniversary celebration activity of Harbin section's foundation was organized.

Key Conferences

In 2014, Harbin section successfully organized Asia-Pacific Conference on Antennas and Propagation.

2017 Contribution Officers

Awards and Recognitions

The vice chair, Prof. Qun Wu received an Outstanding Volunteer Award by R10 Awards and Recognition Committee for the 2015 in recognition of his volunteer work.

As a char of Harbin AP-S chapter, Prof. Qun Wu received the 2017 AP-S outstanding chapter award.

The chair Prof. Dianguo Xu and vice chair Prof.Qun Wu of Harbin section received an award for outstanding achievement in member recruitment for the 2016 membership year, which is recognized by the IEEE member recruitment and recovery committee.

Highlights from Young Professionals

IEEE Harbin Young professional affinity group was founded in 2016. It is the first Young professional affinity group in the northeast of China. During IEEE International Conference on Electronic Information and Communication Technology (ICEICT, August 20-22, 2016), we did a poster at the exhibition to publicize the concept of young professional affinity group. Now there are more than 20 members in IEEE Harbin YP affinity group. In July 2017, there will be a celebration ceremony. Then we will invite some IEEE Fellow from both academic and industrial field to give talks, and we will be taking this opportunity to introduce IEEE to more of our colleagues.

Key Highlights from WIE in Section

(1) Nowadays, women play more important roles in all aspects than ever, the WIE Affinity Group (Harbin Section) dedicates to promote female engineers and scientists in north China by organizing conferences, guest lectures, women seminars, workshops, events on a very routine basis where in an individual finds it very useful once she steps into reality. This is the first WIE Affinity Group in mainland of China. With nearly 30 women members, IEEE Harbin Section Women in Engineering (WIE) Affinity Group is initiated at Harbin Institute of Technology (HIT) in 10th, September of 2016.

(2)IEEE WIE are the main technical sponsors and advocators of the PHM 2017 international conference and the 6th International Conference on Communications, Signal Processing, and Systems which will be held in July of Harbin.

(3) Since September of 2016, IEEE WIE Harbin Section has invited several famous professors to give lectures and seminars. e. g. Professor Yonghui Li from Sydney University, Professor Francis C.M. Lau from The Hong Kong Polytechnic University, Professor Wei Xiang from James Cook University.

HISS 2016 Invited Talk

HISS 2016 Technical Session

HISS 2016 Invited Talk

HISS 2016 Technical Sessio

IEEE Hiroshima Section

Section Chair Name: Isao Nakanishi
Year Started: 1998
Current member strength: 446

Section History

Hiroshima Section was established in November 1998, and started the section activity in April 1999, with the approval of executive officers. Over the last 18 years, our section has conducted and supported a wide variety of events related to the section activity, held in Chugoku region of Japan. Especially, HISS symposium (described below) is a distinctive activity that provides students with the experience of organizing an academic symposium for themselves.

Key Conferences

Hiroshima Section has conducted the IEEE Hiroshima Student Symposium (HISS) 18 times. This symposium is an event "for society by a student," and is planned and managed mainly by students at universities or colleges in Chugoku region of Japan. Until the 18th HISS held in November 2016, more than 700 students in total have been involved in organizing a committee. In addition, 2,000 technical papers, 24 keynote talks, 20-panel sessions, more than 150 exhibitions of laboratories and companies have been held in the symposia.

Awards and Recognitions

Hiroshima Section constitutes the "Section Contribution Award," which is presented to the contributors for the section. Also, section constitutes "HISS Distinguished Contribution Award" and "HISS Distinguished Service Award," given to students for their contributions to the organization of HISS symposium.

IEEE Hyderabad Section

Section Chair Name: Lakshminarayana Merugu
Year Started: 1984
Current member strength: 5730

Section History

IEEE was formally introduced into Hyderabad as Subsection in June 1981, and was elevated to full Section on 14 May 1984. Over the years, the Section has grown into a large section. The Section had a unique set of volunteers of merit and dedication since its inception. The first short course by the Section was on "Secure Communications" from 13 to 22 December 1984. The Section conducted 32 continuing education programs in the first two decades of its formation. The Section has formed nine Society Chapters: PES / IAS / PELS, CS, MTT/AP/EMC, COM/SP, CAS/EDS, CIS/GRSS, Photonics, TMS, and Education Society Chapter; and two Affinity Groups: WIE and YP. Chapters along with Section organized several International, and National Conferences. The Section has more than 125 Student Branches. Section supported formation of three Subsections: Guntur, Vizag Bay and Ananthapuramu. Faraday Memorial Lecture, JC Bose memorial lecture, Graham Bell memorial lecture and Section Student Congress are some annual flagship events of the Section.

Key Achievements

The Section has grown to one of the R10 outstanding Large Section in R10 in 2012 and 2016

Faraday Memorial Lecture – 2015

Section Student Congress – 2009

Key Conferences

IEEE IAS Conference (ICPSPCIC). 19-21 Nov 2015;

INDICON in December (2011)

TENCON (08 November 18-21, 2008)

ETSA (Enabling Technologies for Smart Appliances)

IEEE International Conference on Personal and Wireless Communications

Power Quality (1998)

ACE'97 Internet for India (1997)

IEEE Conference on Power Quality (1995)

IEEE/IAS International Conference on Industrial Automation and Control.

ACE November 1993

Key Achievements in Industry Collaboration

Industrial relations Committee (IRC) of Hyderabad Section brings synergy between Industry, academia, start-ups, Government and practicing professionals by bringing them together on to a common platform. Conducts Technical talks, workshops with IEEE Society Chapters. Symposium on IoT and IEEE standards, one day workshop on UAVs/DRONES-Technological

Advances and Innovations" are among the important programs organized.

Key Highlights from Young Professionals

YPAG conducted STEP events with students' participation. Apart from that YPAG:

R10, 50 Years Celebration, Participation in SYWL Congress

Representation in All India SWYC, Jaipur, Section, YPAG

All India Computer Society Congress CS Chapter and YPAG

Representation at TENSYMP, Bali YPAG

IEEE Technology Entrepreneur's Summit

Key Highlights from WIE in Section

WIEAG conducted Programs, Students also participated in most of the programs conducted by the affinity groups. Apart from that WIEAG participated in

R10: 50 Years Celebration, WIE Global Summit 2016 as part of organizing committee

Participation in R10 SYWL Congress

International Women's Day Celebration

WIE International Summit, Pune, WIEAG

Three-day Workshop on Design of Industrial Power Distribution Systems (2012)

A S Kiran Kumar, Chairman, ISRO and others at IEEE Milestone Exhibit

Technical talk on Multi-Objective Evolutionary Algorithms

Moshe Kam, IEEE President-2011 addressing members of Hyderabad Section

Representation in All India SWYC, Jaipur, Section, WIEAG, YPAG and SAC

Awards and Recognitions

R10 Outstanding Large Section Award in 2012 and 2016

R10 Outstanding Volunteer Award (9 volunteers since 1996)

IAS most Vibrant Chapter: IAS/PES/PELS Joint Chapter

Darrel Chong Activity Awarded to IEEE Student Branches.

Haraden Pratt Award from IEEE

Special Initiatives /Programs Started by Section

The Section has constituted Future Directions Committee for formulation of future activities and strategies. Conference committee to screen and recommend the conferences proposed by non-IEEE OUs for technical co-sponsorship. Two projects on EPICS have been executed. Electrical safety to prevent accidental deaths due to open wire Power lines. Formed a committee to take up SIGHT activities. Taken up Skill Connect Program for improving the skills and employability of engineering students.

IEEE Indonesia Section

Section Chair Name: Fitri Yuli Zulkifli
Year Started: 1988
Current member strength: 1547

Section History

As authorised by the IEEE Board of Directors, the IEEE Member and Geographic Activities Board (known as IEEE Regional Activities Board prior to 1 January 2008) approved the establishment and boundaries of the IEEE Indonesia Section on **16 February 1988**. The Indonesia Section conducts activities which assist the local IEEE members to enhance their professional careers and their communities. As a part of the IEEE, Indonesia Section shares the overall goals, vision and mission, and values adopted by the IEEE organization, both ethically and professionally. But as organization working in the territory of the Republic of Indonesia, Indonesia Section also has its own Articles of Association (Anggaran Dasar) in accordance with the Constitution and the laws of Indonesia.

Key Conferences:

IEEE International Conference on Communication, Networks and Satellite (COMNETSAT)

IEEE International Conference on Computational Intelligence and Cybernetics (CYBERNETICSCOM)

Awards and Recognitions:

2015 Outstanding Section Membership Recruitment Performance

12 New SB formation in year 2015, 8 in year 2016

7 New SB chapters and WIE AG Formation in year 2015, 4 in 2016

8 New Chapters formation

32 International Conferences in 2015, 51 conferences in 2016, 56 conferences in 2017

Number #4 Worldwide Member get Member activities

Third winner of IEEE Student, Young Professional, and Women in Engineering Region 10 Asia Pacific Congress 2015-by SB TelU

1st Winner Humanitarion activities, IAS Society Award-USA, 2016

Achievements in Industry Collaboration

IoT Seminar and Competition in Collaboration between Toyota Motor Manufacture Indonesia (TMMI), Univ. Udayana and TelU

IoT Research, in Collaboration UGM-Industries

Highlights from Young Professionals

Young Professional meet up at Tensymp 2016

Industrial workshop in power and energy space for young professionals and students

Key Highlights from WIE in Section

Social Activities, Kampung Angke, Pantai Newa-Sumba

SIGHT Sahabat Bunda

9 New WIE student branch

Keynote speaker WIE Global Summit Banglore 2016

WIE workshop at Tensymp 2016

"Sheshare" with Prof Takako Hashimoto 2017

Special Initiatives/Programs Started by Section

Humanitarian Technology Rural Empowering

IoT Solution for Fisherman Mapur Island 2016

Indonesia Student Congress

Conference management workshop

IEEE Islamabad Section

Section Chair Name: Dr. Amir Qayyum
Year Started: 1999
Current member strength: 900

Section History

Turning point came when IEEE Lahore Section decided to hold INMIC 1994 Conference in NUST Rawalpindi (College of EME) where twelve of us (IEEE Members) from Rawalpindi/Islamabad attended it. In one of our side meetings during this conference, we decided to pursue the formation of IEEE Sub-Section Islamabad from our parent Section of Lahore under the leadership of Dr. Akbar. Dr. Akbar started the process with Lahore Section in 1996 when we reached 20 IEEE members in Islamabad/Rawalpindi Region. It took almost one year to complete the process along with the demarcation of our boundaries between Lahore and Islamabad Sections. The founding team of Islamabad Sub- Section gathered in the Conference Room of PEC (Pakistan Engineering Council) in 1997 where Dr. Akbar was elected as the Founding Chairman and Air Cdre Mansoor Malik was elected as Vice-Chairman of Islamabad. With extensive networking we completed 50 members in 1999 to qualify for a separate IEEE Section and thus separated from Lahore Section. In the year 2000 at the new millennium Dr. Akbar was elected Chairman and Air Cadre Mansoor Maliik as Vice-Chairman as well as head of the New Membership Drive. In year 2004 the transition of Chairman from Dr. Akbar to Air Cadre Mansoor Malik was achieved very smoothly. Year 2005 was a turning point of IEEE Islamabad Section where our membership reached more than 200 along with more than 10 Student Chapters all over our region. In 2006 IEEE Islamabad Section was awarded the Best Small Section in Asia Pacific Region 10. In

2006 Air Cadre Mansoor Malik was nominated the Regional Director IEEE Aerospace & Electronics Systems Society (AESS) for two years. AVM Saleem Tariq takes over as Chairman IEEE Islamabad Section in 2008 and continues with the momentum to be recognized once again thru the Best Section Award in Asia Pacific Region 10 in the year 2009. In year 2010 VC CUST (ex-MAJU) Dr. Mansoor takes over IEEE Islamabad and sets new goals to achieve high standards in the next three years followed by an outstanding leadership by Dr. Aftab Maroof, Director FAST Islamabad for the next three years. On 18th May 2017, Dr. Aftab Maroof handed over the chairperson's seat to Dr. Amir Qayyum from CUST.

Key Conferences

ICET International Conference on Emerging Technologies

INMIC International Multitopic Conference (Rotates among 3 sections of Pakistan)

FIT Frontiers of Information and Technology

Awards and Recognitions

Recent awards and recognitions include:

Darrel Chong Award by IEEE UET Taxilla SB and IEEE Bahria SB

AIYEHUM Grant to Hifza Marij (IEEE FJWU SB) for project "I am not Alone"

WIE R-10 Grant by IEEE UET Taxilla SB

Richard E. Merwin Scholarship by Amna Javeed

R-10 Medium Section Award

Three VOLT Graduates – Muhammad Ahsan Farooqui, Mujtaba Anwar Chaudhary and Moiz Chaudhary.

R10MediumSectionAward

Computer Society Congress

Upsilon Pi Epsilon Scholarship Award sponsored by "Society" won by M. Saeed ul Hassan

WIE Affinity Group Leadership Award sponsored by WIE won by Syeda Tooba Haider

IEEE Best SB Counsellor Award by Dr. Sajjad and Dr. Gulistan Raja

Best Student Volunteer sponsored by WIE won by Laiba Jawed

Best WIE AG Award sponsored by WIE won by IEEE SB WIE UET Taxila

IEEE Day Photo Contest sponsored by Region won by WIE AG UET Taxila

IEEE Darrel Chong Activity Award won by IEEE SB UET TaxilaWIE Most Inspiring Student Member having global scope won by Kiran Abbas

Best WIE AG Award having global scope won by WIE AG UET Taxila

IEEE Darrel Chong Activity Award won by IEEE SB UET Taxila

Exemplary Student Branch Award by R-10 won by IEEE SB UET Taxila

Outstanding Volunteer Award by R-10 won by Laiba Jawed

Outstanding Branch Volunteer Award by R-10 won by

Prof. Dr. Gulistan Raja

Achievements in Industry Collaboration
IEEE Islamabad Industrial Biennale
Recently SAC Team of IEEE Islamabad Section conducted it on May 7, 2017 with the objective of bridging gap between industry and academia. It was hosted by IEEE PIEAS Student Branch. More than 10 different industries were engaged for event by organizers. Event was divided in two parts. In one part presentation was given to student participants about hiring process and requirements etc by different companies. In second part, a meeting was organized between academia representatives and industrial/company representatives in which they got a chance to discuss problems of mutual interest.

Highlights from Young Professionals
IEEE Trek – A Recreational and Character building trip

Key Highlights from WIE in Section
IEEE WIE ILS 2017 Islamabad

IEEE STAR Project

Special Initiatives /Programs Started by Section
Spark up Your Mind
Initiative by SAC Team in which Student Branches were given a chance to host workshops with participation from at least four other student branches. It not only helped students to enhance their

Industrial Biennale

IEEE_ISL_DVPProgram

technical skills but also provided student branches to actively network with each other.

IEEE Volunteer Leadership Training (VOLT)
IEEE Volunteer Leadership training is initiated for the student branch leadership. It is being held each year since 2015 and normally occurs in September of each year. IT is a proper drill to equip new officers with the IEEE tools.

IEEE Kansai Section

Section Chair Name: Miki Yamamoto
Year Started: 1998
Current member strength: 2258

Section History
As authorized by the IEEE Board of Directors, the IEEE Member and Geographic Activities Board (known as IEEE Regional Activities Board prior to 1 January 2008) approved the establishment and boundaries of the IEEE Kansai Section on 14 November 1998. The Kansai Section conducts activities which assist the local IEEE members to enhance their professional careers and their communities. Currently, there are 2244 members and 7 student branches.

Key Achievements
Starting with "Pioneering Work on Electronic Calculators" certified in 2005, 8 Milestones have been certified in the Kansai Section.

Key Conferences
MAW in Kansai 2016 was held in August at Doshisha University. It was the second MAW in Japan. The purpose of this MAW in Kansai was to energize local electronics industries in Kansai area by connecting students, researchers in universities/ institutes and professionals and engineers in enterprises.

Key Achievements in Industry Collaboration
IEEE delegation conducts corporate visits in the Kansai region, for example, visits to Sumitomo Electric, Mitsubishi Electric, Panasonic and ROHM in 2015. In the MAW, section gained sponsorship from companies and provided a forum for exchange of information between companies, researchers and students.

Highlights from Young Professionals
Kansai YPs AG organizes events to support young engineers and researchers in developing their careers and technical skills: MDC, SAC and YP joint workshop and English presentation competition

Key Highlights from WIE in Section
The IEEE Kansai Section WIE AG was set up in January 2014. The kick-off symposium was held on November 22, 2014, in Osaka. Its main activities include the networking of women researchers and their supporters through symposiums: Section WIE hold the 2nd and 3rd IEEE Kansai WIE symposiums in autumn in 2015 and 2016, respectively.

Awards and Recognitions
Young members who contributed to the activities of the Kansai section are awarded the YP Award, and student members who published excellent papers are awarded the Student Research Award. These awards will be presented to the winners at the Annual Section Meeting from the Section Chair.

MAW Session

Milestone Plaque

WIE symposium

Student Research Award

Special Initiatives/Programs Started by Section

The Kansai section provides support to Chapters and SBs. In addition, support for AGs is also budgeted. In the case of 2017, the total budget of the support program is about 40% of the section budget.

IEEE Karachi Section

Section Chair Name: Prof. Dr. Bhawani Shankar Chowdhry
Year Started: 1982 [1978 as Subsection]
Current member strength: 998 (December 31, 2016)

Section History

IEEE Karachi Section has 4 society chapters (PES, Computer, Communication and joint chapter Control Systems Society). Also, we have affinity group of Young Professionals. There are 30 IEEE Student Branches from the provinces of Sind and Baluchistan. The section is been involved with activities of IEEE initiatives like SIGHT, EPICS, TISP, etc. Also, Section is been represented by volunteers in R10 Meets, Section Congress, HTC, VOLT, R10 Congress, etc.

The section has initiated and organized conferences and congresses in past many years. Student Conference on Engineering Science and Technology (SCONEST) been initiated in 2002 and have events in 2003, 2004, 2014, and 2016. Pakistan Student Congress (now named as PSYWC) in 2007 and have events in 2010, 2013 and 2016. Karachi Section Student Congress (now named as KSYWC) in 2008 and have events in 2012, 2014 and 2015. Different universities are hosting their own series of conferences like ICIET by NUCES, ICE CUBE by BUITEMS, Quetta, ICICT by IBA, Karachi, and IC4 by PNEC-NUST.

Key Achievements

IEEE Karachi Section gets the 2016 Outstanding Section Membership Recruitment and Retention Performance Award and received 2nd position in Member Retention (US $200) and 2nd position in Member Recruitment (US $200).

Key Conferences

IEEE SCONEST 2016 – Hamdard University

IEEE PSYWC 2016 – National University of Computer and Emerging Sciences, Karachi

ICE Cube 2016 – Baluchistan University of IT, Engineering and Management

IEEE ICICT 2015 – Institute of Business Administration, Karachi

IEEE KSYWC 2015 – Regent Plaza, Karachi

IEEE KSSC 2014 – Indus University, Karachi

IEEE IC4 2014 – Pakistan Naval Engineering College - NUST

IEEE INMIC 2014 – Bahria University

IEEE SCONEST 2014 – Isra University, Hyderabad

IEEE PSYWC 2013 – Mehran University of Engineering and Technology

IEEE KSYWC 2015 – Regent Plaza, Karachi

IEEE DIALOGUE (Discovering Abilities &Lifetime Opportunities for Graduate Engineers) 2016, Swiss Consul General HE Emil Wyss was the Chief Guest

Achievements in Industry Collaboration

Technical Seminars on Power and Safety for K-Electric in 2015-16

Industrial Visits of Schneider, Pakistan Cable, Engro VoPak, KANUPP, etc.

Highlights from Young Professionals

IEEE PSYWC 2016 – National University of Computer and Emerging Sciences, Karachi

IEEE KSYWC 2015 – Regent Plaza, Karachi

IEEE KSSC 2014 – Indus University, Karachi

IEEE PSYWC 2013 – Mehran University of Engineering and Technology

IEEE KSSC 2012 and 2008 – PNEC-NUST, Karachi

IEEE PSC 2010 – Usman Institute of Technology, Karachi

Key Highlights from WIE in Section

IEEE Karachi Section has 5 IEEE WIE AG student chapters in different universities like HIET, BUITEMS, JUW, NUCES, and PNEC-NUST. Section organized separate WIE Sessions in all Student Congresses i.e. PSYWC 2016, PSYWC 2013, PSC 2010, PSC 2007, KSYWC 2015, KSSC 2014, KSSC 2012, and KSSC 2008.

Awards and Recognitions

IEEE Karachi Section got the 2016 Outstanding Section Membership Recruitment and Retention Performance Award and received 2nd positions in Member Retention (US $200) and 2nd position in Member Recruitment (US $200).

Special Initiatives/Programs Started by Section

IEEE EPICS project titled as Analytical Software for Healthcare was funded for US$3000. The project was completed from October 2014 to November 2015. Karachi section had TISP activities during June 2014 (Training in Dubai, UAE) to December 2015. 3 events were organized at NUCES, Karachi, HIET, Hamdard University, Karachi and Sukkur IBA by section.

IEEE Kerala Section

Section Chair Name: Dr. K.R.Suresh Nair
Year Started: 1975 as Sub section and 1983 as section
Current member strength: 8532

Section History

In 1973 IEEE members in Trivandrum especially from the newly established KELTRON (Kerala State Electronics Development Corporation)started meeting as a Subsection under Region 10. Mr KPP Nambiar from Keltron was elected the Chairman, with DS Rane from ISRO as Vice Chairman. In its first year itself the Kerala Subsection had the honour of hosting Dr Harold Chestnut (then immediate Past President of IEEE). Kerala Subsection was initially made a part of the Bangalore Section. In 1983 the subsection was converted to a full-fledged section. The first IEEE student chapter was formed at the College of Engineering, Trivandrum with Dr Gomathy as the advisor. Two areas that Kerala Section has been especially noted are Student Activities and Humanitarian Activities. Kerala Section's interventions

IEEE Kerala Section award winners during AGM 2017

IEEE Kerala Section Student activities team - LIN

in the 2004 Indian Ocean Tsunami was widely noticed within IEEE circles, and was perhaps a factor in IEEE adopting the new tagline "Advancing Technology for Humanity" in 2009. Since 2007 onwards, Kerala Section and its volunteers have dominated the world stage in almost all activities of IEEE.

Key Achievements

● Kerala Section members in key volunteer positions in all OU's of IEEE

● IEEE SIGHT was formed in Kerala (2011) by Peter Staecker (2012 IEEE President)

● Model Student Network - LINK was replicated around the globe across sections

● Escientia in Kerala

● 30 Years of unbroken weekly technical talks by industry & academia professionals

● Humanitarian support to the impacted communities of the 2004 Indian Ocean Tsunami during 2005-2008 by IEEE Kerala Section Volunteers

Key Conferences

● IEEE ACE Conferences in 1980

● One of the earliest conferences on Humanitarian Technologies, IEEE R10 GOLD HTC Conference, "Humanitarian Technologies for the 21st Century",

organized in 2010

● IEEE INDICON in 2012

● RAICS (bi-annual)

● SPICES (bi-annual)

● IEEE ISTAS in 2016

Key Achievements in Industry Collaboration

● More than 50% of IEEE Kerala Section volunteers from the industry

● Annual IEEE Job Fair conducted by the Section.

● IEEE Kerala Section Chair is Ex-Officio member of the IT Mission the State Govt's IT Policy making body.

Highlights from Young Professionals

● Pre- University Activities - World's First TISP Week held in 2012 in Kerala
● Humanitarian Activities - Eyes Free Science, Sastra Vismaya
● Early Career Development Programs
● Kerala YP volunteers in key global roles The only AG to win the MGA Young Professionals Hall of Fame award two times (2011 and 2015), six young professionals won the MGA Young professionals Achievement award.

Section Leadership and volunteers during ISTAS 2016 on 20--22 October 2016

Trivandrum Section Volunteers with IEEE President- 2017 in front of EScientia at Cochin University of Science and Technology, Kochi

Key Highlights from WIE in Section

IEEE Kerala WIE is celebrating its 15th year of inception in 2017, formed on 25 June 2002 The first WIE AG formed in Region 10 was in Kerala Section The first student WIE AG was formed in Kerala, College of Engineering Chengannur Kerala has 2190 WIE members (Jan 2017) which is ~ 30% of the total section membership

Awards and Recognitions

⬤ 2015 IEEE MGA Outstanding Large Section Award

⬤ 2015 IEEE R10 Large Section Award

⬤ 2009 Region 10 Distinguished Large Section Award

⬤ 2 time IEEE MGA Hall of Fame Award for Young Professionals Affinity Group (2011, 2015) ● IEEE R10 Outstanding Young Professionals Affinity Group (2011, 2015)

⬤ IEEE R10 Outstanding WIE Affinity Group (2013)

⬤ Richard E Merwin Scholarships won every year in Kerala since 2012

Special Initiatives/Programs Started by Section

SIGHT - replicated worldwide (Humanitarian initiatives in IEEE started with the Kerala Model)

⬤ LINK - replicated worldwide as GINI (A network to manage student members)

⬤ Job Fair (First Job Fair completely hosted by IEEE volunteers globally)

⬤ Sasthra Vismaya

⬤ Eyes Free Science Camp - for the visually challenged

⬤ ECFDP - Early Career Faculty Development Programs throughout the section (First of its kind program as part of IEEE EAB initiative)

⬤ E- Scientia - One of the eight science exhibits of IEEE globally at Kerala

---

IEEE Kharagpur Section

Section Chair Name: Dr. Amitabha
Year Started: 1985
Current member strength:

Section History

The IEEE Kharagpur Section is a section in India Council under Region 10 of the IEEE organization. It is a unique section in the whole IEEE as the section is rooted at the Indian Institute of Technology Kharagpur unlike other sections where activities usually spread over a number of association. The section office is located in the campus of Indian Institute of Technology Kharagpur, India.

Initially it emerged as a small chapter with only 60 members under IEEE Kolkata Section (formerly IEEE Calcutta Section) in 1983. On 13th May, 1985 it was established independently as the IEEE Kharagpur Section. Since its inception with a sustainable growth of its members and distinguished activities today IEEE Kharagpur Section has an exemplary history showcased on IEEE.

Since its inception, the IEEE Kharagpur Section has helped its member's advances their careers and the field of computing and the development of mankind. The IEEE Kharagpur Section organizes workshops, conferences, symposium, colloquium, lectures by renowned professionals and academics. Currently the IEEE Section also locally affiliates the IEEE Signal Processing Society, IEEE Engineering in Medicine and Biology and IEEE Control System Society chapters and

IEEE Day 2016 Celebrations with the Hardware Hackathon Winners

IEEE Kharagpur Section new office inauguration session

the IEEE Women in Engineering Affinity Group.

It also has a Student Branch to promote various academic activities related to student members which is affiliated to the prestigious IEEE University Partnership Program and is the one of the two such student branches from India. Also they have the IEEE Engineering in Medicine and Biology Student Club, IEEE Signal Processing Society Student Chapter, IEEE

Joint Antenna and Propagation- Microwave Theory and Techniques Student Chapter.

Apart from this IEEE organizes an industrial trip every year to enhance industry-academic relations. The IEEE Kharagpur Section is organized by an executive committee. Currently the section also mentors the IEEE Haldia Sub-section.

Latex writing workshop being organized by the IEEE Student Branch

Hands-on session during the MEMS, Microfluidics and Microelectronics workshop in 2014

IEEE Kwangju Section

Section Chair Name: Yo-Sung Ho
Year Started: 2000
Current member strength: 186

Section History
The IEEE Kwangju Section was formed on February 13th, 2000 by Prof. Kiseon Kim (GIST) as the first chair.

The IEEE Kwangju Section contributed the IEEE community by serving as volunteers by hosting several technical and professional meetings.

Key Achievements
🌐 2000~2016: Host technical seminars and social meetings
🌐 2016: Initiate Young Professional Affinity Group (YPAG)

Key Conferences Conducted by Section
2016: IEEE Asia-Pacific Signal and Information Processing

Key Achievements in Industry Collaboration

Financial support from industry on local events

Key Highlights from Young Professionals
Just established in 2016

Key Highlights from WIE in Section
Plan to start WIE student activities

Awards and Recognitions
2017: Dr. Yo-Sung Ho has been promoted to IEEE Fellow

Special Initiatives/Programs Started by Section
🌐 Enhancement of Membership Development
🌐 Promotion to IEEE Senior Members and IEEE Fellow
🌐 Coordination of Industry Relations

Section Executive Committee Members
Chair: Yo-Sung Ho
Vice Chair: Jong-In Song
Secretary: Minjae Lee
Treasurer: Sung Min Hong
Membership Development: Jong Won Shin
Advisory: Kiseon Kim, Heung-No Lee

IEEE Lahore Section

Formally known as Pakistan Section
Section Chair Name: Dr. Amjad Hussain
Year Started: 1968
Current member strength: 680

Section History

Since 1947 when Pakistan was created, with two wings, East & West Pakistan, there were a couple of members of IEEE located in this area. Up to 1968 there were more than one hundred members residing in both East & West Pakistan. More in West Pakistan especially in the town of Lahore, the capital of West Pakistan, a central place of Electrical activities. Lahore is also the Head Office of Water and Power Development Authority, the biggest utility company of the country. The IEEE members residing in Lahore felt the need of having a common forum for arranging technical meetings and seminars to increase their technical knowledge.

In accordance with IEEE by-laws collection of petitions for establishing a Pakistan Section was taken in hand. The entire process of collecting petitions and submitting them to Head Quarter was carried out for couple of month by Mr. I.D Arshad (Director, WAPDA) and Mr. Larner (Fellow, IEEE). IEEE Pakistan Sub Section formed in 1968 and Interim Chair was Mr. I.D Arshad. Later Election was held and Mr. S. M Akbari became the first Chairman of the Section in 1969.

Incidentally Pakistan Section became one of the pioneer Section in Region-10. Gradually with growth in no. of IEEE members. In the meanwhile a big port city of Pakistan petitioned to form a sub-section which was accepted. In 1982, IEEE Karachi Sub Section transformed into IEEE Karachi Section. IEEE Pakistan Section was converted to IEEE Lahore Section and Karachi Section. Later Islamabad Section was formed from IEEE Lahore Section. Now IEEE Lahore Section took initiative to form IEEE Bahawalpur Subsection

and successfully achieve it in 2016. IEEE Lahore Section intended to make another Sub Section "IEEE Faisalabad Sub Section" in Future.

All of these sections are actively engaged in the engineering profession and are collaborating with other national professional institutions in arranging symposium, technical lectures and seminars of national importance.

Key Achievements

2015 - Distinguish Section Award.

IEEE Lahore Section volunteers won Key Section, Regional and MGA awards e.g. IEEE YP Region 10 Award, IEEE WIE Region 10 Award and Hall of Fame 2015. IEEE Lahore Section volunteers equally achieved technically and non-technically and presented presentations at International level in different congresses and conferences.

Key Conferences Conducted by Section

IEEE ICOSST (International Conference on Open Source Systems & Technologies) 2006-2017:

IEEE INMIC (IEEE International Multi-Topic Conference) 1998-2017:

Key Achievements in Industry Collaboration

IEEE Lahore Section is struggling to create industry academia linkage by conducting Technical Activities and Meetings with joint collaboration of industries. From Past few years, we have strong link with Al-Khawarizmi Institute of Computer science, Huawei, ABB, Schneider Electric, General Electric, NTDC, Quaid Azam Solar and lot of well-known companies. We have adjunct Lecture Program conducted by IEEE Industrial Application Society.

Key Highlights from Young Professionals

IEEE Young Professionals Lahore Section is playing key

IEEE ICOSST 2015-2016

1st IEEE Lahore Section Student/WIE/YP/Technical Chapter Congress 2016

Energy Roundtable: LUMS and IEEE PES joint Initiative (Technical Meeting

Representation of IEEE Lahore Section | Region 10 IEEE Congress 2016

role in development of Young Engineers. Following STEP and other events every year brought great no. of achievements. Which include IEEE YP Region 10, IEEE YP Outstanding Volunteer and IEEE YP MGA Award. Mr. Maroof Raza, Mr. Rafeel Chaudhary, Mr. Usman Muhammad Ali and Mr. Usman Munawar added valuable Contributions to IEEE YP Lahore Section in recent years. We have great volunteers holding international YP Committees of Societies e.g. Mr. Usman Munawar (IEEE PES YP R10 & IEEE IAS YP R10& IEEE Region 10 Oversight Committee and IEEE Educational Committee). Mr. Amir Zahoor, (IEEE Education Activities Board, 2017). IEEE YP Lahore Section took amazing initiative like Graduate Assistance Program, Research and Development Program and industry visit Program for empowerment of skills of Young Engineers. Mr. Amir Zahoor, who is serving in IEEE Education Activities Board in year 2017

Key Highlights from WIE in Section

IEEE Women in Engineering Lahore Section constantly playing vital role in empowerment of Women in society and elevating their confidence by giving skills at national level. IEEE Volunteers from Lahore started a IEEE Pakistan WIE Forum in 2010 from during National WIE Summit in which women from all over Pakistan participated. Pakistan WIE forum got recognition at international level and did great job through national level projects. At International level WIE volunteers not only won Leurals but also delivered wonderful projects which added value to IEEE Lahore Section. IEEE WIE Lahore Section have done splendid work and won National and international Awards. WIE volunteers Specially Ms. Mehvish Zahoor, Ms. Sania Arshad, Ms. Nafeesa Mazhar, Ms. Asma Sajid did great efforts to uplift Confidence level of women in Pakistan by conducting seminars, workshops, WIE Forum and Star Programs.

Awards and Recognitions

IEEE Lahore Section won list of awards and recognition at national and international level. In 2015 IEEE Lahore

Section got recognition as "IEEE Distinguish Section". Recent years, our volunteers won 20 International Travel grants. IEEE Lahore Section Volunteers won Global Technical and Humanitarian Awards in past few years. In 2015 Regional congress, IEEE Lahore Section won 8 out of 12 Awards. IEEE PES Lahore Section won Chapter award from 2014 with addition to IEEE IAS IUB won Small Outstanding Chapter Award globally. In 2015, IEEE YP won Hall of Fame award, Similarly WIE IEEE Lahore Section is keep on bringing accords to Pakistan. In Past few years, IEEE Lahore Section Counselors Mr. Anees Buzdar and Mr. Omer Saleem Bhatti won MGA Best Counselor awards.

Special Initiatives/Programs Started by Section

⬤ IEEE Lahore Section and its chapters took following initiatives

⬤ Formation of IEEE Bahawalpur Sub Section and IEEE Faisalabad Sub Section.

⬤ Formation of WIE Pakistan Forum.

⬤ Adjunct Lecture Program to bridge the gaps between Industry and Academia

⬤ Technical and Research Series Program for empowering technical skills of Students and Young Professionals.

⬤ IEEE Graduate Assistance and Internship Program (50 Internships provided).

⬤ IEEE ComSoc Summer School Program 2016-2017

⬤ 10th IEEE International Multi-Topic Conference(INMIC) 1998-2017

⬤ 11th IEEE International Conference on Open Source Systems & Technologies (ICOSST) 2006-2017

⬤ 1st IEEE Lahore Section Student/WIE/YP/Technical Chapter Congress 2016.

IEEE Macau Section

Section Chair Name: Jianqing Li (2016-2018)
Year Started: 2003
Current member strength: 200

Section's History

The Macau section is located in Region 10, established on November 14, 2003. The Official Inauguration of the IEEE Macau Section was held on February 17, 2004 and the event was hosted by Arthur Winston, 2004 IEEE President.

8 Chapters

CH10347 Macau Section Joint Chapter, CAS04/COM19 (08/01/2005)

CH10349 Macau Section Chapter, C16 (10/11/2005)

CH10366 Hong Kong Macau Jt. Sections Chapter, EMB18 (07/25/2006)

CH10484 Macau Section Chapter, SSC37 (06/12/2009)

CH10512 Macau Section Chapter, SMC28 (03/03/2010)

CH10530 Macau Section Joint Chapter, AP03/MTT17 (05/18/2010)

CH10639 Macau Section Jt. Chapter, PE31/PEL35 (04/16/2013)

CH10773 Macau Section Chapter, RFID741 (04/20/2016)

2 Student Branches

University of Macau Student Branch

Macau University Science and Technology Student Branch

Key Conferences

TENCON 2015

01 Nov - 04 Nov 2015, HOLIDAY INN MACAO COTAI CENTRAL AT SANDS, COTAI STRIP, TAIPA, MACAO SAR.

Awards and Recognitions

2016 Outstanding Section Membership Retention Performance

Achievements in Industry Collaboration

⬤ Reinforcement / Establishment of collaborative relationship with local associations, Government and companies.
⬤ Organize / Co-organize Joint Activities with Local Associations:
⬤ l SOE Macau;
⬤ l Worker Association of CEM and Macau Water;
⬤ l Macau Science and Technology Association;
⬤ l Macau Facility and Management Association;
⬤ l Transmac - Transportes Urbanos de Macau.

Special Initiatives/Programs Started by Section

Technical support and comments to Macau Government for engineer registration

---

IEEE Madras Section

Section Chair Name: Dr. M. A. Atmanand
Year Started: 1973
Current member strength: 3840

Section History

IEEE Madras Section is one of the most active 10 sections in India, coming under Asia- Pacific Region, the Region 10 of IEEE. It covers the southern part of the country consisting of the states of Tamil Nadu and Pondicherry in India. IEEE Madras Section was formally started in 1973 as a Subsection of Bangalore Section. This Subsection was elevated into a full Section in 1978 and is nearing its 40th anniversary. IEEE Madras Section has around 3840 members of whom 2725 are student's members in about 110 active Student Branches. The Section has 24 society chapters besides the s Young Professional, WIE affinity groups along with few SIGHT initiatives. The IEEE Madras Section regularly organizes Technical Presentations on state of art technologies, Faculty Development Programs, Professional Development and Training Programmes, Entrepreneurship Summits, Conferences, Exhibitions, Contests, Hub Congress and SB Officers Meet, IEEE Day and Annual Meet and Awards Function etc., The Section extends financial assistance to student branches to conduct events at their SBs. It publishes a comprehensive monthly e-newsletter (IEEE MAS LINK) and a quarterly print newsletter highlighting various activities carried out under IEEE Madras Section, Society Chapters, Affinity Groups and Student

Branches. The Section also maintains an active and informative website at http://sites.ieee.org/madras/

Key Achievements

2010 - Received the "DISTINGUISHED LARGE SECTION AWARD" from R10 for the year 2010.

2011 – Crossed Membership strength beyond 10,000 (10,361).

Key Conferences Conducted by Section

2005 – IEEE INDICON 2005 during 11-13 Dec 2005, an International Conference under the aegis of the IEEE India Council on the theme of "Emerging Trends in Electrical, Electronics and information Technologies". Nearly 140 papers, selected after a peer review, were presented in the conference in the areas of Biomedical Systems, Communication Systems, Signal Processing, Computational Intelligence, Robotics, Computer Communication & Networks, Control and Instrumentation, Fiber Optics and Optical Communication, Microelectronics and VLSI, Power Electronics and Drives, Power Systems, High Voltage Engineering, Wireless Technologies and Software Engineering.

2008 – IEEE R10 Student / GOLD / WIE Congress during 28 -30 Jan 2008.

2014 – IEEE R10 Humanitarian Technology Conference 2014: The conference was aimed to promote discussions and developments in Electrical, Communication, Computing, Security and Disaster Relief areas to deploy them in improving the lives of the impoverished.

2015: IEEE WIE International Leadership Summit was held during 10-12 Sep 2015 with over 200 delegates from across the world with sessions to empower Women in Engineering.

2017 - National Conference Disaster Mitigation and Responsiveness & Management during 3-5 Feb 2017: The conf. had deliberations on various disasters such as Flood, Drought, Cyclone, Earthquake, Forest fire, Tsunami, Landslide, Hurricane etc. including Natural Disasters, Human made Disasters and Human induced disasters, its impact on society and economy, disaster prevention and disaster preparedness, disaster relief, rehabilitation and reconstruction.

Key Achievements in Industry Collaboration

The IEEE Section constantly interacts with its members from academia, industry through technical presentations and other collaborative activities. To name a few, members of Madras Fertilizer Ltd Chennai and National Instruments, Austin, Texas USA have delivered technical talks, Visits to L&T Technical Museum, Visit to L&T Rooftop Solar PV Installation have been organised promoting Industry Institute Interface.

Key Highlights from Young Professionals

IEEE YP at Madras Section established in 2004 has an active affinity group and has organized programs on varied topics like money management by young professionals in their early career, experiencing share trading through hands-on workshops, research interaction program on eHealth, Skill Development Training, STEP program etc., and ensures its over 1900 YPs to be active in their early stages of career to contribute their knowledge in Research & Technology. Some of the YPs of the Section Mr.Sampathkumar Veeraraghavan and Mr. NIvas Ravichandran have received awards from R10, MGA for their active role achievements.

Key Highlights from WIE in Section

The Women in Engineering (WIE) Affinity group under the IEEE Madras Section was formed in the year 2006, by the most dynamic and inspirational WIE volunteer Dr.Ramalatha Marimuthu, who served as the founder Chair for 7 jubilant years. The affinity group received the prestigious "R10 Affinity Group of the Year Award" in the year 2012, for its creative and most innovative activities. The affinity group strives to achieve the vision and mission of IEEE WIE through its novel activities which primarily focus on Rural Women

2016 IEEE MINI POCO Sight Project

SIGHT project distributing first aid kits to fishermen

2016 IEEE MINI POCO (Panel of Conference Organizers)   Group photo of Chennai hub congress held at JI

Empowerment, Career guidance to girl children, and returning mothers. The very first "International WIE Leadership Summit" was organized by the affinity group, during September 2015, by a team of volunteers, led by Dr.Vydeki Vijayakumar, the then Chair and Dr.Ramalatha.

Awards and Recognitions:

Prof. M. Ramalatha has received the 2016 WIE Inspiring Member of the Year Award.

IEEE Computational Intelligence Society, Madras Section Chapter received the Outstanding Chapter Award for the year 2015 under the Chairmanship of Dr. N. Kumarappan.

Certificate of Recognition: The IEEE Member Recruitment and recovery committee recognizes Mr. H.R. Mohan & Dr. N. Kumarappan for outstanding achievement in member retention for the Madras Section during the 2016.

IEEE Computer Society Madras Chapter of the Madras Section won the Outstanding Chapter Award for 2015 under the Chairmanship of Mr. H. R. Mohan

Dr. M. A. Atmanand, Chair, Madras Section was awarded with IEEE Oceanic Engineering Society's (OES) Presidential Award..

Award(s) Received from IEEE R10:

Received "DISTINGUISHED LARGE SECTION AWARD" from R10 for the year 2010.

IEEE Malaysia Section

Section Name and City: IEEE Malaysia Section, Kuala Lumpur
Section Chair Name: Mohammad Faizal Ahmad Fauzi
Year Started: 28th July 1985
Current member strength: 1 Fellow member, 7 Life member, 39 Associate member, 408 senior member, 1972 member, 566 graduate member and 467 student member

Section History

The IEEE Malaysia Section was established on 28 July 1985 with 400 members. In 2015, Malaysia Section

had celebrated its 30th anniversary by releasing the IEEE Malaysia 30th Anniversary Commemoration book. With the maturity of more than 30 years, IEEE Malaysia Section has developed into a thriving organization and has experienced various phases of developments. IEEE Malaysia Section is now proud with 24 technical chapters, 3 affinity groups, 23 student branches and 12 student chapters. Its membership has reached 3500 members which indicate encouraging development in the effort to attract electrical and electronic engineering professionals in Malaysia to IEEE.

IEEE Malaysia Section Excom 2017

IEEE Malaysia Section Leadership Camp 2017

Key Achievements

The IEEE Malaysia Section has published it 30 years Commemoration Book in 2015. In 2016, Malaysia Section was awarded as Best Senior Member elevation for Region 10.

Key Conferences Conducted by Section

IEEE Malaysia Section with its technical chapters has successfully organized many conferences. Two examples of past major conferences were IEEE Region 10 Conference (TENCON) 2000 and IEEE Region 10 Technical Symposium (TENSYMP) 2014. With the trust given to the Malaysia Section, the IEEE Region 10 Conference (TENCON) 2017 will be also organized by the Malaysia Section. The section has also initiated its own conference i.e. Student Conference on Research & Development (SCOReD) in 2001. SCOReD has become a series of highly successful Asia Pacific regional conference which conducted every year by the section and student branches in Malaysia. In addition, the flagship conferences are also organized by technical chapters every year.

Key Achievements in Industry Collaboration

The member of IEEE Malaysia Section is not only coming from universities but also from industries. Volunteers from industries have helped in many ways especially in building the linkage and collaboration in activity related to industry. One of the major achievements is the collaboration with the Institute of Engineers Malaysia (IEM) and The Institution of Engineering & Technology (IET) Malaysia, whereby the key members are mainly from the industries of various field.

Key Highlights from Young Professionals

The IEEE Malaysia Young Professionals was established in 2004 under the name of IEEE Graduate of Last Decade (GOLD). In 2014, its name has been changed

to IEEE Young Professionals to better reflect its goal and objectives. One of the biggest achievements is in co-organizing the 2nd Int. Conf. of Defense & Security Technology in 2014. In 2011, the IEEE YP Malaysia has won Affinity Group Hall of Fame as recognition to productive activities.

Key Highlights from WIE in Section

The IEEE Malaysia Women in Engineering Affinity Group was established in 2007 with Assoc. Prof. Dr. Zuhaina Zakaria as the interim chair. There are also 3 WIE Student Branch Affinity Group established in Malaysia. WIE Malaysia had received several funds from R10 WIE Support Fund to carry out social activities. WIE Malaysia is also given opportunity to organize IEEE WIE Leadership Summit which will be held in Kuala Lumpur on 18th to 19th September, 2017.

Awards and Recognitions

IEEE Malaysia has received several accolades from Region 10. In the year 2000, it was awarded Region 10 Distinguished Section Award. In 2006, IEEE Malaysia was the recipient for Region 10 Distinguished Large Section Award. Various awards also received by individual volunteers, student branches as well as technical chapters either from IEEE technical societies, Region 10 and IEEE Headquarter.

Special Initiatives/Programs Started by Section

IEEE Malaysia Section has organized a special program called the IEEE Malaysia Leadership Camp and the IEEE Malaysia Student Branch Leadership Camp annually. This initiative provide a platform for the Section executive committees to meet with all the high committees from all the Malaysia Technical Chapters, Affinity Groups and Student Branches. Sharing of various information from the IEEE perspective such as financing management, supports and funds available, reporting of activities, communication and website management and many more are held. Chapters and

student branches also have opportunity to tabulate their yearly planning activities and financial commitment. Malaysia Section also initiates a senior member elevation program every year in order to encourage members to be promoted as senior member. This initiative has received good response from the members and help in grown up the number of IEEE senior member in Malaysia.

IEEE Malaysia Section Student Leadership Camp 2017

Photo from Conference TENSYIMP 2014

30 years Commemoration Book

IEEE Nagoya Section

Section Chair Name: Yutaka Ishibashi
Year Started: 1999
Current member strength: 1,195

Section History

Nagoya Section, one of the nine sections of IEEE Japan Council, was established in 1999, and the section territory spreads out to Tokai Area (Aichi, Gifu, Mie, and Shizuoka Prefectures) and Hokuriku Area (Toyama, Ishikawa and Fukui Prefectures) in Japan. Shizuoka University Student Branch (SB) was started in 1968, and the SB is the oldest one in R10. Nagoya University SB and Fukui University SB were started in 2005 and 2016, respectively.

Nagoya Young Professionals (YP) Affinity Group was established in 2015. Four chapters, that is, APS, MAG, MTT, and ITS were established in 2006, 2008, 2010, and 2013, respectively.

Key Achievements

IEEE 2015 Gold Award for Section Membership Recruitment and Retention Performance

Key Achievements in Industry Collaboration

Group photo of Conference Presentation Awards in 2017

Group photo of Student Awards in 2017

IEEE Milestones were awarded to Tokaido Shinkansen (Bullet Train), Yosami Radio Transmitting Station, 20-inch Diameter Photomultiplier Tubes, 2000, 2009, and 2013. Mainly two companies have been supporting the operation of Nagoya Section.

Key Conferences Conducted by Section

Nagoya Section has the following sponsored activities every year.
Joint Conference of Institutes related to Electrical, Electronics, and Information Engineering in Tokai Area
Joint Conference of Institutes related to Electrical, Electronics, and Information Engineering in Hokuriku Area Special Lectures by newly-awarded IEEE Fellows are held basically every year. IEEE Metro Area Workshop in Nagoya (MAW 2017) is scheduled to be held at Chukyo University on October 7-8, 2017.

Key Highlights from Young Professionals

Formation of Nagoya YP was approved on Dec. 7, 2015, and the Kickoff event was held on Dec. 12, 2015. Nagoya YP members participated in Japan SYWL Workshop held together with Metro Area Workshop in Kansai (MAW 2016) on Aug. 6, 2016. Also, a social event "Toriaezu Beer" was performed on Sep. 16, 2016.

Key Highlights from WIE in Section

Nagoya Section does not have WIE. The section may try to establish WIE in near future.

Awards and Recognitions

Nagoya Section Young Researcher Awards, Student Awards, and Conference Presentation Awards are given to several students, respectively, every year. Excellent Student Awards in University are given to students at seven universities every year.

Special Initiatives/Programs Started by Section

Nagoya Section started Student Branch (SB) Associate Member System in 2016 to increase activities of student members. In the system, student members at universities without student branches can join SB of a neighboring university as associate members. Also, Nagoya Section is trying to support activities of life members to establish LMAG-Nagoya by including members who will become life members within a few years as associate members.

Group photo of Party in LMAG Lecture Meeting in 2017

Group Photo of Invited Seminar by IEEE President in 2015.

IEEE Nanjing Section

Section Chair Name : You Xiaohu
Year Started : 2007
Current member strength : 2262

Section History

The IEEE Nanjing Section is located in Region 10, and was formed on 14 February 2007. The IEEE Nanjing Section is represented at the China Council. The first Section Chair is Prof. He Zhenya, Life Fellow of IEEE.

Key Conferences

We have reported 579 conferences since 2007, among them include:

IEEE Conference on Wireless Communication and Signal Processing, once a year

IEEE WCNC 2013

IEEE VTC Spring 2016

IEEE/ACM International Conference on Green Computing and Communications

IEEE 10th International Conference on Computer-aided Industrial Design & Conceptual Design

International Forum on Smart Grid

The 6th Chinese Conference on Information and Communication Security

Awards and Recognitions

IEEE President Lewis Terman and John Vig have signed and issued honor commended certificates to Prof. He Zhenya in March 2008 and June 2009 respectively

IEEE R-10 Nanjing Section IAS and PES Joint Chapter is selected as IEEE Power and Energy Society's High Performing Chapter in 2010

Section is represented at the China Council.

IEEE New South Wales Section

The NSW section of the IEEE is centred on Sydney, though it has active members throughout the state of New South Wales. The Section Chair is Professor Karu Estelle, vice-chair Ray Brown, Treasurer John Ypsilantis, and Secretary John Aitkin. The section started as the Australian Section, on the 16th August 1972, and became the NSW Section in 1985, after the Victorian sub-section had become a section in its own right.

Membership

Its total membership was 2790 at the end of January 2017, of whom 52 were Fellows and Life Fellows, 274 Senior Members and Life Senior Members, and 1447 Members and Life Members.

History

The section history goes back to 1890 when William Joseph Spruson – a patent attorney – joined the precursor to the IEEE as an associate member. Subsequently, people more actively involved in electronics joined, notably Ernest Thomas Fisk, a co-founder of Amalgamated Wireless (Australia). He became a member in 1915, a fellow in 1925 and a life fellow in 1951.

The first meeting of the Australian IEEE members was organised early in 1972 by James J. Vasseleu, and they agreed to petition IEEE headquarters to recognise an Australian section. There were 63 signatories, and the petition was accepted on the 16th August 1972. The

first meeting of the section took place almost a month later on the 12th September 1972, and elected Jim Vasseleu as chair.

A Victorian sub-section was formed in 1975, but initially failed to thrive. It was re-activated in 1981 and petitioned for full section status in 1983, which petition was approved in the same year, but not immediately acted on. The former Australian section in NSW was renamed the NSW Section in 1985 in recognition of this development.

The Section has four student branches, at Sydney University, Macquarie University, the University of New South Wales and Western Sydney University. Macquarie University Student Branch was awarded the prize for the Best Student Branch in Australia and the 2nd prize for IEEE Exemplary Student Branch in Region 10. In 2011 Professor Karu Esselle received the IEEE Outstanding Branch Counsellor Award. There is also a student branch chapter of the IEEE Power and Energy Society at the University of Wollongong and a student branch chapter of the Microwave Theory and Techniques Society in Macquarie University. There are also four Women in engineering groups - at Sydney University, Macquarie University, University of Technology Sydney, and the University of New South Wales.

The key achievement of the NSW IEEE section is probably the first large international IEEE conference organized in Sydney, Globecon 98, which was organised in 1998 by the Communications/Signal Processing Chapter (with a lot of help from the rest of the section). It opened the way to a number of other big conferences.

NSW IEEE members have been involved in a number of interesting industrial achievements starting with Ernest Fisk.

For an intellectually rich section with 52 Fellows and Life Fellows, it's difficult to single out particular achievements. Dr. Andrew Dzurak and his team at the University of New South Wales have been able to set up a single atom quantum spin bit in a P-31 atom embedded in an isotopically pure layer of Si-28, cooled in liquid helium-3. The spin bit has a life-time of thirty seconds, which was a world record at the time, and may still be. Getting enough Helium-3 to do this on an industrial scale may be difficult.

Last year the NSW chapter of the Education Society was selected for the 2016 Outstanding Chapter Achievement Award "for experiencing an 80% increase in membership across two years through frequent innovative technical meetings, supporting women in engineering education and providing development opportunities to teaching assistants."

The NSW Section has in recent years been very active in promoting the TISP lesson plans provided by the IEEE Education Activity Board to STEM school teachers. This had been done by making contact with the STEM teachers through their state/national Teacher Associations at conferences and other major gatherings. Section has introduced over 1000 teachers to the TISP education resources the IEEE makes freely available to them, and have had about 200 participate in workshops where they were able to use the lesson plan resources as if in a classroom with students. One

conference in 2016 was in Canberra, and the Section was able to work in conjunction with the ACT Section in making our usual presentation. It is hoped the ACT section will continue with the presentations in future years. The Section helped the Power and Energy Chapter organise the 11th International Conference on the Properties and Applications of Dielectric Materials in Sydney in 2015. Two faces at the top of the picture are Trevor Blackburn (who has been active in the section and the chapter for many years) and Ray Brown (in the back with spectacles - who is now our vice chair). Both are stalwarts of the NSW chapter of Power and Energy Society.

IEEE New Zealand Central Section

Section Chair Name: Prof Donald Bailey
Year Started: Subsection, Nov 2005, Section, Aug 2007
Current member strength: 262

Section History

The New Zealand Central Section was originally part of the NZ South Section. The concentration of engineers within the Wellington region (lower North Island) meant that it made sense to become a separate section. In 2010 we formed our first chapter – Instrumentation and Measurement Society, closely followed by a joint Communications / Signal Processing / Information Theory chapter, and a Power and Energy Society chapter. In 2011, we established the GOLD (now Young Professionals) affinity group, and the first student branch at Massey University, with the Victoria University Student Branch beginning in 2012. We currently have a Women in Engineering affinity group under development, but not formally established at this time.

Key Conferences: Technical co-sponsor of

Image and Vision Computing New Zealand - IVCNZ (2009, 2013, 2016)
International Conference in Field Programmable Technology – FPT (2015)
International Conference on Sensing Technology – ICST (2015)
International Conference on Automation, Robotics and Applications – ICARA (2006, 2009, 2011, 2015)

Sensor Applications Symposium – SAS (2014)

Awards and Recognitions

2014 R10 Distinguished Small Section Award

2015 R10 Outstanding Volunteer Award to Dr Murray Milner

Achievements in Industry Collaboration

The section has strong Chapters in Communications, Instrumentation and Measurement, and Power and Energy, which have close collaborations with industry. Each year there the respective chapters hold a workshop which receives strong participation from industry and government research organisations.

Highlights from Student Branches

The Massey University Student Branch and Victoria University Student Branch alternately host a Postgraduate Presentation Day, where postgraduate students give a 10 minute presentation on their research. This has been held annually since 2007. The talks are judged by members from the Section Executive, including both academics and industry, with a prize given to the best presenter.

Special Initiatives/Programs Started by Section

From the very first year as a sub-chapter, we have hosted an industry breakfast, which is jointly sponsored by the Section, and also the local Institute of Engineering and Technology (IET) and Institute of Professional Engineers New Zealand (IPENZ) branches. At the industry breakfast, we have a CEO or CTO give a talk on a topic of relevance. This event typically attracts 30 to 40 participants, many of who are from industry

IEEE New Zealand North Section

Section Chair Name : NZ North Section
Year Started : 1968 (1979)
Current member strength: 670

Section History

Although New Zealand is a small country in the Pacific, its contribution to Electrical/Electronic Societies (AIEE and IRE) has a long history. The NZ Section was established in 1968 very soon after the formation of the Tokyo Section. The major electrical milestones that underpin New Zealand's relationship with AIEE, IRE and then IEEE are -

1872	Telegraphic Communication between NZ provinces
1881	Manual telephone exchange with 17 subscribers
1886	Reefton is the first NZ town on public electric supply
1902	Cable communication between NZ/Canada, electric trams in Auckland
1907	Wireless communication between NZ and Australia
1914	Hydroelectric generation at Lake Coleridge
1925	Regular radio broadcast in Auckland. Manufacture of receivers in AK
1957	Commercial Geothermal generation at Wairakei, second in the world
1964	Commissioning of power transmission HVDC submarine cable between North and South Islands
1971	Commissioning of Earth Satellite station

Being remote, NZ has had to rely on local innovation and manufacturing during the development of its industrial and farming enterprise. Electrical Engineering has been a key aspect in this enterprise and in spite of having only 50 active members, the NZ Section was formed in 1968. This was very challenging giving that 50 signatures were mandatory and the 50 members were scattered all across the country.

In 1969, the NZ Section became a co-sponsor of the National Electronics Conference (NELCON).

The first IEEE president to visit NZ was Robert Tanner in 1972.

The first Chapter to be formed in NZ was the Industrial Applications Chapter in 1974.

Growing membership and the geographical divide led to a petition to create a NZ South Section. This eventuated in 1979 leading to the creation of a NZ North Section and a NZ South Section.

The NZ Council was formed in 1980, which encompassed both of these sections.

Key Conferences
PES POWERCON 2012
PELS SPEC 2016
PES ISGT-ASIA 2017

Awards and Recognitions
Student Branch Activity Award (2008)
R10 Exemplary Certificate (2008);
R10 Outstanding Certificate (2010);
R10 Outstanding Award (2011)
President's Exceptional Student Humanitarian winner "OneBeep" (2011)
MGA Outstanding Branch Award (2013)
MGA GOLD Award (2011, 2013),
R10 Outstanding Volunteer Award (2013)

IEEE New Zealand South Section

Section Chair Name: Lance McCallum
Year Started: 1980
Current member strength: 267

Section History

After the formation of the orginal New Zealand Section, in 1975 Robin Harrington of Christchurch approached the executive of the NZ IEEE Section with a proposal that a South Island NZ Section of the IEEE be established. The proposal could not proceed at the time because there were fewer than 50 members in the South Island. At a subsequent election of officers Robin Harrington became Vice Chairman of the existing New Zealand Section.

In 1978 he put forward a first petition for a South Island Section. This petition was finally approved in 1979 after a boundary adjustment which divided the New Zealand membership into North and South sections.

Student Activities

The student branch as seen a slow decrease in members over the past few years. This is largely due to the number of electrical engineering students at the University of Canterbury having decreased. A big focus of the student branch this year has been to increase membership. Through giving presentations at the university and making contacts with the industry, student membership has increased by over 300% from last year. The branch has also recruited more industry sponsors (from across New Zealand) than the club has ever had before. With an increase in student events this year, the branch hopes to further increase its member numbers significantly again in the very near future.

The University of Canterbury student branch prides itself off organising engaging events for its' student members, whether it be professionally or socially orientated. Key functions that the student branch organises includes quiz nights, social BBQs and academic tutorial nights. However our most reputable achievements come from the industry tours and our practise interview event.

While at university, there are many students that struggle with finding a direction for a career after their studies. To help give student IEEE members an insight into potential career paths, the student branch organises several industry tours throughout the year. The tours target companies at the cornerstones of industry to show students the variety of work that their discipline can lead to. The tour consists of taking students to an engineering company where they get to network and learn more about the jobs available. Up to 30 student members attend each tour which happens 2-3 times a year at various companies around the district.

As part of our annual student activities, our largest and highly anticipated event is a practice interview day. The student branch invites a number of companies from the electrical industry to come and conduct real world interviews with our student members. The students, at various stages of their degrees, come equipped with a CV and knowledge of the company and get interviewed as if they were applying for a junior engineering role. The companies spend 10-15 minutes interviewing the student and then provide some feedback on their performance afterwards. This event has received a huge amount of praise from both the companies and students that have attended previously. It not only allows students to practise their interview skills in a real-life situation, but also allows the companies to network with a large number of students that will be looking for employment in the near future. Organised in unison with this event, the student branch also coordinates CV and job interview skill seminars which are conducted by the University of Canterbury Careers department. These seminars give our student members a toolbox of skills in which they can take to the practice interviews and endeavors for employment in the future.

Achievements in Industry Collaboration

The University of Canterbury student branch prides itself off organising engaging events for its' student members, whether it be professionally or socially orientated. Key functions that the student branch organises includes quiz nights, social BBQs and academic tutorial nights. However our most reputable achievements come from the industry tours and our practise interview event.

While at university, there are many students that struggle with finding a direction for a career after their studies. To help give student IEEE members an insight into potential career paths, the student branch organises several industry tours throughout the year. The tours target companies at the cornerstones of industry to show students the variety of work that their discipline can lead to. The tour consists of taking students to an engineering company where they get

to network and learn more about the jobs available. Up to 30 student members attend each tour which happens 2-3 times a year at various companies around the district.

As part of our annual student activities, our largest and highly anticipated event is a practice interview day. The student branch invites a number of companies

From the electrical industry to come and conduct real world interviews with our student members. The students, at various stages of their degrees, come equipped with a CV and knowledge of the company and get interviewed as if they were applying for a junior engineering role. The companies spend 10-15

minutes interviewing the student and then provide some feedback on their performance afterwards. This event has received a huge amount of praise from both the companies and students that have attended previously. It not only allows students to practice their interview skills in a real-life situation, but also allows the companies to network with a large number of students that will be looking for employment in the near future. Organised in unison with this event, the student branch also coordinates CV and job interview skill seminars which are conducted by the University of Canterbury Careers department. These seminars give our student members a toolbox of skills in which they can take to the practice interviews and endeavours for employment in the future.

IEEE Northern Australia Section

Section Chair Name: Dr Graham Woods
Year Started: 1994
Current member strength: 266

Section History

Activities in North Queensland started in the 70's, organized by Keith Kikkert, Greg Allen and John Nielson (James Cook University, JCU). Another early active member, Janina Mazierska (also known as Ceremuga), joined in 1987 from JCU. (Secretary), Peter Symington (Treasurer) and Greg Allen (Student Activities Chair).

North Queensland Section was approved on 29 January 1994 (Foundation and First Chair Janina Mazierska). The Section formed Chapters: MTT-S/CommSoc Joint Chapter (2003), Power and Energy Society Chapter (2013), Oceanic Engineering Society Australia Chapter under the IEEE Australia Council organised by Mal Heron of NA Section (2013).

Key Achievements

To provide a platform and focus for technological advancement in the Northern Australia region and bring together like minded persons from the large geographical region that makes up Northern Australia.

Key Achievements in Industry Collaboration

The section prides itself on maintaining strong links with industry in the local region including Ergon Energy, The Section services a geographical area of some 2,600,000 km^2 and includes Papua New Guinea, Northern Queensland and Northern Territory in Australia, and the major cities of Townsville, Cairns and Darwin. The Section area was enlarged when the Northern Territory "ceded" from New South Wales Section, in 2008, resulting in a name change to Northern Australia Section (15 June 2008).

2017 Peter Arlett Memorial Lecture

Right Photo from Left : Greg Elkins, Jay Giri.
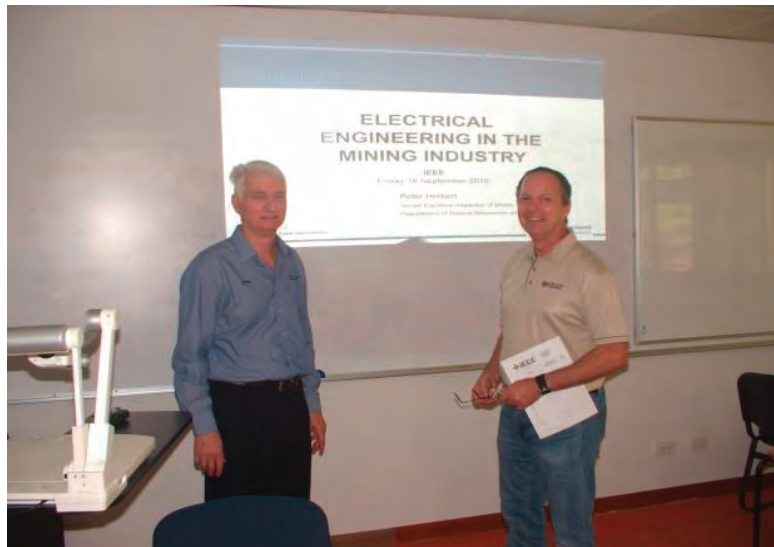
2017 Mining industry talk. From left : Peter Herbert (Senior Mines Inspector), Graham Woods.

IEEE James Cook University Student was formed in Feb 20, 1990. North Queensland Subsection was approved Allen (Foundation Chair), and Janina Ceremuga (First Chair), Keith Kikkert (Vice Chair), on Dec 26, 1991, with starting members including Greg John Nielsen

Telstra and consulting firms including GHD and Orana Engineering.

Key Highlights from Young Professionals

The Northern Australia section formed a Young Professional affinity group in 2017. The inaugural YP affinity group leader is Mostafa Rahimiazghadi.

Awards and Recognitions

The Northern Australia Section has achieved a number of prestigious awards over its relatively short history. These include the Region 10 Best Small Section Award in 2013 the highest voting prize from Regions 10 in 2015.

Special Initiatives/Programs Started by Section

The Northern Australia section started the Peter Arlett Memorial lecture in 2014 to commemorate a prominent figure in the Northern Australia power industry and as an annual focus IEEE event.

The Northern Australia section hosts talks relevant to the local members. Of particular note are technical seminars and workshops relevant to local industry members.

IEEE Pune Section

Section Chair Name: Prof GS Mani
Year of Starting: 2010
Current member strength: 1200

Section History

From a subsection under Bombay Section, Pune graduated as a full Section in June 2010. Thus, Pune is probably the youngest section in India. Over the years, we have established Six Professional chapters (Signal Processing, Communications, Instrumentation & Measurement, Computers, Electrical Power Engineering, and Education). The section also has about 20 Student Branches in different Engineering Colleges of Pune. Two Working Groups (WIE and Young Professionals) have also been formed.

Major Conferences

Pune Section has been holding number of conferences, seminars, workshops at National and International level every year. In the year 2016 alone, there were eight conferences, on subjects varying from Computational Intelligence to Data Management toTV White spaces. The section has a well-oiled and organized mechanism to ensure quality of the conferences. The flagship conference of India council, INDICON 2014 was hosted by Pune Section in December 2014, which was well attended and well appreciated. More than 1600 Technical papers were received for presentation from over 16 countries -- only about 175 selected for oral presentation. There were 7 Parallel Sessions held on 3 days with invited speakers coming from different parts of the world. Tutorials by experts on important topics, Exhibition by many technical entrepreneurs and DRDO participation in a big way were some of the other highlights. The event was well covered in media.

Awards

IEEE (Pune Section) was adjudged as the best section in Asia- Pacific Region in 2014 (Medium Section Category). PICT Student branch of the Section was the largest and Outstanding Student Branch and was specially felicitated by President, IEEE. Many persons from the Section have also been awarded for their voluntary contributions to IEEE, notable among them are Mr. Tagare, Dr. Doke, Dr. Rajesh Ingle, Dr Kalyani Joshi, Prof. Mandar Khurjekar among others. Number of persons volunteering for Pune Section have also received recognition for their contributions to Society. Our mentor, Dr Vijay Bhatkar was recently decorated with Padma Bhushan award. He was also appointed as the Chancellor of Nalanda University in Jan 2017. Dr PK Sinha, past chair of Pune Section (2015-2016) has been appointed as Vice Chancellor and Director of the newly formed IIIT, Nai Raipur.

Women in Engineering Affinity Group

WIE Affinity group of Pune Section has been very active ever since it was formed in 2012. In perfect tune with IEEE, WIE arranges Women's day Program every year to 'Inspire, Engage, Encourage, and Empower' the Women of the section. The event attracts audiences from diverse backgrounds including students, professionals, entrepreneurs, technocrats and even social reformers and philanthropists. Apart from technical and motivational sessions, many engaging events are held to commemorate this day – sessions on Marketing, Entrepreneurship.

Special Initiatives by Section

Activities for the students at Pune Section conducts programs regularly by various student branches include webinars, lectures, workshops, tutorials, debates, Quiz, apart from competitions, coding contests etc. In the Computing Contest held in May 2014, there were a record number of 655 registrations from across the world including from Russia, Istanbul, Canada, Slovakia, UK, Egypt, South Africa, Belarus and Brazil.

Smart City Initiative: On the initiative from IEEE (Pune Section) Pune Municipal Corporation (PMC) applied for and got selected as "IEEE Affiliated Smart City" in 2015. Following this Initiative, the Section has signed a MOU with the Corporation and intends to contribute to the smart city growth. Together with PMC, the section presented a 3-hour Tutorial session on 'PUNE MODEL: Planning for a Smart City in a Developing country' during IEEE International Smart Cities Conference (ISC2) in Trento, Italy, during September 2016.

Flagship Events: The two flagship events of Pune section are Project Competitions for final year Engineering students (UG and PG) and Technology Dissemination Contests for Students (TDCS).Project Competitions test the capacity of students in applying the theoretical knowledge gained in their class rooms to practical usage. TDCS is a unique contest where engineering college students are judged on the basis of their skills to spread awareness about advanced technologies among rural and urban school children. Over the years, this has gained popularity and students from all parts of the country are participating in the contest. In 2016 alone, TDCS could reach out to more than 350 schools Pan India.

IEEE Queensland Section

Section Chair Name: Dr.Daniel Eghbal
Year Started : 1985
Current member strength : 1,123

Section History

Approval to form the Queensland Section was granted on February 22nd 1985 and the section was officially launched on February 26th 1986 at a function attended by the Minister for Industry, Small Business and Technology Mike Ahearn. Initially the Queensland Section's geographical area covered all of the state of Queensland plus Papua New Guinea. On January 29th 1994 the North Queensland Section was formed, restricting the Queensland Section's geographical area to those parts of Queensland below the 23rd parallel south.

Key Achievements

2015: organize two major international conferences
2015: Queensland Section 30 year's anniversary event

Key Achievements in Industry Collaboration.

Queensland Section has been working with Engineers Australia and the local industries to identify industry member needs. Consequently, IEEE events have been received very well by industry members. And the local industry also has been supportive in hosting international conferences.

Key Conferences Conducted by Section

ICASSP 2015 - IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)

APPEEC 2015 - IEEE PES Asia-Pacific Power and Energy Engineering Conference

AUPEC 2016 - Australasian Universities Power Engineering Conference

Key Highlights from Young Professionals

The Queensland Young Professionals affinity group previously known as IEEE Graduates of the Last Decade affinity group was formed on June 23rd 2006. In the recent years, young volunteers have taken the leadership role and actively organise technical seminar.

Key highlights from WIE in Section

The Queensland chapter of the IEEE Women in engineering affinity group was formed in 2010. Since then, the Queensland WIE affinity group has been actively organising technical events and highlighting the role of female engineers in the industry.

Awards and Recognitions

Queensland Section administrates various awards and recognitions:
Recognition of Service and Outstanding Contribution Certificate
Volunteer of the year award, PES Outstanding Engineer and PES Outstanding Volunteer Award, The IEEE Student Thesis Prize, The ICPADM-Mat Darveniza IEEE Student Prize, IEEE Student Prize (Signal & Image Processing)

Special Initiatives/Programs Started by Section

In 2011, Queensland PES chapter established a $2,000 travel award for students to attend IEEE PES General Meeting. This program is a great example of how the revenue from organizing PES technical workshops can provide unique opportunity to future leaders; IEEE student members. In 2014, the Queensland Section launched its inaugural Senior Membership Elevation BBQ event and increased the number of senior members to over 120 (that was 50% membership increase).

2015 IEEE PES APPEEC Conference –

IEEE Queensland Section 30 years anniversary, 2015

IEEE Queensland Section 30 year's anniversary, 2015 – QLD Section Chair from establishment to 2015- from right to left: Prof. Matt Darveniza, Prof.Neil Bergmann, Associated Prof. Ian Vaughan Clarkson, Associated Prof. Peter Sutton, Prof.Tapan Saha

IEEE Republic of Philippines Section

Section Chair Name: Dr. Jennifer Dela Cruz
Year Started: December 4,1974
Current member strength: 316

Section History

IEEE Philippines Section was founded on December 4, 1974 amidst and in response to flourishing infrastructure development programs by the Marcos government in the area of energy and electric power. The Philippines Section of the IEEE was formed as Section 15 of the Region 10 of the Institute's geographical division and registered with the Securities and Exchange Commission (SEC) of the Philippines as a non-stock, non-profit organization on May 1975. The first Chair of the Section was Engr. Bienvenido Tesoro, who was followed by Professor Jose Azarcon Jr. from the Department of Electrical Engineering at University of the Philippines. The IEEE Philippines Section produced its newsletter, entitled "R10S15" (for Region 10 Section 15), during the stewardship of Mr. Willington K. K. C. Tan. The R10S15 was intended to disseminate information about the Section's activities and the latest technology news in electrical engineering. It further encouraged the exchange of ideas between IEEE professionals and students through columns and feedback sections. Around this time, IEEE Student Branches were formed at the University of the Philippines (UP), De La Salle University (DLSU) and New Era College. The IEEE Philippines Section also linked up with the professional organizations in the Philippines, such as the Institute of Integrated Electrical Engineers (IIEE) and the IEEE Philippines Section found its first home in the permanent headquarters of the IIEE in Cubao, Quezon City. In 1992, the Section's newsletter was renamed to "Network". Heightened activities of the Section at this time resulted in more pages and more news. Most activities in the late 1980s to 1990s were confined to technical seminars, which included the following: "The Quest for the Village Dial Tone – a Seminar on Rural Telecommunications Development in the Philippines", "Video Conferencing Technology", "Nuclear Power Plants in the Development and Progress of a Nation", "Municipal Telephone Law and Alternative Technologies in Telecommunications", "Very Small Aperture Terminals", "Integrated Circuits Packaging Technology", "State of the Art in Telecommunications Technologies", "SCADA/EMS Systems" and the First IEEE Philippines Section Symposium on Wireless Technologies in 2005. Students and academics participated in scholastic quiz competitions in Electrical and Electronics Engineering that were sponsored by the IEEE Philippines Section. In the mid-1990s, Student Branches in the University of Santo Tomas (UST), the oldest university in Asia, the Mapua Institute of Technology and University of the East (UE) were also setup. Most of the IEEE members in the Philippines come from Metro Manila, which is the country's business, industry and academic center. The Section attempted to reach out to other provinces in the Philippines by encouraging the setting up of local society chapters in the north of Luzon and –

22 - south in the Visayas region and Mindanao. Apart from cooperation with IIEE, which represented the power engineering sector in the Philippines, the Section pursued ties with the Institute of Electronics

and Communications Engineers of the Philippines (IECEP) in order to reach out to practicing professionals in the electronics and telecommunications industry. Highlights of these efforts included tournaments and dinner party events, which also provided opportunities for members to network for professional development and for enhancing their business. A highlight in the IEEE Philippines Section history is the visit of then IEEE President Wallace Read in 1995, who served as a keynote speaker during the IEEE-organized seminar on Advances in Power Engineering. His visit also marked the formal signing of the IEEE national society accreditation documents of two professional organizations in the Philippines – the Institute of Integrated Electrical Engineers (IIEE) and the Institute of Electronics and Communications Engineers of the Philippines (IECEP). The primary challenge being faced by the IEEE Philippines Section year after year is finding means of maintaining and increasing membership numbers. The Section is reaching out to universities, industry groups (such as the Semiconductor and Electronics Industries of the Philippines Inc., Philippine Electronics and Telecommunications Federation), government (Department of Science and Technology) and individual companies to pitch the value of IEEE membership. The Section has adopted the slogan, "IEEE = Technology = High Value" in attempting to establish its relevance and carve a niche in the Philippines. The technology landscape in the Philippines is largely focused on semiconductor and electronics manufacturing and IT outsourcing. There is, however, very promising developments in the areas of software design, IC design and RF/microwave systems. The IEEE Philippines Section has espoused and supports such high value activities for industry and academe, through sourcing of experts and literature, in its attempt to contribute to nation-building. In line with this objective, the Section supports the following activities every year: the Dr. Wallace Read, IEEE President 1995, with officers of the IEEE Philippines Section Dr. Wallace Read and, to his left, Mr. Gerry Villacorta (1995 IEEE Philippines Section Chair) leading the signing of the national society agreements for the IIEE and IECEP

- 23 - Microcontroller Applications Design Competition (MADC) and the National Electronics and Communications Engineering Conference (ECECONF). After close to 34 years of existence, the IEEE Philippines Section is more committed than ever in executing the principles which led to the establishment of the first IEEE: the advancement of theory and practice of electrical and electronics engineering through knowledge sharing, discussion and dissemination; the advancement of the engineering profession through promotion of safe and quality service to the nation; and, the enhancement of the quality of life for all people throughout the world through promotion of applications of technology in everyday life.

Key Conferences:
TENCON 2012: Cebu Philippines, Nov 19-22, 2012

R-10 HTC: Cebu Philippines, Dec. 9-12 2015

Achievements in Industry Collaboration:
IEEE Philippine Section "Kapihan" (coffee conversations): One of the initiatives of the Philippine Section is to bridge the gap between industry practitioners, faculty members and students (graduate and undergraduate). This is a regular event

done in different professional and academe venue. This activity involves short technical presentations/lectures and roundtable discussions after.

IEEE Philippine Section Family Day: An annual activity of the Philippine Section that started nearly 3 years ago. IEEE PS Family Day is a non-

technical activity that is composed of several recreational activities. A registered IEEE member can bring along his/her family to create bonds with other IEEE members.

IEEE Philippine Section Sports Fest: This activity was conceptualized by the section volunteers in conjunction to Family Day. The aim of this activity is to engage younger members (students) to create bonds with other members through sports activities.

IEEE Philippine Section Yolanda Drive: Typhoon Yolanda is one of the deadliest if not the deadliest typhoon recorded. The typhoon left a number of homeless civilians. The section went to ground zero to distribute several goods for the needy individuals.

IEEE Philippine Section Lectures: The nominee occasionally organize talks and lectures with invited foreign speakers to deliver lectures/workshops to IEEE students and young professionals.

IEEE Philippine Section WIE:
The petition to form WIE Affinity group in the Philippines was approved last Oct 26, 2015. A meeting last November 15, 2015 with the IEEE R10 WIE Coordinator Supavadee Aramvith was held in Pancake House, Alabang. Details of inauguration and technical sessions were discussed and planned which will be incorporated in the program of IEEE R10 HTC 2015 International Conference to be held in

Waterfront Hotel, Cebu, Philippines. The WIE PS inauguration was scheduled on Day 3, Dec 11, 2015, 11:00 o'clock in the morning. The WIE affinity group was introduced, slide presentation of WIE in general was made, some backgrounds and status of women Engineers in the Philippines. Dr. Takako Hashimoto, the IEEE WIE Coordinator attended the event and made a congratulatory and inspirational speech for the newly formed affinity group. She encouraged the group and gave her full support to our future endeavors. Another highlight of the program is a video message by Dr. Supavadee Aramvith. Despite her physical presence, she managed to discuss the overall efforts of the R10 WIE in promoting its mission and vision. Through her message, she gave commendation to all the people behind the success of WIE around Region 10.Likewise, the group was very lucky to have the presence of IEEE President Howard Michel and IEEE R10 Chairman Ramakrishna Kappagantu to grace the event.

IEEE Sapporo Section

Section Chair Name: Yoshikazu Miyanaga
Year Started: 1998
Current member strength: 247

Section History
The IEEE Sapporo Section is located in Region 10, and was formed on 14 November 1998. It is represented at the IEEE Japan Council. The IEEE Sapporo Section territory encompasses the Hokkaido Island region in Japan.

Kiyohiko Itoh san is a Life Fellow and the founding chair of the Sapporo Section.

Key Conferences Conducted by Section
A domestic conference named Hokkaido-Section Joint Convention of Institutes of Electrical and Information Engineers is annually conducted with Hokkaido Sections of the Institute of Electronics, Information and Communication Engineers (IEICE), the Institute of Electrical Engineers of Japan (IEEJ), the Institute of Television Engineering (ITE) of Japan, the Illuminating Engineering Institute of Japan (IEIJ), and the Institute of Electrical Installation Engineers of Japan (IEIEJ).

Key Highlights from WIE in Section
IEEE Sapporo Section WIE Affinity Group was formed on 22 August 2007, as the first Section's WIE Affinity Group in Japan.

Awards and Recognitions
2016, Outstanding member recruitment and retention performance

Special Initiatives/Programs Started by Section
IEEE Sapporo Section Student Paper Awards

IEEE Sapporo Section Student Paper Contest

IEEE Sendai Section

Section Chair Name: Masataka Nakazawa
Year Started: 1998
Current member strength: 711 (as of the end of 2016)

Section History

Sendai Section, covering Tohoku Region located in the North Eastern area in Japan, was established in 1998. The number of members belong to Sendai Section was about 380 at the time of establishment, but is about 700 members at present. In 2000, Tohoku University Student Branch was formed as the ninth Branch in Japan. In 2001, EMC27 Sendai Chapter was formed as the first technical chapter in our section. So far, the following chapters were formed: MAG33 in 2005 (changed to joint with Sapporo Section in 2016), COM19 in 2012 and SP01 in 2013. Section will continue to enhance our activities in the future.

Key Achievements

The first IEEE Milestone in Region 10 was awarded on Directive Short-Wave Antenna, namely Yagi-Uda antenna at Tokyo Section in 1995. This technology was invented in Sendai Section.

Conferences Conducted by Section

IEEE R10 Humanitarian Technology Conference 2013 (R10-HTC2013) was held at Tohoku University, Sendai City, hosted by Sendai as well as all Japan Sections and Japan Council. Many participants from all over the world stimulated discussions and exchanged opinions in this conference.

Key Achievements in Industry Collaboration

Section has been making efforts to stimulate industry collaborations with companies located in Tohoku Region. The number of IEEE members who belong to the companies in Sendai Section has been increasing. So far two company-belonging members have been upgraded to the IEEE Senior membership.

Highlights from Young Professionals

Student session has been organized to make scientific presentation/discussion and technical writing all in English, in annual academic meetings since 2002. Section has awarded Student Awards to the excellent papers in these sessions. Seminars for improving presentation and writing skills in English has also been organized.

Key Highlights from WIE in Section

WIE affinity group will be formed in Sendai Section this year. This is the fourth establishment after Japan Council, Kansai Section, and Sapporo Section in Japan. it is expected that female engineers will increase further along with this activity.

Awards and Recognitions:

Section received a gold medal as the recognition of the Outstanding Section Membership Recruitment and Retention Performance in 2016.

Special Initiatives/Programs Started by Section

Motivated by the experience of The East Japan Great Earthquake Disaster, we have been organizing a series of the lecture meetings on "technologies covered by IEEE can contribute to disaster recovery, prevention, and safety measures" since 2011

Lecture Meeting for Disaster Recovery –

Milestone

Poster Session SB2 –

Section Excom Members

Student Award ceremony

IEEE Seoul Section

Established Date : 1976
Section Chair Name : Jong Chang Yi
Current Member Strength : 3500 Members including 29 Fellows and 300 Senior Members.

Sections History

The IEEE Seoul Section was formed as the IEEE Korea Section on February 26th, 1976 with Prof. Chung Han Lee (Seoul National University) and Prof. Song Bae Park (KAIST) as the first chair and vice-chair, respectively. The section changed its name to IEEE Seoul Section in 1992.

So far, Seoul Section contributed the IEEE community by serving as volunteers including one Secretary of the IEEE Board of Directors, 4 R10 Directors, and many Technical Society Chairs, as well as by hosting many technical and professional meetings including 3 TENCONs.

Key Achievements

- 1983 hosted TENCON in Jeju.
- 1991 & 1992 Prof. Souguil J. M. Ann served as R 10 Director.
- 1993 Prof. Souguil J. M. Ann served as Secretary of IEEE BOD.
- 1999 hosted TENCON in Jeju.
- 2003 & 2004 Dr Jung Uck Seo served as R10 Director.
- 2009 & 2010 Dr Yong Jin Park served as R10 Director.
- 2010 Corporate Innovation Award: Samsung Electronics Co.
- 2017 Prof. Kukjin Chun serves as R10 Director.
- 2018 to host TENCON in Jeju.
- Annual Student Paper Contest since 2000
- 23 local technical chapters in Seoul Section

Key Conferences Conducted by Section

- 1983 & 1999 TENCON
- IEEE Asia-Pacific Electromagnetic Compatibility, June 2017
- IEEE Systems, Man, Cybernetics, August 2017
- IEEE Compilers, Architectures, and Synthesys, October, 2017
- IEEE CODES+ISS, October, 2017
- IEEE/ACM Network On Chips, October, 2017
- TENCON 2018, October 28-31, 2018

Key Achievements in Industry collaboration

- 2010 IEEE Corporate Innovation Award by Samsung Electronics.
- 2012 Robert Noyce Medal for industrial achievement by Yoon Woo Lee (Samsung Electronics Co.)
- Volunteer Positions are filled with industrial professionals.
- Financial supports from industry on local and national events.

Key Highlights from Young Professionals

Just established in 2016.

Key Highlights from WIE in Section

2016 Won R10 WIE Contest.

Awards and Recognitions

- Recognition plagues are presented at HMPC event
- Grand, Gold, Silver, and Broze Prizes are SPC event
- 2010 IEEE Corporate Innovation Award by Samsung
- 2012 Robert Noyce Medal for industrial achievement by Yoon Woo Lee (Samsung Electronics Co.)

Special Initiatives/Programs Started by Section

IEEE/IEIE Joint Award which started 10 years ago now gained a nation-wide recognition as one of the top honor awards mong Electrical and Electronic Engineering.

IEEE Shikoku Section

Section Chair Name: Masanori Hamamura
Year Started: 1999
Current member strength: 254

Section's History

In 1999 Shikoku section was established as the eighth regional section in Japan. Shikoku is the fourth largest island in Japan and there are four prefectures, Ehime, Kagawa, Tokushima, and Kochi. Our office changes around the four prefectures in every two years. Section organize a convention in September and several technical meetings every year.

Key Conferences conducted by section

Shikoku-section Joint Convention of the Institutes of Electrical and related Engineers (SJCIEE) is the largest convention in Shikoku and is organized by IEEE Shikoku section and other seven Shikoku sections of domestic institutes/societies.

International Conference on Informatics and Applications (ICIA) 2015, 2016, and 2017 was/will be organized in Takamatsu. Student branch meetings are held every year in cooperation with IEICE (Institute of Electronics, Information and Communication Engineers) and SJCIEE.

Awards and Recognitions

Section received 2006 IEEE RAB Outstanding Small Section Award and 2006 R10 Distinguished Small Section Award.

Section chair and officers in 2017 (left) and Student branch meeting with IEICE in 2015 (right).

Convention site and participants (left) and voluntary student staffs (right) of SJCIEE 2015.

Potluck and workshop organized by IEEE Kochi Student Group with Japan society for fuzzy theory and intelligent informatics in 2013.

Section chair and officers in 2017 –

Student branch meeting with IEICE in 2015

Potluck and workshop organized by IEEE Kochi Student Group with Japan society for fuzzy theory and intelligent informatics in 2013

IEEE Shin-etsu Section

Section Chair Name: Prof. Kiyoshi Ohishi, Nagaoka University of Technology
Year Started: 2006
Current member strength: 242

Section History

June, 2006: The Shin-Etsu Section was created in 2006 from part of the Tokyo Section. The geographical area of the Shin-Etsu Section consists of Niigata and Nagano prefectures in Japan.
January, 2014: Students' membership renewal rate marked 50.0%, the 3rd highest among the R10 sections.
October, 2014: The total number of the lectures held by the IEEE Shin-Etsu section exceeded 15.
October, 2016: The total number of winners of the IEEE Shin-Etsu Young Researcher Paper Award touched 30.

Key Achievements

2007: 1st IEEE Session at the IEICE Shin-Etsu Section Conference.
2007: 1st IEEE Session at the IEEJ Tokyo Chapter Niigata Branch Conference.
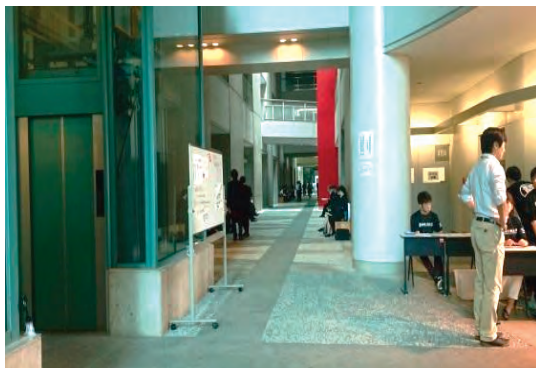
Key Achievements in Industry Collaboration.

To promote the collaboration between Academia and Industry, the Shin-Etsu Section has presented a number of lectures where the speakers are invited from universities, institutes and companies.

Key highlights from Groups

Key Conferences Conducted by Section

IEEE Sessions at both the IEICE Shin-Etsu Section Conference and the IEEJ Tokyo Chapter Niigata Branch Conference. From 2007, both are held annually.

Special Initiatives/Programs Started by Section

The Shin-Etsu Section organize the IEEE Session and present Young Researcher Presentation Award to students who presented excellent papers at the IEEE Sessions at both of the IEICE Shin-Etsu Section Conference and the IEEJ Tokyo Chapter Niigata-Branch Conference. We also support students financially who present excellent papers at international conferences or symposium

Convention site and participants –

voluntary student staffs (right) of SJCIEE 2015

IEEE Singapore Section

Established Date: 1978
Section Chair Name: Sanjib K Sahoo
Current Member Strength: 3000

Sections History

IEEE Singapore Section was legally registered with the Singapore Registry of Societies as a trade association in Singapore in 1978 and, recognized by the IEEE USA as a geographical entity in Region 10 named as IEEE Singapore Section. IEEE Singapore Section has about 3000 members. Its sub-entities includes 28 Chapters, 2 Affinity Groups and 3 Student Branches.

Key Achievements

Dr. Amit Gupta and Prof. Tseng King Jet received R10 Outstanding Industry-Academia Collaboration Award for Rolls-Royce Singapore and NTU Singapore Power Systems Integration Laboratory.

Key Conferences Conducted by Section

The Section organized TENCON 2016, the annual flagship conference of the IEEE Region 10, which was held from 22 - 25 November 2016 at Marina Bay Sands, Singapore. The conference provided a unique opportunity for international scientists, engineers and

scholars to share and exchange their experiences. TENCON 2016 received more than 1,500 papers from 50 countries. After peer review, about 990 papers were accepted for presentation.

Below is the list of the conferences organized by the Singapore Section from 2015 to 2017, most of which are initiated by Chapters under the Singapore Section, and are organized on a regular basis:

5th Asia-Pacific Conference on Synthetic Aperture Radar (APSAR 2015)

IEEE Asia Pacific Wireless Communication Symposium (APWCS)

IEEE International Conference on Cybernetics and Intelligent Systems (CIS), and IEEE International Conference on Robotics, Automation and Mechatronics (RAM) 2015

2015 IEEE International Conference of Electron Devices and Solid-State Circuits (EDSSC 2015)

Electronics Packaging Technology Conference (EPTC) 2015

IEEE International Conference on Building Efficiency and Sustainable Technologies (ICBEST) 2015

IEEE International Conference on Control & Automation (ICCA)

IEEE Conference on Industrial Electronics and Applications (ICIEA) 2015

IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) 2015

International Microwave Workshop Series on Advanced Materials and Processes for RF and THz Applications 2015

2015 Joint IEEE International Symposium on the Applications of Ferroelectric (ISAF), International Symposium on Integrated Functionalities (ISIF), and Piezoresponse Force Microscopy Workshop (PFM) 2015

IEEE International Conference on Power Electronics and Drive Systems 2015

Visual Communications and Image Processing (VCIP 2015)

IEEE International Conference on Communication Systems (ICCS) 2015

IEEE International Conference on Sustainable Energy Technologies (ICSET) 2015

International Symposium on the Physical and Failure Analysis of Integrated Circuits (IPFA) 2016

International Symposium on InfoComm & Mechatronics Technology in Bio-Medical & Healthcare Applications (IS 3T-in-3A) 2016

International Symposium on Integrated Circuits (ISIC) 2016

IEEE Region10 Conference (TENCON 2016)

2017 IEEE International Conference on Robotics and Automation (ICRA 2017)

Conference on Lasers and Electro-Optics Pacific Rim (CLEO PR 2017)

IEEE GLOBECOM

International Applied Computational Electromagnetics Society Symposium (ACES 2017)

Key Achievements in Industry Collaboration

An Industry Track was organized on the first day of TENCON 2016. The session had presentations on latest technology trends in industry. A panel discussion was held on how to improve the interaction between academia and industry.

Key Highlights from Young Professionals

Young Professionals received 2016 R10 YP Affinity Group Award. YP organized the IEEE Hardtech Summit on 26 November at NTU, Singapore.

Key Highlights from WIE in Section

WIE Singapore section organized WIE special session at IEEE TENCON2016 Most of the attendees and presenters are WIE members across the Region 10. It provided an excellent opportunity to share and discuss about the future plans and collaborations of WIE activities among sections.

Awards and Recognitions

Singapore section had honored seven members for their long membership. The IEEE president and R10 director presented each with a memento and token of appreciation during the AGM.

Special Initiatives/Programs Started by Section

The section provides attractive membership benefits like free access to local attractions like Science Centre, Night Safari etc.

IEEE South Australia Section

Established Date: 1985
Section Chair Name: Dr. Giuseppina Dall'Armi-Stoks (2017)
Current Member Strength: 154 in 1987 to over 500 in 2009

Sections History

IEEE South Australia Section was chartered on 23 August 1985 with Dr Don Sinnott (now FIEEE) the Foundation Chair. The first workshop held by the Section in March 1988 was titled "Microwave Radar for the 1990s". It was led by David K Barton, one of the most eminent US radar experts of the time. David contributed his services gratis, as an IEEE Distinguished lecturer supported by IEEE HQ for an Australian tour, and the Section charged a (small) fee for attendance. The significance of this workshop is that it was the launchpad for all subsequent conference sponsorship and support from that point on by the Section.

The South Australia Section has grown in membership from 154 in 1987 to over 500 in 2009. The Section has the following IEEE Society Chapters: Communications / Signal Processing (1992), Antenna Propagation / Microwave Theory and Techniques (1993), Control / Aerospace and Electronics Systems (1996), Computer (1998), Information Theory Chapter (2002), Ocean Engineering Chapter (2014) and a Power and Energy Society (2014). The Information Theory Chapter was transferred to SA in 2002, and is a joint Chapter covering SA/ACT/VIC/NSW sections, managed administratively from SA. It has the following IEEE Affinity Groups: Young Professionals (formerly Graduates of the Last Decade) (2003), Women in Engineering (2009) and Life Members (2011). The Section has student branches at The University of South Australia (1997), The University of Adelaide (2000) and Flinders University (2003).

In 1992, the Section established an annual subject prize at each of the three universities in South Australia, and in 2001 instituted a travel scholarship program for postgraduate students delivering research papers at conferences. It has established an annual Joint Technical Program (JTP) with Engineers Australia (EA) – SA division and Institution of Engineering and Technology (IET) SA/NT Network.

Key Achievements

Winner of both the Region 10 Outstanding Small Section Award for 2007

Member and Geographic Activities (MGA) Board outstanding Small Section Award for 2007.

Winner of Region 10 Outstanding Small Section Award 2003

The inaugural recipient of the IEEE Regional Activities Board Outstanding

Small Section Award for 2003.

The winner of Region 10 Outstanding Volunteer Award for 2015(Prof. Cornelis Jan (Keith) Kikkert)

2011 (Dr. Michael Evans)

2003 (Prof. Bob Bogner)

2001 (Prof. Andrew Parfitt)

The Section hosted the 2004 Region 10 meeting in Adelaide. It has five IEEE Fellows: Prof. Don Sinnott (1997), Prof. Michael Gibbard (2003), Prof. Derek Abbott (2005), Dr. Gordon Frazer (2015) and Dr. Giuseppe Fabrizio (2016).

Key Conferences Conducted by Section

The Section has sponsored and co-sponsored a number of conferences in Adelaide financially:

1994 ICASSP

1996 ADFS

1996 ANZIIS

2002 IDC

2003 RADAR

2007 IDC

2007 ICON

2013 RADAR

2018 forthcoming RADARThe Section has also supported many other conferences technically

2000 APMC

2004 ASCC

The 5th Biennial Asian Control Conference in Melbourne

2004 ISSTA

The 8th IEEE International Symposium on Spread Spectrum Techniques and Applications in Sydney

2007 PDCAT

2007 DICTA

2008 RADAR

2008 BICTA

2008 ATNAC

2017 Imminent 3rd International Symposium on Big Data Visual Analytics (BDVA)

Key Achievements in Industry Collaboration

2010 IEEE Corporate Innovation Award by Samsung Electronics.

2012 Robert Noyce Medal for industrial achievement by Yoon Woo Lee (Samsung Electronics Co.)

Volunteer Positions are filled with industrial professionals.

Financial supports from industry on local and national events.

Key Highlights from Young Professionals

Just established in 2003.

Key highlights from WIE in section

Established in 2009. The Women in Engineering (WIE) Affinity Group in 2014 initiated an annual Science, Technology, Engineering and Mathematics (STEM) /Robotics workshop for years 8, 9 and 10 high schools girls from Rural South Australia. The aim of the workshop is to promote WIE, IEEE and raise awareness of STEM occupations amongst rural high school students (especially girls), and encourage them to consider studying STEM subjects in their final years of school, STEM courses at university and careers. The workshop has been supported by Region 10 WIE Support Funds.

Awards and Recognitions

Recognition plagues are presented at HMPC event

Grand, Gold, Silver, and Bronze Prizes are SPC event

2010 IEEE Corporate Innovation Award by Samsung

2012 Robert Noyce Medal for industrial achievement by Yoon Woo Lee (Samsung Electronics Co.)

Special Initiatives/Programs Started by Section

After being established in 2002, the following IEEE South Australia Section Distinguished Lectures were held:

2002: Prof. Brian D.O. Anderson AO,

2003: Mr. Ric Smith AO PSM, Secretary of the Department of Defence, 2004: Prof Robin Batterham, Australia's Chief Scientist,

2005: Emeritus Prof. Max Brennan, AO, Chief Scientist of South Australia,

2006: Prof. Ron Ekers, Foundation Director of CSIRO's Australia Telescope National Facility and President of the International Astronomical Union from July 2003 to August 2006,

2007: Dr. Len Sciacca, Chief, Electronic Warfare and Radar Division, DSTO,

2008: AVM Julie Hammer, National President of Engineers Australia,

2009: Prof. Barry Brook, Sir Hubert Wilkins Professor of Climate Change, University of Adelaide,

2010: Dr. Amanda Barnard, Leader of the Virtual Nanoscience Laboratory, CSIRO,

2011: Dr. Lan T Lam, Research Leader, CSIRO Energy Technology,

2012: Laureate Prof. Rob Evans, Director of the Victorian Research Laboratory of National ICT Australia,

2013: Dr. Zoz (Andrew) Brooks, host of "RoboNation" and "Prototype This!",

2014: Prof. Peter Quinn (FTSE), Executive Director of ICRAR, University of Western Australia, 2015: Prof. John Arkwright, South Australian Premier's Professorial Research Fellow in Biomedical Engineering, Flinders University, and

2016: Prof. Michelle Simmons, ARC Laureate Fellow and Director of the Centre of Quantum Computation & Communication Technology, University of New South Wales.

IEEE Sri Lanka Section

Section Chair Name: Dr. TSS Jayawardana
Year Started : 2003
Current member strength: 2432

Section History

Dr. Sanath Alahakoon of the University of Peradeniya initiated a petition to start the IEEE Sri Lanka Section, with the IEEE Sri Lanka Section being formed on 14th November 2003. The boundaries of the Section are the country of Sri Lanka. IEEE RAB approved the formation of the IEEE Sri Lanka Central Region Subsection of the Sri Lanka Section on 12 Nov 2005. IEEE University of Peradeniya student branch was formed in July 2007, followed by IEEE University of Moratuwa student branch in 2008. There are now a total of 12 active and vibrant student branches including student branches at University of Colombo School of Computing (2011), Sri Lanka Institute of Information Technology (2011), University of Ruhuna (2012), Wayamba University of Sri Lanka (2015), Uva Wellassa University (2015), Informatics Institute of

Technology (2015), General Sir John Kotelawala Defence University (2016), Sabaragamuwa University (2016), University of Kelaniya (2016) and Open University of Sri Lanka (2016). The IEEE Graduates of the Last Decade (GOLD) Affinity Group was formed in Sri Lanka in October 2011 and it has changed to IEEE Young Professionals (YP) in 2014. Subsequently Women In Engineering affinity groups were formed in the student branches of University of Peradeniya, University of Moratuwa, University of Colombo-school of Computing, Sri Lanka Institute of Information Technology, Informatics Institute of Technology. IEEE Industrial Application Society (IAS) was formed with the presence of Dr. Peter Magyar (Chair of the IAS Chapters and Membership Development) and David B Durocher (President of Industry Applications Society) . There are currently six IEEE Technical Society Chapters in Sri Lanka, namely Power and Energy Society (PES), Computer Society (CS), Microwave theory and Techniques Society (MTTs), Communication Society (ComSoc), Robotics and Automation Society (RAS), and

Industry Applications Society (IAS). In addition there are student chapters of several societies were formed including MTTs(2016), IAS(2015), PES in University of Peradeniya, EMBS, and IAS in University of Moratuwa, RAS in University of Ruhuna.

IEEE Sponsored Conference

IEEE R10 Humanitarian Technological Conference in 2018

International Conference on Information and Automation for Sustainability (ICIAfS) since 2005

IEEE International Conference in Industrial and Information Systems (IEEE ICIIS) since 2006

IEEE R10 SYW congress 2015 hosted in Colombo, Sri Lanka in 2015

Technically Co-Sponsored Conferences in 2016 and 2017

ICTer 2016/17, ICIAfS 2016, MIES 2016, EECon 2016, NCTM 2017, MERCon 2017, ICIIS 2017

International Conference of Advances in ICT for Emerging Regions.

Subodha Charles won Larry k. Wilson award in 2015

Won the best CMD Multicultural Video Contest at IAS 50th Anniversary meeting 2015 in Dallas, Texas, USA

2015 Outstanding Section Membership Recruitment and Retention Performance

2015 Outstanding Section Membership Recruitment Performance
Student branch of University of Peradeniya won IEEE Global Website Competition 2016
Student branch of University of Peradeniya won IEEE Region 10 Student Branch Website Contest 2016
Winners of SS12 Asia and SS12 Asia Maker Fair Event

in 2016
Select IEEE Sri Lanka Section by R10 to host HTC2018 conference
Distinguished Lecturer of the IEEE Power and Energy Society (PES) – Prof. Janaka Ekanayake (2015)
Prof. Janaka B. Ekanayake was elevated to the grade of Fellow of IEEE (2016)
Dr. S.A.H.A. Suraweera, senior lecturer at the department of electrical and electronic engineering, University of Peradeniya is a co-recipient of IEEE communication society's LEONARD G. ABRAHAM PRIZE in 2017.

Awards and Recognitions

Prof S.R.H.Hoole was elevated to the grade of Fellow of IEEE in 1995

IEEEXtreme 3.0: Global Champions; IEEEXtreme 5.0: Ranked 2nd, 9th;

IEEEXtreme 6.0: Ranked 3rd, 9th; IEEEXtreme 8.0: Ranked 3rd, 15th

UCSC IEEE student branch website won the IEEE R10 Website Contest in 2014

IEEE Student Branch of University of Moratuwa won the Silver Darrel Chong Award in 2014

IEEE Student Branch of University of Ruhuna won the first place at the photo contest in 2014

Achievements in Industry Collaboration

Organising Robotics meet up in every six months as a joint event between IEEE Sri Lanka Section and Robotics and Automation Society to share the experience of academia and the industry experts for the benefit of the industry participants. Opening of Industrial Automation Society Chapter in 2016 Several workshops targeting industry professionals including the IEEE Workshop on Electric Vehicles and their G2V

and V2G operation (2015), Workshop on PV Installations in Sri Lanka: Barriers and Remedies (2013), Big Data Workshop (2016)

Highlights from Young Professionals
Annual IEEE SL SYW Congress IEEE R10 SYW congress 2015 hosted in Colombo, Sri Lanka in 2015

Key Highlights from WIE in Section
The 1 st Student / WIE / GOLD Congress, adopting the concept of GINI (GLOBAL INTEGRATED NETWORK OF IEEE STUDENTS), to share experience of student volunteers in different universities was held on 6 th January 2012, in University of Moratuwa Women in Engineering Technical Forum 2016 at the auditorium of Dialog Axiata Students , Young Professionals, Women-in- Engineering (SYW) congress To promote and inculcate the humanitarian aspect in IEEE

members organised a charity programme named "Make them Smille"

Special Initiatives/Programs Started by Section
IEEE Sri Lanka Sections Electronic Design Competition (conducted for the fourth consecutive year)
IEEE Sri Lanka Section Undergraduate Project Symposium
Annual Get together of IEEE Sri Lanka Section
IEEE Sri Lanka Section Awards Night started in 2016
DLP lecture programmes in Sri Lanka
Organise Technical talks like Robotics meetups
A united group of volunteers named as Student Network was formed under Section
Student Representative, Mr. Suboda Charles in 2014 to groom the successive leaders in an autonomous manner

IEEE Taegu Section

Section Chair Name: Jeehyun Kim
Year Started : 1992
Current member strength : about 220

Key Conferences
2008.4. IEEE Taegu section spring workshop: Semiconductor technology

2009.7 IEEE Taegu section summer workshop: Medical device

2010.12 IEEE Taegu section winter workshop: Sensors

2012.9 IEEE Taegu section symposium: Optical Tomography Methodology

2012.11 IEEE Taegu section winter workshop

IEEE Tainan Section

Section Chair Name: Tsorng-Juu Liang
Year Started: 20 June, 2003.
Current member strength: 867 members

Section History
The IEEE Tainan Section was initiated by a preparatory committee and formally formed in 2003. Taiwan is grouped into Region 10 Asia Pacific and has two sections: the Taipei Section and the Tainan Section. The Tainan Section's boundary includes Yunlin, Chiayi, Tainan, Kaohsiung, and Pingtung.

Key Achievements
Every year, Tainan Section holds technical events and invites keynote speakers in various fields of expertise for our members to share mutual experiences.

Key Conferences Conducted by Section

Organized IEEE TENCON 2007 10/30-11/02

Organized IEEE ISCAS 2009, 5/24-5/27

Organized IEEE Asia Pacific Conference on Circuits and Systems 12/02-05, 2012

Founded IEEE International Conference on Orange Technologies 3/12-3/16, 2013

Founded IEEE Intl. Future Energy Electronics Conference, 11/3-6, 2013

Organized IEEE International Conference on Orange Technologies 12/17-20, 2016

Dushan Boroyevich, 2016/11/09-13，Overview of the CPES at Virginia Tech； Kevin Tomsovic，2016/12/13-15，Control Architectures for the Future Power System；Jason Lai，2016/12/22，Impact of Wide

Bandgap Semiconductor Devices to Power Electronics Designs and Applications

Key Achievements in Industry Collaboration

Tainan Section cooperates with Academia-Industry Consortium for Southern Taiwan Science Park of National Cheng Kung University which is the service organization specifically aiming at facilitating interactions and collaborations between industry and academia, as well as to accelerate technology transfer from university to industry, to establish an information sharing mechanism to communicate the activity information to the members of both organization.

Key Highlights from Young Professionals

Young Professional Tainan keeps planning activities, such as workshops, speeches, forums, etc. specifically for young professionals. Some activities held in the past listed in the followings. In future, section has plan to hold Young Professionals annual meeting in 2017 as well.

Several main technical activities are listed in the followings:

- 2016/10/03, International workshop on 3D multimedia
- 2015/03/22, Latest Advance of Hybrid Energy Storage
- 2015/04/14, 3D Industry Forum
- 2015/05/15, Technical Talk - IC Design Challenge
- 2015/05/28, CTHPC
- 2015/05/29, Invited Talk: Variability-Aware Software: Case Studies in Cross-Layer Dependability for the Memory Subsystem
- 2015/06/30, Energy Efficiency in Embedded System Design

Key Highlights from WIE in Section

The WIE in IEEE initiative focuses on bringing together and highlighting all women in tech activities happening across IEEE. It frequently organizes special forums and invites brilliant speakers to share their research, industrial or personal experiences with all members, such as

2015/10/1~30 WIE Forums；speakers: Gina (Google), Pat Tsao (Pan Asian Innovation association), Autumn Li (AHED, LLC)

2016/1/1~12/31 Technical Talks – Director Rong-Hao (Liang Intel-NTU Research Center), Mr. Yin Jia Chen (Taiwan Mobile Co., Ltd.), Prof. Ja-Ling Wu (CSIE, National Taiwan University, Prof. Hung-Kuo Chu (CSIE, National Tsing Hua University)

Awards and Recognitions

Chapter Funding: Antennas and Propagation Society Tainan Chapter (2016), Circuits and Systems Society Tainan Chapter (2015, 2016), Computer Society Tainan Chapter (2016), Vehicular Technology Society Tainan Chapter (2016).

Tainan Section has been awarded for outstanding achievement in member retention during the 2015 membership year.

Antennas and Propagation Society Tainan Chapter has been awarded and granted support funding for 2015 Best Chapter Award and also annual funding.

Special Initiatives/Programs Started by Section

IEEE Tainan Section Annual Awards consists of 8 different aspects since 2003. Award receivers are selected from the nominee pools by a thorough review performed by 2 Awards Chairs and 5 reviewers. Eight different awards are listed in the followings:

- Best Master Thesis Award
- Best Ph.D. Thesis Award
- Best GOLD Member Award
- Outstanding Technical Achievement Award
- Best Service Award
- IEEE Tainan Section Macronix Award
- IEEE Tainan Section Himax Award
- IEEE Tainan Section Delta Award

IEEE Taipei Section

Section Chair Name :   Yi-Bing Lin
Year Started : 1974
Current member strength : 3060

Section History

The IEEE Taipei Section was established in 1974. It is the sixth section established in R10. There are over 2500 active members in the year 2017, 34 Chapters have been formed and actively functioning. In 2009, Taipei Section received IEEE Outstanding Large Section Award. The IEEE Chapters in Taipei cooperate with the local government, industries, and the academia on various technical conferences and other activities that significantly vitalize the dynamics of the industry in Taiwan. Regular meetings of the Section officers are held to sparkle ideas and plans for activities that will further enhance the activeness of this Section. With Taiwan's growing importance in the global high tech industry, the IEEE Taipei Section and its Chapters as well as Student branches endeavor to contribute to the advancement of the prosperity of its community through activities that provide professional information exchanges and stimulate technological innovations.

Key Conferences

International Symposium on VLSI Design, Automation and Test (VLSI-DAT)

Awards and Recognitions

2011   Fang-Chen Luo(羅方禎)   2011 IEEE Jun-ichi Nishizawa Medal "For pioneering contributions to thin-film-transistor (TFT) liquid-crystal displays".

2011   Morris Chang(張忠謀)   2011 IEEE Medal of Honor "For outstanding leadership in the semiconductor industry".

2012   Chih-Yuan (C.Y.) Lu(盧志遠) IEEE Frederik Philips Award "For leadrship and contributions to reseach, development, and indusrial alliances in semiconductor techonolgy"

2012   Antennas & Propagation Society Taipei Chapter 2012 IEEE APS Best Chapter Award

2013   Burn J. Lin(林本堅)   IEEE   Jun-ichi Nishizawa Medal, "For contributons to lithographic manufacturing, including immersion lithography"

2013   John H. Lau(劉漢誠)   IEEE Components, Packaging, and Manufacturing Techonology Award, "For contributions to the literature in advanced solder materials, manufacturing for highly reliable electronic products, and education in advanced packaging"

2014   C. L. Liu(劉炯朗) IEEE   Gustav   Robert Kirchhoff Award, "For seminal, long-lasting contributions to design automation for circuits and systems" Sponsored by the IEEE Circuits and Systems

2014   Hsi-Tseng Chou(周錫增)   IEEE Undergraduate Teaching Award, "For inspirational teaching and innovations in undergraduate engineering education"

2015   Systems, Man, & Cybernetics Society Taipei Chapter

2015 IEEE SMC Best Chapter Award

IEEE Taipei Section   2015 Outstanding Section Membership Retention Performance

Highlights from Young Professionals

The YP group of IEEE Taipei Session has supported students, recent graduates, and women to become members by participating in 2016 IEEE International Conference on Consumer Electronics- Taiwan, meaning the CE Chapter of the Taipei Session has covered the member fee for the participants.

Activities

1. 2015 IEEE International Conference on Consumer Electronics- Taiwan
2. 2015 Conference on Advanced Electrical and Electronics Technology
3. This conference was sponsored by the IEEE Taipei Section YP Group, and was held at Chinese Culture University, Taipei, Taiwan.
4. 2016 IEEE International Conference on Consumer Electronics- Taiwan
5. 2016 Conference on Advanced Electrical and Electronics Technology
6. This conference was sponsored by the IEEE Taipei Section Young Professional Group and Signal Processing Society, Taipei Chapter, and was held at Chinese Culture University, Taipei, Taiwan.
7. 2016 IET Multidisciplinary of Microelectronic-Information Systems Application and Integration Contest

This conference was sponsored by the IEEE Taipei Section Young Professional Group and Signal Processing Society, Taipei Chapter, and was held at Chinese Culture University, Taipei, Taiwan.

Key Highlights from WIE in Section
Smart Assistive/Rehabilitation Device Workshop

Activity: "Smart Assistive/Rehabilitation Device Workshop" was organized by IEEE WIE Taipei, Bio-Medical Electronics Education Consortium and Department of Electrical Engineering, National Taiwan University of Science and Technology. The workshop was held in B03, EE building, National Taiwan University of Science and Technology, Taipei, Taiwan. Totally five novel smart assistive/rehabilitation devices were introduced and demonstrated in the workshop.

HTML5 Game Engine

Activity: The technical event entitled "HTML5 Game Engine" was organized by IEEE WIE Taipei, Bio-Medical Electronics Education Consortium and Department of Electrical Engineering, National Taiwan University of Science and Technology. The short course was held in T2-510, EE building, National Taiwan University of Science and Technology, Taipei, Taiwan. In the short course, the current status of HTML5 game engine was introduced. Firstly, our speaker demonstrated to the audience a very simple game engine. And then the famous Construct 2 HTML5 game engine was introduced.

IEEE Thailand Section

Section Chair Name : Dr. Jitkasame Ngarmnil
Year Started : 1977
Current number of member : 612

Section History

In 1977, Mr.Soonthorn Chengpiphat initiated of the setting up the IEEE Thailand Section by gathering the signatures from IEEE members in Thailand and forwarded to IEEE Headoffice for approval. IEEE approved the petition in November 1977.

In 1978, Dr.Ivan Getting contacted Mr.Jack Bailhe and Mr.Sanay Sridaranop to follow up the formation of the IEEE Thailand Section, and they have got in touch with Mr.Kamthon Sindhavananda who is a senior member to proceed the establishment of IEEE Thailand Section. In the same year, Mr.Paul Carroll, the Director of IEEE, visited Bangkok to assist the formation of the Section. The informal meeting was held between Mr.Jack Bailhe, Mr.Kamthon Sindhvananda, Mr.Surasak Senawong, Mr.Sanay Sridaranop, Mr.Soonthorn Chengpiphat and Mr.Charmon Suthiphongchai.

In April 1979, the eighteen persons from thirteen different organizations and institutes attended the meeting at Erawan Hotel, and Mr.Kamthon Sindhvananda expressed his intention to promote the membership in order to support the activities of IEEE Thailand Section when it is set up.

On 26 November 1979, the first General Meeting of IEEE Thailand Section was held and Mr.Kamthon Sindhvananda was elected as the Chairman, Mr.Prayong Ansusinha-Vice Chairman, and Mr.Charmon Suthiphongchai-Secretary/Treasurer to be Section Officers for the year 1980.

Thailand Section By-laws were prepared by the Executive Committee and approved by the Region 10 Director in 1980.

On May 16,1980, the IEEE Thailand Section's library was set up at the Faculty of Engineering, Chulalongkorn University.

Region-10 Committee meeting was held on September 19-20, 1981 in Bangkok. The IEEE President, Dr.Richard W. Damon and Executive Directtor, Mr.Eric Herz and Dr.James Owens attended this meeting. About thirty members from India, Australia, New Zealand, Pakistan, Hong Kong, Japan, Korea, Malaysia, Philippines, Singapore and Taiwan joined the Committee Meeting. So far, the Section is trying to promote the number of members and it is gradually increasing.

Thailand Section hosted IEEE Region 10 Meet in 2013 at Chiang Mai, Thailand, and in 2016 at Bangkok, Thailand.

Awards and Recognitions
2016 IEEE PES Outstanding Chapter Award

2015-2016 IEEE-HKN Outstanding Chapter Award (Mu Theta Chapter – Chulalongkorn University)

2015 IEEE Outstanding Section Membership Retention Performance

2006 IEEE Region 10 Outstanding Volunteer Award (Ekachai Leelarasmee)

Special Initiatives/Programs Started by Section

Thailand Section has continuous partnership with Electricity Generating Authority of Thailand (EGAT), Metropolitan Electricity Authority (MEA), and Provincial Electricity Authority (PEA) that enable joint activities with the section and with the PES. In

addition, there are joint activities with local Professional organizations such as The Engineering Institute of Thailand (EIT) under H.M. The King's Patronage and Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI) Association.

IEEE Tokyo Section

Section Chair Name: Iwao Sasase
Year Started: 1955
Current member strength: 7,835

Section History

The IEEE Tokyo Section originated from a local section of the Institute of Radio Engineers (IRE) in 1955. Due to the reorganization of IRE and the American Institute of Electrical Engineers (AIEE) into the IEEE in 1963, the IRE Tokyo Section became the IEEE Tokyo Section. Initially, it started with a membership of 72 and has grown annually, to about 10,000 in 1998. Use of "Tokyo" in the name and not "Japan" came from the IEEE tradition of naming Sections after cities. However, in 1998, it was decided that the Tokyo Section should be split into eight Sections to further develop IEEE activities and promote member services and membership development in local regions in Japan. After that, the Tokyo section separated the Shin-Etsu section in 2005.

Key achievements

The first R10 Meeting was held at NHK center in Tokyo 1973.8. Section supported the R10 Meet 2017 in Makuhari, Japan on the 4th and 5th March 2017, as a hosting section with Japan Council.

Key Conferences Conducted by Section

The IEEE Tokyo Section supported Asia Pacific Year'94 held on 20th April 1994, in Tokyo.

Key Achievements in Industry Collaboration

The IEEE Tokyo Section have been establishing strong relationships with industry for a long time and extensively supporting IEEE operations since 1975. With sincere appreciation to their support, the 2016 Supporting Friend of IEEE Membership and Geographic activities award was presented to 8 companies in Tokyo section.

The 2016 Supporting Friend of IEEE Membership and Geographic activities award in 2017 in Makuhari

Metro Area Workshop(MAW) in Tokyo
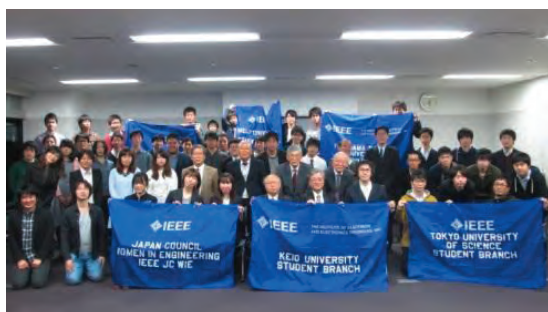
SB-YP-WIE-LMAG Workshop in 2015

The 2016 IEEE Young Professionals Affinity Group Hall of Fame Award in India

Key Highlights from Young Professionals

Tokyo YP (formerly Tokyo GOLD) Affinity Group was established as the first YP Affinity Group in Japan in November 2008. With the aim of improving both technical and leadership skills, Section organize activities such as Career Development Workshops, essay contests, ideathon/hackathons, and other networking events. Tokyo YP won the 2016 IEEE Young Professionals Affinity Group Hall of Fame Award, which has been conferred on only three YP Affinity Groups in the world.

Awards and Recognitions

Life member affinity group was founded in 2010 and encourages the member continuously. The LM Outstanding Volunteer Award was presented to Prof. Kunio Tada August 2016 for these activities. The fellow nomination committee has been helping members upgrade yielding a total of 343 fellow members in 2016 in Tokyo section. Seven members were promoted to IEEE Fellow grade in 2016.

Special Initiatives/Programs Started by Section

Release of Tokyo Bulletin started in 2000. Tokyo section 50years celebration ceremony was held in 2005, Tokyo Japan. The GOLD Affinity Group was founded in 2008 and changed its name to Young Professionals in 2013. History Committee was founded in 2014 and promotes the recognition of achievements as milestones. A total of 23 milestones have been issued to the Tokyo section. Section successfully organized Metro Area Workshop (MAW) with about 200 participants in Tokyo in 2015, supported by MGA as a Japan initiative project.

IEEE Uttar Pradesh Section

Section Chair Name: Prof.Ramkumar J,FIE(I)
Year Started: 1992
Current member strength : 2237

Section History

IEEE Uttar Pradesh (UP) Section was formed on 11 May 1992 covering two Indian states (Uttar Pradesh and Uttarakhand) and Nepal. Prior to that, it was a sub-section of Delhi Section since 28 December 1970. Late Prof. Gopal K. Dubey was the founder Chairman of the section. The section is celebrating 25th year celebration since May 2016 along with 50th year celebrations of R10. A new logo of IEEE UP Section is designed and shown in image. IEEE UP Section is one of the most vibrant sections in India and it has been at the forefront of organizing various activities which are pertinent to the vision and mission of IEEE.

The section has been striving to inculcate the spirit of cooperative functioning and volunteering for social cause through its activities. Due to the promotion of socially relevant technical activities, the section has been continuously growing at a rapid pace especially from 2013, under guidance of Prof Sri Niwas
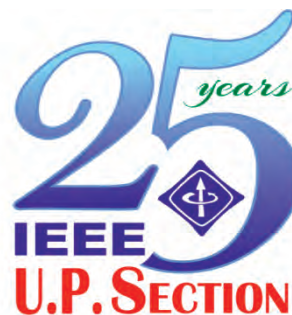
Singh. At present the section has about 50 student branches, 11 society chapters and more than 2300 members. From 2013, we had an increase of 30% in membership followed by 50% increase in 2014 and 64% increase in 2015. This section has received the 2013 EAB meritorious award in continuing education, first time in the R10 and one of the student branches is awarded Darrel Chong Student Activity award, 2014 in the Gold category. Several volunteers of the section have been awarded various awards in 2013, 2014. In 2014, section took many initiatives such as creation of new sections awards, section conference known as UPCON. In 2015, section technical sponsored 24 conferences/technical and 150 events including the meetings, lectures, etc.

Conferences Organized by Section

In the year 2016, IEEE UP Section technically co-sponsored 25 technical conferences and 15 technical events were financially supported. Overall, the section organized 150 major events during 2016; including meetings, lectures, etc. at various places in the section. The section has been striving to work jointly with other sections as well as other societies of National and regional levels. IEEE UP Section was one

of the supporting sections of R10 SYWL Congress (50th celebration of R10) held at Bangalore during August 22-25, 2016 and successfully hosted R10-HTC, which is first R10 event in the section, at DEI Agra during December 21-23, 2016 where IEEE President and R10 Director inaugurated the conference.

The activities of affinity groups like WIE, SIGHT, and YP have also been organized regularly during the years. A new award to honor the senior volunteers of the section has been stated in 2016. Prof SC Srivastava, IIT Kanpur who was instrumental in formation of the section, was given this first award during 3[rd]UPCON2016 at IIT BHU Varanasi. Section also felicitated to Er K Ramakrishna, R10 Director during the UPCON-16, which is an annual conference of the section to provide the platform to the students and researcher to share the ideas and connect them with IEEE. IEEE UP Section coordinated IEEE Smart Village ($10K), R-10($10K) and HAHC ($50K) project on the "Electrification Project on Simigaun (Nepal)". Solar Photo Voltaic technology was used in the project and was successfully completed on Feb 2017.

Best Practices

To increase interaction with industry, Industry excellence Awards were given to many prominent industry persons. Many industry people were invited for talk and industrial visits for the students were also organized.

Section is actively involved with the local /national societies, like IE(I), CSI, IETE, INAE in organizing the various events such as Engineers Day, World Telecommunication & Information, etc. New Home

Page of the section launched http://www.ieeeup.org. The newsletter is generated through this URL and sent to all the members for of information.

Continued with the awards constituted in the section for Outstanding Branch Counselor/Advisor, Outstanding Section Volunteer, Best Student Branch Chapter, and LargestStudent Branch Award.

ExCom meetings at different locations of the sections to increase the visibility of the section. To encourage the student volunteers, they are sent to other sections in various technical and professional events.

In line with the social outreach policy of IEEE, the Section organized special events like Save Electricity Awareness Week, National Energy Conservation Day, women empowerments, writing skills and engineering ethics etc.

The section also generally requests the organizers of these activities to charge a reduced registration fee for IEEE members and two IEEE student members free registration to promote the benefits of IEEE membership. An important aspect will be to encourage student membership by organizing activities focused on students' needs. The section will organize useful panel discussions, site visits to local industrial organizations, power stations and laboratories for members. The section plans to promote starting some lectures and group discussions, which can help in providing career guidance and counseling to students.

Students Members Attending Student Congress (AISYWC) at LMNIT Jaipur

Office Bearers of 2016

IEEE Victorian Section

Section Chair Name: Edhem (Eddie) Custovic)
Year Started: 1975
Current member strength: 2035

Section History

IEEE Victorian Section began life as a Sub-Section of the former Australia Section in 1981. After a two-year apprenticeship in this role, we successfully petitioned for full Section status, and the new operating unit was approved in August 1983. We immediately set about devising and implementing some quite ambitious operating strategies, and this very positive approach characterised our outlook for many years thereafter. In fact, in the same month as our Section's foundation, August 1983, we ran a one-day Symposium titled "Women in Engineering & Computer Science", which was probably the first such event ever held in Australia. Our partner in this pioneering venture was Engineers Australia. In 1984, we established our first technical chapter, and later that year we produced our first newsletter to members. In 1986, the latter publication became the fully-formatted journal Uplink, a distinctive name that is still in use today. During this period our membership growth was very rapid at first, but then moderated to the slow but steady growth that has been maintained ever since. In 1992, we hosted our first international conference, TENCON '92, held in Melbourne. In 1995, we again entered the record books with the first female Section Chair to hold office in Australia, Prof. Dalma Novak. During the 1990's and early 2000's, several of our chapters ran successful conferences in their respective areas of speciality. In 2005, the Section sponsored its second TENCON conference. And in 2010, we organised and ran the inaugural Australia-New Zealand Student Congress (ANZSCON). The ANZSCON series has since continued, at two-yearly intervals, at various locations in Australia and New Zealand, ever since. In 2016 our section organised the Engineering & IT Career Expo with nearly 2000 individuals in attendance and

hosted the largest IEEE industry senior leadership gathering, with nearly 40 CEO's and general managers.

Key Achievements

1983; Section Journal Uplink, first published 1986;

2010 – Organised and hosted inaugural Australia & NZ Student, Young Professional & Women in Engineering Congress, 2016 - Organised First Career Expo State Library nearly 2000 attendees, Women in Engineering & Computer Science Symposium Ninety-Seven (97) technical events held during year 2015; Women in Engineering Energized Fashion Runway Show 2015; Women in Engineering Virgin Australia fashion runway &quote; Electronica 2016.

Key Achievements in Industry Collaboration

In 2016 The IEEE Victorian Section in conjunction with IEEE Standards Association hosted the largest industry engageent held in Australia. Over 40 CEO's, General Managers and Senior Executives from over 20 large multi-national and small- medium enterprises worked together to develop an IEEE Industry Strategic plan.

- 2016 Established Industry Advisory Board

Key Conferences Conducted by Section

Symposium on Women in Engineering and Computer Science held in Melbourne (Aug 23), jointly sponsored by IEEE Victorian Section and IEAust. Electrical & Communications Engineering Branch, Victoria Division. This was (arguably) the first women-in-engineering event of its type held in Australia.

Tencon'05 Conference held in Melbourne (Nov 22-24). Prof Hugh Bradlow (Telstra) conference chair; Enn Vinnal (Telstra) conference vice-chair. This was the fifth TenCon held in Australia and the second in Victoria.

1992 - Region 10 Technical Conference (TenCon'92) held in Melbourne (Nov 11-13). Kevin Forward

IEEE_Victorian_Section_Industry_Engagement_2016

IEEE_ANZSCON_Organising Team 2010

IEEE_Victorian Section with MElbourne Convention Bureau_2016

(University of Melbourne) and Bala S. Kumble (Telecom Australia) joint conference chairs. This was the first TenCon held in Australia.

1993 - 100th committee meeting of IEEE Victorian Section (April)

Globecom'98 conference held in Sydney. Prof. Hugh Bradlow (Telstra) conference chair; Enn Vinnal (Victorian Section) conference secretary.

Key Highlights from Young Professionals
YP (VIC) was formed in 2013 they are working together with the industrial professionals to bring out technical seminars and awareness sessions, industrial tours, social and networking events.

Started the first of its kind STEP (Student Transitioning and Elevation Partnership) event for VIC section in May 2017.

R10 YP grant for IEEE President's Industry Networking Dinner

Key Highlights from WIE in Section
- The Victorian WIE AG was formed in July 22, 2005 as the first IEEE Women in engineering affinity group in Australia

- WIE Group made history by being awarded 2nd prize in the Best Affinity Group of the Year 2006 (Honorable Mention) after running an impressive program of activities right from inception (in the first year)

Awards and Recognitions
- 1984 IEEE Centenary Medal, Douglas Lampard

- 1995 Region 10 Outstanding Volunteer, Anthony E Gascoigne, 2007 – Enn Vinnal, 2016 Mehrnaz Shoushatrian

- 2000 IEEE Millennium Medal, Lawrence W. Cahill, Robin A. Court, Chris W. Dobson, Anthony E. Gascoigne, Bala S. Kumble, Michael K. Moore, John P. Nakulski, Dalma Novak, Robert Slaviero, Enn Vinnal, Rodney B. Waterhouse

- 2015, Edhem (Eddie) Custovic – IEEE MGA Board Young Professional Achievement Award

- 2016 Women in Engineering Best Affinity Group Award

IEEE Vietnam Section

Section Chair Name : Prof. Nguyen Huu Thanh
Year Started : 2007
Current member strength : 160

Section History
Vietnam Section founding committee were found in 2006 by group of Vietnamese professors working abroad and Vietnamese professors working in Vietnam. 06 March 2007, during RIVF 2007 (International Conference on Research, Innovation and Vision for the Future on Computing and

Communication Technologies 2007), IEEE Vietnam Section officially launched. In 2009, IEEE Communications Society (ComSoc) were formed. In 2012, IEEE Solid-State Circuits Society, Computational Intelligence Society were formed. In 2014, we established the GOLD (now Young Professionals) affinity group, and Women in Engineering affinity group formed in 2016. The first student branch at Tra Vinh University, with the Tra Vinh University Student Branch beginning in 2016.

NAFOSTED Conference on Information and Computer **Science** – NICS (2015, 2016, 2017)

Key Conferences Conducted by Section

Technical co-sponsor of

International Conference on Research, Innovation and Vision for the Future on Computing and Communication Technologies - RIVF (2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016)

The International Conference on Advanced Technologies for Communications – ATC (2013, 2014, 2015, 2016, 2017)

International Conference on Communications and Electronics (ICCE) – (2006, 2008, 2010, 2012, 2014, 2016)

International Conference on Knowledge and Systems Engineering – KSE (2015, 2016, 2017)

NAFOSTED Conference on Information and Computer **Science** – NICS (2015, 2016, 2017)

Special Initiatives/Programs Started by Section

Vietnam section support IEEE R10 to organize IEEE R10 Meeting, Melia Hotel Hanoi, Feb. 28 – March 1, 2009. **Organized** IEEE R10 – IEEE Vietnam Section Joint distinguished technical seminar

Volunteer Training Workshop

Achievements in Industry Collaboration

The section has strong Chapters in Computational Intelligence Society, Solid-State Circuits Society which have close collaborations with industry. Each year there the respective chapters hold a workshop which receives strong participation from industry and government research organisations.

Highlights from Young Professionals

The Vietnam section formed a Young Professional affinity group in 2014. YP organizes wome workshops every year for young people. In 2016, YP organized Summer School in Big Data and IoT for Vietnamese and Japanese, Malaysia students at Hanoi University of Science and Technology. Every year, we organize the workshops in conjunction with some IEEE conferences in Vietnam. 50% of Vietnam section members are young professionals.

Key Highlights from WIE in Section

The IEEE Women in Engineering affinity group – Vietnam section, was formed in 2016. Since then, the Vietnam WIE affinity group has been actively organising technical events and highlighting the role of female engineers in the industry. We organized Women in Engineering Forum to strengthen networking in WIE members in Vietnam and promote IEEE Vietnam WIE group to other members.

IEEE Western Australia Section

Section Chair Name: Cesar Ortega-Sanchez.
Year Started: IEEE Western Australia was established on 24 May 1984.
Current member strength: 664 members (as of March, 2017).

Section History

The region of Western Australia (WA) was part of the IEEE Australia Section from 1972 through to 1984. It includes Australia's external territories of Christmas Island and Cocos-Keeling Island. On 24th May, 1984, the IEEE WA Section was established under the chairmanship of Professor Alan Billings. He was

succeeded by other distinguished academic and industry leaders: Professor Yianni Attikiouzel, Professor Laurie Faraone, Dr Dorota Kieronska, Mr Harry McDonald, Professor Kit Po Wong, Professor Lance Fung, Dr Douglas Chai, Professor Kevin Wong, Dr Valerie Maxville, Professor Adam Osseiran and Professor Cesar Ortega. Since its establishment 33 years ago, the IEEE Western Australia Section has grown from strength to strength and it is expected the trend will continue.

Key Achievements

The Western Australia Section has been very successful in achieving the IEEE mission in this isolated part of the world. The Section has organized 128 technical and 23 professional events since 2010. Every year the Section organizes a family day to bring together WA members and their families and keep nurturing the IEEE spirit.

Key Conferences Conducted by Section

1995 – IEEE International Conference on Neural Network; IEEE International Conference on Evolutionary Computation. Technical co-sponsored ANZIIS-95, the third Australian and New Zealand conference on Intelligent Information Systems.

1996 – IEEE TENCON'96, Digital Signal Processing Applications
1997 – The WA Section hosted the IEEE R10 meeting.
2000 – PowerCon 2000
2005 – IEEE International Conference on Industrial Informatics (INDIN)
2008 – IEEE Symposium on Computational Intelligence and Games
2011 – IEEE Women in Science & Engineering (WISE) Conference
2014 – IEEE Conference on Optoelectronic and Microelectronic Materials and Devices (COMMAD). Aupec 2014 Smart Power For Everyone Conference.
2017 – IEEE SeGAH 5th IEEE Conference on Serious Games and Applications for Health. Technical co-sponsored 23rd Asia Pacific Conference on Communications.

Key Achievements in Industry Collaboration

The Western Australia Section Committee is formed mainly by academics from the four public universities in WA. Hence most activities are oriented towards students and fellow academics. Industry has been involved in the Networking Forums and Tech Fairs organized by the student branches.

Key Highlights from Young Professionals

Young Professionals in Western Australia are very active in organizing activities to link recent graduates and students with industry. These are some recent activities:

Meet & greet events with professionals working in industry and students.

Networking events with engineering professionals, students and professionals from other industries in collaboration with other entities like IET Young Professionals.

Participated in the Tech Fair in 2014 which was a careers fair run by the student branches of all the universities in WA.

Interview Preparation Workshop (STEP Event) at Edith Cowan and Curtin Universities in 2015 and 2016.

C Programming Workshop at University of WA in 2016.

Key Highlights from WIE in Section

WIE in Western Australia has been involved in different events and workshops to promote the participation of women in engineering:

FREE interview preparation workshop (including mock interviews with experienced professionals) for recent graduates and soon-to-be graduates in 2015.

Women in Leadership workshop including a series of talks on practical strategies and insights from academic and industry to enhance women's leadership and females in engineering for career advancement and success in 2015.

Networking Sundowner and getting your CV noticed in 2014.

IEEE Australia and New Zealand Student and Young Professionals Conference (ANZSCON) in 2014.

IEEE Tech Fair in 2014.

Awards and Recognitions

Past Section Chair Mr Harry McDonald won the 1999 R10 Outstanding Volunteer award.

Past Section Chair Professor Lance Fung won the 2015 R10 Outstanding Volunteer award.

WA PES chapter won the outstanding small chapter award for activities in 2000.

The University of WA Student Branch won the IEEE Australia Council Student Branch competition in 2007.

Every year the Section sponsors awards to the best Electrical and Electronic engineering students at three of the four public universities in WA.

Powercon 2000 Organizing Committee (No high-resolution available for this photo)

RoboLab 2007 technically sponsored by the CIS Chapter

Teamwork workshop 2009

Tech Fair 2014

Mock job interviews event organized by Young Professionals and Student Branches in 2016

Networking Event IEEE & IET Young Professionals held in 2016

IEEE Wuhan Section

Section Chair Name: Dr. Guilin Zheng, Prof. of Wuhan University
Year Started: 2007
Current member strength:
The membership in Wuhan section reached 803 by the end of 2016.

Wuhan Section has 6 chapters and 2 student branches.

Section History
Wuhan Section was inaugurated on 14 Feb, 2007.

One of the faster developed section and a very active section in China.

This year another two chapters are applying to set up.

Key Conferences
2018 Ubiquitous Positioning, Indoor Navigation and Location-Based Services (UPINLBS) has been approved by MCE to held in Wuhan IEEE Wuhan Section is technically sponsor of the conference.

Awards and Recognitions: MD Silver Award in 2016

Highlights from Young Professionals:
Set up Wuhan University and Hua-Zhong University of Science and Technology Young professional chapters in 20161

IEEE Xian Section

Section Chair Name: JiandongLi, Xidian University (2017－2018)
Year Started: 2007
Current member strength: 1037

Section History
IEEE Xi'An Section originates from IEEE Xi'An Subsection; IEEE Xi'An Subsection was established in 1999; The establishment of IEEE Xi'An Subsection was advocated by Prof. Changxin FAN (Xidian University), Prof. Baosheng HU (Xi'An Jiao tong University) and Prof. Jianguo HUANG (NPU); Prof. Changxin FAN is the first President of IEEE Xi'An Subsection.Prof. Jianguo HUANG is the second President of IEEE Xi'An Subsection.

Jun 8, 2007, IEEE Xi'An Section Establishment Ceremony. Professor Janina Maziersk, Fellow of IEEE and Director of IEEE Region 10, presented in the ceremony.

Key Conferences
1. Sept.22th, 2010, IEEE Xi'An Section held the first Symposium on IT Advances in 21st Century to celebrate IEEE 125th Anniversay in IEEE Xi'an Section.

2.IEEE International Conference on Signal Processing and Communications

1) The 2011 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC 2011) was held in Xi'an, Shaanxi, China, in September 14-16, 2011.

2) The IEEE International Signal Processing, Communications and Computing Conference (ICSPCC 2012) was held in Hong Kong, China, August 12-15, 2012.

3) The 2013 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC 2013) was held in Kun Ming, Yunnan, China, in August 5-8, 2013.

4) The 2014 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC 2014) was held in Guilin, Guangxi, China, in August 5-8, 2014.

5) The 2015 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC

2015) was held in Ningbo, Zhejiang, China, in September 19-22, 2015.

6) The IEEE International Signal Processing, Communications and Computing Conference (ICSPCC 2016) washeld in Hong Kong, China, August 5-9, 2016.

3. IEEE TENCON 2013

TENCON 2013washeld in Shaanxi Guesthouse from October22 to 25, 2013.The goal of TENCON 2013 is to bring together leading engineers, researchers and academics from the world to discuss novel theories, technologies and applications in the areas of signal processing, communications and computing. TENCON 2013 also aims to provide a stimulating forum for scholars, engineers and students from the world.

Awards and Recognitions

Prof.Jianguo Huang was awarded the Outstanding Volunteer Award of the IEEE Region 10 in recognition of his outstanding contribution during the leadership of the IEEE Xi'an Section.

Achievements in Technical Conference

PES Chapter organized International Conference on Electrical Insulation and Power Equipment with collaboration of EMC and DEIS Chapter on October in 2015

PES Chapter organized International Conference on Electromagnetic Filed Problems and Applications with DEIS Chapter on September in 2016DEIS Chapter arranged International Conference on Condition and Monitoring Diagnosis with PES Chapter on September in 2016

EDS Chapter organized 23rd International Conference on Noise and Fluctuations (ICNF2015) on June 1~5, 2015.

Highlights from Young Professionals

Xinbo Gao got Theory and Methods of Image Structure Modeling and Visual Appearance

Reconstruction by Ministry of Science and Technology.

Zan Li got Distinguished Service Award of the CITS by CITS 2015

Yuxiaozhou got 2015 Young Space Leader at International Astronautical Federation

Yuxiao Zhou got 2016 National science and technology workers innovation and Entrepreneurship Competition（Rank1) by China Association for science and technology

Xinbo Huang got（1）On-line monitoring and fault diagnosis for operation condition of transmission lines and the series product development--- The First Prize of scientific and technical awards of Shaanxi province.

Xingwu Zhang got Scientific and technological achievements of Henan Province Henan from Science and Technology Department

Minglei Yang got Excellent Paper Award Second Prize 2016 CIE International Conference on Radar.

Key Highlights from WIE in Section

- Zan Li received Distinguished Service Award of the CITS 2015 in CITS 2015

- Hongying LIUgot The Google Anita Borg Memorial Scholarship Asia in 2012 by Google Inc.

- Lan Du a.Dctoral dissertation was granted National Excellent Doctoral Dissertation of PR China, NSFC for Excellent Young Scholars, Chang Jiang Scholars Program for Young Scholars and the second prize of the State Technological Invention Award.

4.
Legacy of Excellence :
Recipients of IEEE Awards

Editors - Byung Gook Park & V. Prasad Kodali

Sponsors of the IEEE Medals & Technical Field Awards

The IEEE awards program would not be possible without the sponsorship of some of the world's leading corporations, foundations and individuals, whose interest in the IEEE's technological disciplines are shown by their support to this program.
Given here is the list of sponsors from Region 10 for IEEE Medals and Awards program over the years:

Company/Organization	Award Sponsored
Hitachi Ltd.	IEEE Edison Medal
KDDI R&D Laboratories	The Kiyo Tomiyasu Fund
Mitsubishi Electric Corporation	IEEE Edison Medal
NEC Corporation	Koji Kobayashi Computers & Communications Award
Samsung Electronics Co. Ltd.	IEEE Edison Medal
Semiconductor Research Foundation	IEEE Jun-Ichi Nishizawa Medal
Sony Corporation	Masaru Ibuka Consumer Electronics Award
Taiwan Semiconductor Manufacturing Co. Ltd.	IEEE Cledo Brunetti Award
The Federation of Electric Power Companies Japan	IEEE Jun-Ichi Nishizawa Medal
Toshiba Corporation	IEEE Edison Medal
Toyota Motor Corporation	IEEE Medal for Environmental and Safety Technologies
Wolong Electric Group Co. Ltd.	IEEE Nikola Tesla Award

IEEE Founders Medal presenta on to Masaru Ibuka, Chairman, Sony Corpora on by Robert Tanner, IEEE President, March 1972

Recipients of IEEE Medals, Recognitions & Technical Field Awards

The IEEE Awards Board (AB) administers the highest medals, awards, and recognitions presented by IEEE. Through its Awards Program, IEEE advances the interests of its members by recognizing their contributions in advancing the fields of interest to IEEE to the benefit of society. By this means, the image and prestige of the organization, its members, and the profession are all enhanced. The IEEE Awards Program honors members and other professionals for their service to society. The IEEE Technical Field Awards are awarded for contributions or leadership in specific fields of interest of the IEEE.   Recipients of these honors from Asia-Pacific region over the past half century are listed here.

Leo Esaki
IEEE Medal of Honor 1991

Tadahiro Sekimoto
IEEE Medal of Honor 2004

Morris Chang,
IEEE Medal of Honor 2011

IEEE Medals

Masaru Ibuka Sony Corporation Tokyo
IEEE Founders Medal 1972
"For outstanding administrative leadership in applying solid-state devices in consumer electronics, thereby enhancing industry growth and bringing distinction to the profession."

Hanzo Omi Fuji Electrochemical Ltd. Kawasaki
IEEE Founders Medal 1979
"For pioneering leadership in computer technology, the promotion of international cooperation in research and development in electronics and communications, and for devoted service to the electrical profession."

Shigeru Yonezawa Telecommunication Assoc. Tokyo
IEEE Founders Medal 1982
"For technical contributions in the development of VHF multichannel telephone systems, and for leadership in promoting international cooperation between developing and industrialized nations in telecommunications technologies."

Koji Kobayashi NEC (Nippon Electric Co.) Tokyo
IEEE Founders Medal 1984
"For leadership in the development of computer and communications technologies, their integration into modern networks, and the worldwide expansion of electronics."

Leo Esaki
IEEE Medal of Honor 1991
"For contributions to and leadership in tunneling semiconductor superlattices and quantum wells."

Hiroshi Inose NCSIS Tokyo
IEEE Alexander Graham Bell Medal 1994
"For pioneering contributions to digital switching and modulation, and for leadership in international telecommunications."

Akio Morita Sony Corporation Tokyo
IEEE Founders Medal 1994
"For distinguished corporate leadership and for a life time of innovative contributions in bringing advanced technologies to consumer electronics products."

Tadahiro Sekimoto NEC Corporation Tokyo
IEEE Alexander Graham Bell Medal 1996
"For pioneering contributions to digital satellite communications and industry leadership in developing digital communications."

Jun-Ichi Nishizawa Tohoku University Sendai
IEEE Edison Medal 2000
"For contributions to materials science and technology, and the invention of the static induction transistor."

Morris Chang Taiwan Semiconductor Manufacturing Taipei
IEEE Robert N. Noyce Medal 2000
"For his vision and leadership in pioneering the silicon integrated circuit foundry industry."

Recipients of IEEE Medals, Recognitions & Technical Field Awards

Brian D.O. Anderson Australian Academy of Science Canberra
IEEE James H. Mulligan, Jr. Education Medal 2001
"For outstanding graduate texts of lasting value and far-reaching international influence, and for outstanding leadership in the development of electrical engineering education in Australia."

Hajime Sasaki KEIDANREN Tokyo
IEEE Robert N. Noyce Medal 2001
"For contributions to, and leadership in, the technology and business development of semiconductor devices and the harmonization of the global semiconductor industry."

Tsuneo Nakahara Sumitomo Electric Industries Osaka
IEEE Alexander Graham Bell Medal 2002
"For pioneering work on the design and development of manufacturing systems for optical fibers."

Yasuharu Suematsu Tokyo Inst. of Tech. Tokyo
IEEE James H Mulligan, Jr Education Medal 2003
"For outstanding leadership in graduate and undergraduate education as a mentor, professor, and president, and for pioneering contribution to research and education in optical communication devices."

Tadahiro Sekimoto NEC Corporation Tokyo
IEEE Medal of Honor, 2004
"For contributions to digital satellite communications, promotion of information technology R&D, and technical and corporate leadership in coputers and communication."

Fumitada Itakura Meijo University Nagoya
IEEE Jack S. Kilby Signal Processing Medal 2005
"For pioneering contributions to narrow-band speech coding."

Toshiharu Aoki NTT Data Corporation Tokyo
IEEE Founders Medal 2006
"For outstanding visionary leadership in global standardization and commercialization of broadband multi-media networks."

Mitsumasa Koyangi Tohoku University Sendai
IEEE Jun-Ichi Nishizawa Medal 2006
"For pioneering contributions to dynamic random access memory (DRAM) cell structures and architecture."

Kiyoo Itoh Hitachi Tokyo
IEEE Jun-Ichi Nishizawa Medal 2006
"For pioneering contributions to dynamic random access memory (DRAM) cell structures and architecture."

Hideo Sunami Hiroshima University Hiroshima
IEEE Jun-Ichi Nishizawa Medal 2006
"For pioneering contributions to dynamic random access memory (DRAM) cell structures and architecture."

Shoichiro Yoshida Nikon Corporation Tokyo
IEEE Robert N. Noyce Medal 2006
"For contributions to, and leadership in, the technology and business development of IC lithography."

Isamu Akasaki Meijo University Nagoya
IEEE Edison Medal 2011
"For seminal and pioneering contributions to the development of nitride-based semiconductor materials and optoelectronic devices, including visible wave length LEDs and lasers."

Shoichi Sasaki Keio University Yokohama
IEEE Environmental and Safety Technologies Medal 2011
"For pioneering contributions to the development and market penetration of hybrid electric vehicles (HEVs) through the invention of their power output apparatus and control method."

Morris Chang Taiwan Semiconductor Manufacturing Company Taipei
IEEE Medal of Honor 2011
"For outstanding leadership in the semiconductor industry."

Fang-Chen Luo AU Optronics Corporation Hsinchu
IEEE Jun-Ichi Nishizawa Medal 2011
"For pioneering contributions to thin-film-transistor (TFT) liquid-crystal displays."

Akira Yoshino Asahi Kasei Corporation Fuji-shi
IEEE Environmental and Safety Technologies Medal 2012
"For developing the lithium-ion battery, which enables significant fuel conservation and reduced emissions as power storage for electric vehicles and for smartgrids incorporating renewables."

Rachid Yazami Nanyang Technologicial University (NTU) Singapore
IEEE Environmental and Safety Technologies Medal 2012
"For developing the lithium-ion battery, which enables significant fuel conservation and reduced emissions as power storage for electric vehicles and for smartgrids incorporating renewables."

Faqir Chand Kohli Tata Consultancy Services Mumbai
IEEE Founders Medal 2012
"For early vision and pioneering contributions to the development of the IT industry in India."

Yoon-Woo Lee Samsung Electronics Co. Ltd. Seoul
IEEE Robert N. Noyce Medal 2012
"For pioneering the development of the memory chip and LCD industries in Korea."

Tsuneo Takahashi NF Corporation Yokohama
IEEE Environmental and Safety Technologies Medal 2013
"For pioneering the development of navigation technology in automobiles."

Burn J. Lin TSMC Hsinchu
IEEE Jun-Ichi Nishizawa Medal 2013
"For contributions to lithographic manufacturing, including immersion lithography."

Takuo Aoyagi Nihon Kohden Corporation Tokyo
IEEE Medal for Innovations in Healthcare Technology 2015
"For pioneering contributions to pulse oximetry that have had a profound impact on healthcare."

Katsuhiko Takeuchi DENSO Corporation Kariya-shi
IEEE Environmental and Safety Technologies Medal 2016
"For development of electronic multipoint fuel-injection systems, enabling fuel-efficient and low-emission diesel engines."

Masahiko Miyaki DENSO Corporation Kariya-shi
IEEE Environmental and Safety Technologies Medal 2016
"For development of electronic multipoint fuel-injection systems, enabling fuel-efficient and low-emission diesel engines."

Recipients of IEEE Medals, Recognitions & Technical Field Awards

Masayoshi Esashi Tohoku University Sendai
IEEE Jun-Ichi Nishizawa Medal 2015
"For pioneering contributions to micro electromechanical systems (MEMS) and their uses in automobiles, cellular phones, industrial equipment, and medical devices."

Takuo Sugano University of Tokyo Tokyo
IEEE Robert N. Noyce Medal 2016
"For contributions to and leadership in the research and development of the science and technology of semiconductor devices."

Yukihiro Shinohara DENSO Corporation Kariya-shi
IEEE Environmental and Safety Technologies Medal 2016
"For development of electronic multipoint fuel-injection systems, enabling fuel-efficient and low-emission diesel engines."

Takeo Kanade Carnegie Mellon University Pittsburgh
IEEE Founders Medal 2017
"For pioneering and seminal contributions to computer vision and robotics for automotive safety, facial recognition, virtual reality, and medical robotics."

IEEE Recognitions

M. G. K. Menon Government of India New Delhi
IEEE Honorary Membership 1984
"For contributions to the planning and growth of science and technology, particularly electronics, and its application to development; promotion of international scientific cooperation; and experimental research in particle physics and cosmic rays."

Hideo Yamashita University of Tokyo Tokyo
IEEE Honorary Membership 1985
"For contributions to research in computers, for fostering international cooperation in the science and technology of information processing, and for leadership in electrical engineering education."

Sony Corporation Tokyo
IEEE Corporate Innovation Award 1987
"For the development and effective application of high technology to consumer and industrial products."

Akio Morita SONY Corporation Tokyo
IEEE Honorary Membership 1991
"For his distinguished leadership of Sony Corporation and the integration of emerging technologies into consumer electronics products."

Hiroyuki Mizuno Matsushita Electric Industrial Company Osaka
IEEE Honorary Membership 1996
"For technical leadership in semiconductor research, manufacturing and its application in consumer electronics and for promoting international technical cooperation."

Pavaguda Venkata Indiresan, Indian National Academy of Engineering New Delhi
IEEE Honorary Membership 1998
"For contributions to the growth of electrical engineering in India through his leadership in education, applied research and professional engineering institutions"

Angus Mcmillan Tait Electronics Ltd. Christchurch
IEEE Ernst Weber Managerial Leadership Award 1998
"For leadership and contributions in creating and expanding radio communication approaches that achieved international recognition and success."

Norio Ohga Sony Corporation Tokyo
IEEE Honorary Membership 2000
"For visionary leadership in the development of the MiniDisc."

Seiko Epson Corporation Suwa-shi
IEEE Corporate Innovation Award 2002
"For pioneering development of electronic watches based on quartz crystal oscillators and for resulting contributions to the low power consumption electronics industry."

Taiwan Semiconductor Manufacturing Company Hsin-Chu
IEEE Corporate Innovation Award 2002
"For pioneering and realizing the dedicated IC wafer fabrication business thereby leading worldwide to numerous fabless IC companies."

Tadashi Sasaki International Center for Materials Research
IEEE Honorary Membership 2003
"For leadership of the commercialization of Liquid Crystal Displays and development of the pocket calculator."

NTT Docomo Tokyo
IEEE Corporate Innovation Award 2005
"For innovations in the planning, development, and deployment of i-mode, an international leader in mobile Internet service."

Toyota Motor Corporation Toyota-City
IEEE Corporate Innovation Award 2007
"For the development and promotion of a hybrid combustion-electric power train for automobiles that significantly improves fuel economy and reduces emissions without sacrificing vehicle dynamic performance."

Tsutae Shinoda Fujitsu Laboratories Ltd. Akashi
IEEE Honorary Membership 2007
"For outstanding innovative and pioneering contributions to commercializing large area color plasma displays."

N. R. Narayana Murthy Infosys Technologies Ltd. Bangalore
IEEE Ernst Weber Managerial Leadership Award 2007
"For a pioneering role in the globalization of information technology software and services, and leadership in establishing global business and governance practices in India."

Jong Yong Yun Samsung Electronics Co. Seoul
IEEE Honorary Membership 2008
"For exceptional achievements in pioneering technology-driven innovation within the electronics industry, advancing engineering education, and encouraging a multidisciplinary engineering community."

Recipients of IEEE Medals, Recognitions & Technical Field Awards

Hidehito Obayashi Hitachi High-Technologies Corporation
Tokyo
IEEE Ernst Weber Managerial Leadership Award 2010
"For outstanding engineering and managerial leadership in the
field of scanning electron microscopy, including the creation
and development of critical dimension SEMs for VLSI
manufacturing."

N. R. Narayana Murthy Infosys Technologies Bangalore
IEEE Honorary Membership 2010
"For founding and leading the extraordinary growth of Infosys
Ltd., notable for its ethical stance, and for supporting
empowerment of members of disadvantaged rural
communities."

Samsung Electronics Co.   Suwon-city
IEEE Corporate Innovation Award 2010
"For the innovative conception, development and deployment
of Mobile WiMAX technology that enables the true ubiquity of
mobile communications."

Wang Jianzhou China Mobile Ltd. Beijing
IEEE Honorary Membership 2011
"For greatly enhancing the quality of life of large populations in
rural areas through visionary leadership in the deployment of
affordable mobile telecommunications."

Avul Pakir Jainulabdeen Abdul Kalam Former (2002-07)
President of the Republic of India New Delhi
IEEE Honorary Membership 2011
"For outstanding contributions toward transforming society
through technology and for inspiring millions of school children
to harness science and technology for human welfare and
national development."

Panasonic Corporation Osaka
IEEE Corporate Innovation Award 2012
"For developing and commercializing high-performance
heterojunction solar cell technology (HIT)."

Yoshio Utsumi Japan Telecommunications Engineering and
Consulting Service (JTEC) Tokyo
IEEE Honorary Membership 2012
"For leadership in policy and initiatives leading to the growth of
information and communication technologies."

Tetsuya Iizuka THine Electronics Tokyo
IEEE Ernst Weber Managerial Leadership Award 2012
"For pioneering de facto standard video chips for moving
images and nurturing entrepreneurship in Japan."

Gururaj Deshpande Tejas Networks Bangalore
IEEE Ernst Weber Managerial Leadership Award 2013
"For demonstrating exceptional business innovation and
visionary entrepreneurial leadership in the telecommunications
network industry."

V. Prasad Kodali Government of India, Department of
Electronics New Delhi
IEEE Haraden Pratt Award 2014
"For sustained contributions to IEEE, its Boards and
Committees, and for pioneering the development of Region 10.

Fumio Harashima Tokyo Metropolitan Universit Tokyo
IEEE Haraden Pratt Award 2015
"For outstanding leadership in globalization and diversity of
IEEE communities."

IEEE Technical Field Awards

Koji Kobayashi Nippon Electric Co. Ltd. Tokyo
IEEE Frederick Philips Award 1976
For leadership in the management of research, development,
and the production of telecommunication and electronic
systems."

Nobutoshi Kihara SONY Corp. Tokyo
IEEE David Sarnoff Award 1982
"For major contributions to magnetic video tape recording."

Sakae Yamamura University of Tokyo Tokyo
IEEE Nikola Tesla Award 1982
"For contributions to the theory of linear induction motors and
the development of magnetic levitation of track vehicles."

Jun-Ichi Nishizawa Tohoku University Sendai
IEEE Jack A. Morton Award 1983
"For invention and development of the class of static induction
transistors (SIT) and for advances in optoelectronic devices."

Fumitada Itakura Nagoya University Nagoya
IEEE Morris N. Liebmann Award 1986
"For pioneering contributions to linear predictive coding and
speech processing

Yasuharu Suematsu Tokyo Inst. of Tech. Tokyo
IEEE David Sarnoff Award 1986
"For contributions to semiconductor lasers and integrated
optics for optical fiber communications."

Izuo Hayashi Optoelectronics Joint Res. Lab. Kawasaki
IEEE David Sarnoff Award 1988
For contributions to III-V semiconductors and device
technology."

Shun-Ichi Iwasaki Tohoku University Sendai
IEEE Cledo Brunetti Award 1989
For contributions to the miniaturization of magnetic recording
systems."

Heitaro Nakajima SONY Corp. Tokyo
IEEE Masaru Ibuka Consumer Electronics Award 1989
"For technical innovation and leadership in the development of
the digital audio compact disk system and the achievement of
international cooperation in both the development and
introduction of this system."

Takanori Okoshi University of Tokyo Tokyo
IEEE Morris N. Liebmann Award 1989
"For leadership in and pioneering contributions to coherent
optical fiber communications."

Satoshi Hiyamizu Osaka University Osaka
IEEE Morris N. Liebmann Award 1990
"For demonstration of the High Elecron Mobility Transistor
(HEMT)."

Takashi Mimura Fujitsu Laboratories Atsugi
IEEE Morris N. Liebmann Award 1990
"For demonstration of the High Elecron Mobility Transistor
(HEMT)."

Toshiaki Masuhara Hitachi Tokyo
IEEE Donald O. Pederson Award in Solid-State Circuits 1990
For pioneering contributions to NMOS depletionload circuits
and the development of high speed CMOS memories."

Hideo Sunami Hitachi Tokyo
IEEE Cledo Brunetti Award 1991
For contributions in the invention and development of the
trench capacitor DRAM cell."

Takuo Sugano University of Tokyo Tokyo
IEEE Jack A. Morton Award 1992
"For contributions to Metal-Insulator-Semiconductor devices
and technology."

Isamu Washizuka Sharp Corp. Nara
IEEE Masaru Ibuka Consumer Electronics Award 1992
"For demonstrating technical feasibility of large size color LCD
displays suitable for consumer TV applications."

Toshihisa Tsukada Hitachi Tokyo
IEEE Jack A. Morton Award 1993
"For contributions to the discover and development of Buried
Heterostructure (BH) semiconductor lasers."

Takafumi Nambu Mitsuru Ida Kamon Yoshiyuki Sony Tokyo
IEEE Cledo Brunetti Award 1993
"For the development of the WALKMAN, the realization of a
totally new concept of miniaturization of consumer
electronics."

Mat Darveniza University of Queensland Queensland
IEEE Herman Halperin Electric Transmission and Distribution
Award 1993
For contributions to the lightning protection of power
equipment, including both engineering analysis and protective
equipment design."

Kiyoo Itoh Hitachi Tokyo
IEEE Donald O. Pederson Award in Solid-State Circuits 1993
"For technical contributions to folded dataline circuits and the
development of highdensity dynamic RAMs."

Eiji Takeda Hitachi Tokyo
IEEE Cledo Brunetti Award 1994
"For pioneering contributions to the characterization and
understanding of hot-carrier effects in MOS devices."

Minoru Nagata Hitachi Central Research Lab. Tokyo
IEEE Frederick Philips Award 1994
"For leadership in research and development of silicon
integrated circuits, and fostering international information
exchange."

Mitsumasa Koyanagi Tohoku University, Sendai
IEEE Cledo Brunetti Award 1996
"For pioneering research and development of the three
dimensional stacked capacitor DRAM cell."

Nobutake Imamura Tosoh Corporation   Kanagawaken
IEEE Reynold B. Johnson Information Storage Systems Award
1996
"For contributions to research, development, and
commercialization of magnetooptic recording media and drive
systems."

Michiyuki Uenohara NEC Research Institute Tokyo
IEEE Frederick Philips Award 1996
"For fostering cooperative R&D management and advancement
of microelectronics technology."

Hiroyuki Sakaki University of Tokyo Tokyo
IEEE David Sarnoff Award 1996
"For pioneering studies of quantum effects in semiconductor
microstructures."

Brian D. O. Anderson Australian National University Canberra
IEEE Control Systems Award 1997
"For contributions in the areas of adaptive and optimal control,
stability, and system identification."

Fujio Masuoka Tohoku University Sendai
IEEE Morris N. Liebmann Award 1997
"For the development of Flash EEPROM and NAND-type
EEPROM technology."

Naoki Yokoyama Fujitsu Laboratories Atsugi
IEEE Morris N. Liebmann Award 1998
"For contributions to and leadership in the development of self-
aligned refractory-gate gallium arsenide MESFET integrated
circuits."

Isamu Akasaki Meijo University Nagoya
IEEE Jack A. Morton Award 1998
"For contributions in the field of group-III nitride materials and
devices."

Shuji Nakamura Nichia Chemical Industries, Ltd. Tokushima
IEEE Jack A. Morton Award 1998
"For contributions in the field of group-III nitride materials and
devices."

Vincent Thomas Morgan Commonwealth Scientific and
Industrial Research Organization (CSIRO)   Linfield
IEEE Herman Halperin Electric Transmission and Distribution
Award 1998
"For contributions to the understanding of the electrical,
mechanical and thermal behavior of electric power
transmission and distribution lines."

Nicky Chauchun Lu Etron Technology Inc. Hsinchu
IEEE Donald O. Pederson Award in Solid-State Circuits 1998
"For pioneering contributions to high speed dynamic memory
design and cell technology."

Tatsuo Izawa Nippon Telegraph and Telephone Corp.
Kanagawa
IEEE David Sarnoff Award 1998
"For contributions to vapor phase axial deposition for optical
fiber fabrication."

 Hiroshi Yasuda University of Tokyo Tokyo
IEEE Charles Proteus Steinmetz Award 2000
"For leadership in the development of standards for multimedia
coding and audio/visual services."

Katsutoshi Izumi Osaka Prefecture University Osaka
IEEE Daniel E. Noble Award for Emerging Technologies 2001
"For pioneering development of Separation by Implanted
Oxygen (SIMOX) technology."

Takashi Fujio Himeji Institute of Technology
IEEE Masaru Ibuka Consumer Electronics Award 2002
"For pioneering contributions to the research and development
of High Definition Television."

Kozo Hayashi Sharp Corporation Tokyo
IEEE Masaru Ibuka Consumer Electronics Award 2002
"For pioneering contributions to the research and development
of High Definition Television."

Recipients of IEEE Medals, Recognitions & Technical Field Awards

Masao Sugimoto Pioneer Corporation Tokyo
IEEE Masaru Ibuka Consumer Electronics Award 2002
"For pioneering contributions to the research and development
of High Definition Television."

Masahiko Morizono Sony Corporation Tokyo
IEEE Masaru Ibuka Consumer Electronics Award 2002
"For pioneering contributions to the research and development
of High Definition Television."

Yuichi Ninomiya NHK Science & Technical Research
Laboratories Tokyo
IEEE Masaru Ibuka Consumer Electronics Award 2002
"For pioneering contributions to the research and development
of High Definition Television."

Masataka Nakazawa Tohoku University Miyagi-Ken
IEEE Daniel E. Noble Award for Emerging Technologies 2002
"For pioneering development of 1.48 µm InGaAsP laser-diode
pumping of erbium-doped fiber amplifiers (EDFA)."

Pingkeung Ko Authosis Inc. Quarry Bay
IEEE Donald O. Pederson Award in Solid-State Circuits 2002
"For contributions to MOSFET physics and development of the
BSIM model for CMOS circuit simulation."

Toshiharu Aokintt Data Corporation Tokyo
IEEE Frederick Philips Award 2002
"For leadership of research & development contributing to
worldwide advances in digital switching, network intelligence
and broadband communications."

Tsuneo Nakahara Sumitomo Electric Industries Ltd Osaka
IEEE Eric E.Sumner Award 2002
"For pioneering contributions to the physical understanding,
manufacture, and deployment of optical fiber communications
systems."

Neville Thiele University of Sydney Sydney
IEEE Masaru Ibuka Consumer Electronics Award 2003
For major contributions to the synthesis and analysis of
loudspeakers."

Kenichi Iga Japan Society for the Promotion of Science Tokyo
IEEE Daniel E. Noble Award for Emerging Technologies 2003
"For pioneering developments of surface emitting
semiconductor lasers and arrays."

Yutaka Tsukada Kyocera ShigaKen
IEEE Components, Packaging, and Manufacturing Technology
Award 2005
"For pioneering contributions in microvia technology for
printed circuit boards, and for extending the feasibility of the
direct flipchip attachment process."

Hiroyoshi Komiya Tokyo Seimitsu Co. Ltd. Tokyo
IEEE Frederick Philips Award 2005
"For leadership in R&D and driving international cooperation
leading to the next generation of silicon wafers."

Seiuemon Inaba FANUC Ltd. Yamanashi Prefecture
IEEE Robotics and Automation Award 2005
"For long-standing leadership and technical contributions to the
development of Numerical Control machines, industrial robots,
and flexible factory automation."

Susumu Namba Nagasaki Institute of Applied Science Nagasaki
IEEE Cledo Brunetti Award 2006
"For contributions to ion-beam and optical technologies for
application to semiconductor devices."

Changgyu Hwang Samsung Electronics Co Ltd Gyeonggi-Do
IEEE Andrew S. Grove Award 2006
"For contributions to the development of advanced memory
products."

Yongkyung (Kenneth) Lee KT R&D Laboratories Seoul
IEEE Frederick Philips Award 2007
"For leadership in the management of research and
development of broadband networks and the promotion of
international collaboration."

Mathukumalli Vidyasagar Tata Consultancy Services
Hyderabad
IEEE Control Systems Award 2008
"For promulgation of control science and engineering and
contributions to robust control, robotics and statistical learning
theory"

Hirofumi Akagi Tokyo Institute of Technology Tokyo
IEEE Richard Harold Kaufmann Award 2008
"For pioneering contributions to the theory of instantaneous
reactive power in three-phase circuits, and its applications to
power conditioning"

Burn Jeng Lin TSMC Hsin-Chu
IEEE Cledo Brunetti Award 2009
"For contributions to immersion lithography for the
manufacture of integrated circuit devices."

Kenneth K. Mei City University of Hong Kong Kowloon
IEEE Electromagnetics Award 2009
"For contributions to computational electromagnetics and
Maxwellian circuits."

Tadashi Fukao Independent Consultant Yokohama
IEEE William E. Newell Power Electronics Award 2009
"For contributions to the development of cycloconverters and
bearingless drives."

Shojiro Asai Rigaku Corporation Tokyo
IEEE Frederick Philips Award 2009
"For leadership in research and development in electron device
technologies and their applications."

Yasuhiko Arakawa Research Center for Advanced Science and
Technology Tokyo
IEEE David Sarnoff Award 2009
"For seminal contributions to improved dynamics of quantum
well semiconductor lasers."

Graham Clifford Goodwin University of Newcastle Callaghan
IEEE Control Systems Award 2010
"For contributions to the theory and practice of digital and
adaptive control."

Shinichi Abe Toyota Corp Aichi
IEEE Daniel E. Noble Award for Emerging Technologies 2010
"For pioneering contributions to the development and market
penetration of hybrid electric vehicles (HEVs) through the
establishment of innovative architectures and control
technologies."

Akio Nakagawa Toshiba Corporation Kawasaki
IEEE William E. Newell Power Electronics Award 2010
"For development of non-latch-up IGBTs."

Hitoshi Watanabe Soka University Tokyo
IEEE Gustav Robert Kirchoff Award 2010
"For pioneering contributions to filter design theory and
computeraided circuit design."

Recipients of IEEE Medals, Recognitions & Technical Field Awards

Michio Sugeno Doshisha University Kyoto
IEEE Frank Rosenblatt Award 2010
"For contributions to development and applications of the theory of fuzzy sets."

Sadaoki Furui Tokyo Institute of Technology Tokyo
IEEE James L. Flanagan Speech and Audio Processing Award 2010
"For contributions to and leadership in the field of speech and speaker recognition towards natural communication between humans and machines."

Shoichi Sasaki Keio University Yokohama
IEEE Daniel E. Noble Award for Emerging Technologies 2010
"For pioneering contributions to the development and market penetration of hybrid electric vehicles (HEVs) through the establishment of innovative architectures and control technologies."

Takayasu Sakurai University of Tokyo Tokyo
IEEE Donald O. Pederson Award in Solid-State Circuits 2010
"For pioneering contributions to the design and modeling of highspeed and lowpower CMOS logic circuits."

Takehisa Yaegashi Cordia Corporation Shizuoka
IEEE Daniel E. Noble Award for Emerging Technologies 2010
"For pioneering contributions to the development and market penetration of hybrid electric vehicles (HEVs) through the establishment of innovative architectures and control technologies."

Toshio Fukuda Nagoya University Nagoya
IEEE Robotics and Automation Award 2010
"For leadership and pioneering contributions to Intelligent Robotic Systems and Micro and Nano Robotic Systems."

Jun Murai Keio University Kanagawa
IEEE Internet Award 2011
"For his leadership in the development and deployment of the global Internet, especially across the Asia-Pacific region."

Dimlee Kwong Institute of Microelectronics Singapore Science Park II
IEEE Frederick Philips Award 2011
"For leadership in silicon technology and excellence in the management of microelectronics R&D."

Hirochika Inoue University of Tokyo Tokyo
IEEE Robotics and Automation Award 2011
"For original and continuous contributions to research in intelligent robotics, in particular to real-time vision and humanoid robotics."

Raghunath Shevgaonkar Indian Institute of Technology Bombay Mumbai
IEEE Undergraduate Teaching Award 2011
"For contributions to inspirational classroom teaching and development of outstanding text books and e-learning material for electromagnetic

Naoya Takahashi Hitachi Ltd   Tokyo
IEEE Reynold B. Johnson Information Storage Systems Award 2012
"For leadership in the development of innovative storage systems for heterogeneous open and mainframe servers, business continuity solutions and virtualization of heterogeneous storage systems."

Chihyuan (C.Y.) Lu Macronix International Co. Ltd. HsinChu
IEEE Frederick Philips Award 2012
"For leadership and contributions to research, development and industrial alliances in semiconductor technology."

Hideo Ohno Tohoku University Sendai
IEEE David Sarnoff Award 2012
"For seminal contributions and leadership in bridging semiconductor electronics with magnetism and spintronics."

John Lau Industrial Technology Research Institute (ITRI) Hsinchu
IEEE Components, Packaging, and Manufacturing Technology Award 2013
"For contributions to the literature in advanced solder materials, manufacturing for highly reliable electronic products, and education in advanced packaging."

Hidenori Akiyama Kumamoto University Kumamoto
IEEE Leon K. Kirchmayer Graduate Teaching Award 2013
"For excellence in graduate teaching, curriculum development, inspirational research guidance, and development

Shinichi Takagi The University of Tokyo Tokyo
IEEE Andrew S. Grove Award 2013
"For contributions to the understanding of transport properties in inversion layers of high-performance MOSFETs."

Norio Takahashi Okayama University Okayama
IEEE Nikola Tesla Award 2013
"For contributions to finite element modeling, analysis, and optimal design tools of electrical machines."

Malcom H. Hudson Macquaire University Australia
IEEE Marie Sklodowska-Curie Award 2014
"For developing maximum likelihood image reconstruction in emission tomography leading to it widespread and effective use in healthcare."

Chung Laung Liu National Tsing Hua University Hsinchu
IEEE Gustav Robert Kirchoff Award 2014
"For seminal, longlasting contributions to design automation for circuits and systems."

Shigeo Hirose HiBot Corporation Tokyo
IEEE Robotics and Automation Award 2014
"For contributions to the design and construction of multiple nonconventional robotic systems such as snakelike, quadruped walking, wall climbing, and swarm robots."

Hsi-Tseng Chou Yuan Ze University Chung-Li
IEEE Undergraduate Teaching Award 2014
"For inspirational teaching and innovations in undergraduate engineering education."

Hiroshi Iwai Tokyo Institute of Technology Yokohama
IEEE Cledo Brunetti Award 2015
"For contributions to the scaling of CMOS devices."

Masayoshi Esashi Tohoku University Sendai
IEEE Andrew S. Grove Award 2015
"For developments in microelectromechanical systems (MEMS) used in transportation and industrial electronics."

Takemochi Ishii University of Tokyo Minatoku
IEEE Innovations in Societal Infrastructure Award 2015
"For pioneering the concept of dependable autonomous decentralized systems and contributing to its practical application in early transport control systems."

Recipients of IEEE Medals, Recognitions & Technical Field Awards

Hirokazu Ihara International Institute of Intelligence and Information Machida
IEEE Innovations in Societal Infrastructure Award 2015
"For pioneering the concept of dependable autonomous decentralized systems and contributing to its practical application in early transport control systems."

Atsunobu Ichikawa Tokyo Institute of Technology Machida
IEEE Innovations in Societal Infrastructure Award 2015
"For pioneering the concept of dependable autonomous decentralized systems and contributing to its practical application in early transport control systems."

Yosiro Oono Kyushu University Fukuoka
IEEE Gustav Robert Kirchoff Award 2015
"For fundamental contributions to the foundation of classical circuit theory."

Shu Yuen Ron Hui University of Hong Kong
IEEE William E. Newell Power Electronics Award 2015
"For contributions to power electronics applications in planar wireless charging and sustainable lighting technology."

Akira Toriumi University of Tokyo Tokyo
IEEE Cledo Brunetti Award 2016
"For contributions to CMOS device design from materials engineering to device physics"

Carlos H. Diaz Taiwan Semiconductor Manufacturing Co. Hsinchu
IEEE Andrew S. Grove Award 2016
"For sustained contributions to and leadership in foundry advanced CMOS logic transistor technology"

Hiroyuki Matsunami Kyoto University Yawata
IEEE David Sarnoff Award 2016
"For contributions to the development of silicon carbide (SiC) crystals and devices for advanced power electronics"

Ning Cai Xidian University Xi'an
IEEE Eric E. Sumner Award 2016
"For pioneering contributions to the field of network coding"

Raymond W. Yeung Chinese University of Hong Kong Hong Kong
IEEE Eric E. Sumner Award 2016
"For pioneering contributions to the field of network coding"

Shuo-Yen Robert Li Chinese University of Hong Kong Hong Kong
IEEE Eric E. Sumner Award 2016
"For pioneering contributions to the field of network coding"

Takehiro Moriya Moriya Research Lab Atsugi
IEEE James L. Flanagan Speech and Audio Processing Award 2016
"For contributions to speech and audio coding algorithms and standardization"

John O'Sullivan Taggie Systems Everleigh
IEEE Masaru Ibuka Consumer Electronics Award 2017
"For pioneering contributions to high-speed wireless LAN technology."

Takao Nishitani LAISIP Kanagawa
IEEE Donald O. Pederson Award in Solid-State Circuits 2017
"For pioneering real-time programmable digital signal processor architectures."

Recipients of IEEE Medals

Isamu Akasaki	Toshiharu Akoi	Takuo Aoyagi	Brian D.O. Anderson
Morris Chang	Leo Esaki	Masayoshi Esashi	Masaru Ibuka
Fumitada Itakura	Kiyoo Itoh	Hiroshi Inose	Takeo Kanade
Koji Kobayashi	Faqir Chand Kohli	Mitsumasa Koyangi	Yoon-Woo Lee
Burn J Lin	Fang-Chen Luo	Masahiko Miyaki	Akio Morita
Tsuneo Nakahara	Jun-Ichi Nishizawa	Hanzo Omi	Shoichi Sasaki

Recipients of IEEE Medals

Hajime Sasaki	Tadahiro Sekimoto	Yukihiro Shinohara	Yasuharu Suematsu
Takuo Sugano	Hideo Sunami	Tsuneo Takahashi	Katsuhiko Takeuchi
Rachid Yazami	Shigeru Yonezawa	Shoichiro Yoshida	Akira Yoshino

Recipients of IEEE Recognitions

Gururaj Deshpande	Fumio Harashima	P.V. Indiresan	Tetsuya Iizuka
Wang Jianzhou	APJ Abdul Kalam	V Prasad Kodali	Angus McMillan
M.G.K Menon	Hiroyuki Mizuno	Akio Morita	NR Narayan Murthy
Hidehito Obayashi	Norio Ohga	Tadashi Sasaki	Tsutae Shinoda
Yoshyo Utsumi	Hideo Yamashita	Jong Yong Yun	

Recipients of IEEE Technical Field Awards

Shinichi Abe	Hirofumi Akagi	Isamu Akasaki	Hidenori Akiyama
Brian D.O. Anderson	Toshiharu Aoki	Yasuhiko Arakawa	Shojiro Asai
Ning Cai	Hsi-Tseng Chou	Mat Darveniza	Carlos H. Diaz
Masayoshi Esashi	Takashi Fujio	Tadashi Fukao	Toshio Fukuda
Sadaoki Furui	Graham Clifford Goodwin	Kozo Hayashi	Izuo Hayashi
Shigeo Hirose	Satoshi Hiyamizu	Malcolm H. Hudson	Shu Yuen Ron Hui

Recipients of IEEE Technical Field Awards

Changgyu Hwang	Atsunobu Ichikawa	Kenichi Iga	Hirokazu Ihara
Seiuemon Inaba	Hirochika Inoue	Takemochi Ishii	Fumitada Itakura
Kiyoo Itoh	HIROSHI Iwai	SHUN ICHI IWASAKI	Tatsuo Izawa
Katsutoshi Izumi	Nobutoshi Kihara	Pingkeung Ko	Koji Kobayashi
Hiroyoshi Komiya	Mitsumasa Koyanagi	Dimlee Kwong	John H. Lau
Yongkyung(Kenneth) Lee	Shuo-Yen Robert Li	Burn Jeng Lin	Chung Laung Liu

Recipients of IEEE Technical Field Awards

CHIHYUAN (C.Y.) Lu	Nicky Chauchun Lu	Fujio Masuoka	Hiroyuki Matsunami
Kenneth K Mei	Takashi Mimura	Vincent Morgan	Takehiro Moriya
Masahiko Morizono	Jun Murai	Minoru Nagata	Akio Nakagawa
Tsuneo Nakahara	Heitaro Nakajima	Shuji Nakamura	Masataka Nakazawa
Susumu Namba	Takafumi Nambu	Yuichi Ninomiya	Takao Nishitani
Jun-ichi Nishizawa	Hideo Ohno	Yosiro Oono	Takanori Okoshi

Recipients of IEEE Technical Field Awards

John O'Sullivan	Hiroyuki Sakaki	Takayasu Sakurai	Shoichi Sasaki
Raghunath Shevgaonkar	Yasuharu Suematsu	Takuo Sugano	Michio Sugeno
Masao Sugimoto	Hideo Sunami	SHINICHI Takagi	Norio Takahashi
Naoya Takashi	Eiji Takeda	Neville Thiele	Akira Toriumi
Yutaka Tsukada	Toshihisa Tsukada	Michiyuki Uenohara	Mathukumalli Vidyasagar
Isamu Washizuka	Hitoshi Watanabe	Takehisa Yaegashi	Sakae Yamamura

Recipients of IEEE Technical Field Awards

Hiroshi Yasuda	Raymond W. Yeung	Naoki Yokoyama	

Recipients of Friend of IEEE MGA Award

Friend of IEEE MGA Awards specifically recognize support provided to IEEE and its members, in support of IEEE goals by firms, divisions of firms, or individuals. Listed below are the recipients of this award, with year of award, from Asia Pacific Region.

Fujitsu Limited (*2016*), Kawasaki, Kanagawa, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

Hitachi, Ltd (*2016*), Chiyoda-Ku, Tokyo, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

KDDI Corporation (*2016*), Fujimino-Shi, Aitama, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

 Mitsubishi Electric Corporation (*2016*), Kamakura, Kanagawa, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

NEC Corporation (*2016*), Kawasaki, Kanagawa, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

Nippon Telegraph and Telephone Corporation (*2016*), Atsugi, Kanagawa, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

Sumitomo Electric Industries, Ltd. (*2016*), Minato-ku, Tokyo, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

Toshiba Corporation (*2016*), Kawasaki, Kanagawa, Japan
With sincere appreciation, in recognition of long-lasting and extensive support to IEEE Japan area operations.

University of Hyderabad (*2010*), Hyderabad, India
For outstanding and continued support of the IEEE Hyderabad Section by providing significant contributions to Section meetings, encouraging faculty to serve as IEEE volunteers, and hosting both TENCON 2008 and the Workshop on Cloud Computing 2009.

North Sydney Institute of TAFE, Gore Hill Campus (2007), New South Wales, Australia
In recognition of outstanding and continued support of the activities of the IEEE New South Wales Section and its Chapters.

Mr. Venu Chettupalli (*2005)*, Andhra Pradesh, India
For the distinguished services to the IEEE fraternity within the IEEE Hyderabad Section.

Satyam Computer Services, Ltd. (*2003*), Secunderabad, India
For their consistent support of IEEE Members in the Hyderabad Section in pursuit of business excellence with innovative, high quality solutions in information technology.

IEEE FELLOWS - ASIA PACIFIC REGION

The grade of IEEE Fellow recognizes unusual distinction in the profession and is conferred only by invitation of the IEEE Board of Directors upon a person with an extraordinary record of accomplishments in any of the IEEE fields of interest. The accomplishments that are being honoured shall have contributed importantly to the advancement or application of engineering, science, and technology, bringing the realization of significant value to society. The total number of IEEE Fellow elevated in any one year must not exceed one-tenth percent of the total voting membership of the IEEE on record as of 31 December of the preceding year. Over the years, several members were conferred this distinction. Given here is a list of active IEEE Fellow from Asia-Pacific region with (Section), year of elevation to fellow grade and citation. Life fellow are identified with*

Vasudev Aatre* (Hyderabad) 2002
for leadership in research and development for strategic electronics and defense systems

Derek Abbott (South Australia) 2005
for contributions to analysis of noise and stochastic phenomena in vision systems.

Masayuki Abe* (Tokyo) 1999
for contributions to III-V compound semiconductor optoelectronic and high-speed devices.

David Abramson (Queensland) 2016
for contributions to software tools for high performance, parallel, and distributed computing

Tinku Acharya (Kolkata) 2010
for contributions to very large scale integration algorithms and architectures for electronic image processing

Fumiyuki Adachi* (Sendai) 2002
for contributions and leadership in digital cellular communication technologies.

Vivek Agarwal (Bombay) 2015
for contributions to topologies and control schemes for solar photovoltaic energy conversion and power quality enhancement

Doyeol (David) Ahn (Seoul) 2005
for contributions to the theory of semiconductor quantum-well lasers and the development of quantum information communications research.

Kiyoharu Aizawa (Tokyo) 2016
for contributions to model-based coding and multimedia lifelogging

Hirofumi Akagi (Tokyo) 1996
for contributions to the theory of instantaneous reactive power in three-phase circuits, and to the development of active power filters for harmonic compensation in power systems.

Yoshihiko Akaiwa* (Fukuoka) 2001
for contributions to digital modulation techniques and distributed dynamic channel assignment for mobile radio communications.

Masanori Akazaki* (Tokyo) 1986
for contributions to investigations of scrubbers and high-voltage de transmission lines.

Shigeyuki Akiba (Tokyo) 2002
for contributions to infrared semiconductor lasers and to the development of high capacity transoceanic undersea cable systems.

Shirabe Akita (Tokyo) 2004
for contributions in applied superconductivity in support of electric power applications.

Hidenori Akiyama (Fukuoka) 2000
for contributions to the development of pulsed power technology and its industrial applications.

Massimo Alioto (Singapore) 2016
for contributions to energy-efficient VLSI circuits

Shun-Ichi Amari* (Tokyo) 1994
for contributions to mathematical foundations of neurocomputing and information geometry.

Akihiro Ametani* (Kansai) 1992
for contributions to the analysis of electrical transients in power systems.

P AnandaMohan* (Bangalore) 2005
for contributions to telecommunications technologies.

Yoshiharu Anbe* (Tokyo) 1998
for contributions to the research and development of automatic control system for metal rolling mills.

Brian Anderson* (Australian Capital Terr) 1975
for contributions to quadratic optimal control and stability theory and for leadership in electrical engineering education.

Makoto Ando (Tokyo) 2003
for contributions to the design of high gain planar waveguide arrays.

Yasuhiro Ando (Tokyo) 2003
for contributions to optical connector technologies.

Souguil J Ann* (Seoul) 1995
for contributions to the development of high resolution transducers for image processing, and to electronics education in Korea.

Teruaki Aoki* (Tokyo) 2003
for leadership in consumer electronics and contributions to semiconductor technology.

Toshiharu Aoki* (Tokyo) 1995
for contributions to the development of integrated digital network systems and to networking architectures for multimedia communication.

Tomonori Aoyama* (Tokyo) 2002
for contributions to digital signal processing for communications and broadband communication networks.

Hiroyuki Arai (Tokyo) 2013
for contributions to the design and analysis of low profile antennas for mobile communications

Shigehisa Arai (Tokyo) 2010
for contributions to single-mode semiconductor lasers for optical communications

Tatsuo Arai (Kansai) 2016
for contributions to micro manipulators and sensors, and applications to cellular biology

Yasuhiko Arakawa (Hiroshima) 2006
for contributions to the understanding of quantum confinement effects in semiconductor lasers and the development of quantum dot lasers.

Mituhik Araki* (Kansai) 2006
for contributions to control theory and its industrial/medical applications.

John Archer* (New South Wales) 1990
for contributions to low-noise millimeter-wave receiver design.

Kazutami Arimoto (Hiroshima) 2010
for development of high-density dynamic random access memory and embedded memory

Suguru Arimoto* (Kansai) 1983
for contributions to information theory and linear systems theory

Seiichi Aritome (Tokyo) 2014
for contributions to flash memory technologies

Jean Armstrong (Victorian) 2015
for contributions to the theory and application of orthogonal frequency division multiplexing in wireless and optical communications

Masahiro Asada (Tokyo) 2012
for contributions to semiconductor laser theory and terahertz devices

Minoru Asada (Kansai) 2005
for contributions to robot learning and applications.

Shojiro Asai* (Tokyo) 1990
for contributions to advancing semiconductor device technology.

Shigeru Asakawa* (Tokyo) 1995
for contributions to the development of ultra-low power digital radio-paging systems.

Koichi Asatani (Tokyo) 2005
for contributions to optical networking and standards, communicatons quality of service, and network performance.

T Asokan (Gujarat) 2012
for contributions to the development technologies for electrical safety

Ikuo Awai* (Kansai) 2008
for contributions to microwave passive components

Harbans Bajaj* (Delhi) 2004
for leadership in field management of power plants.

Sanghamitra Bandyopadhyay (Kolkata) 2016
for contributions to genetic algorithm based classification and clustering techniques

Soumitro Banerjee (Kolkata) 2014
for contributions to the understanding of nonlinear phenomena in power electronic circuits, and to the theory of border collision bifurcation

Prabhakar Bapat* (Bombay) 1991
for contributions to the growth of small-scale electrical machinery manufacturing industry.

Amine Bermak (Hong Kong) 2013
for contributions to sensing and processing of vision and olfactor circuits and systems

Charanjit Bhatia (Singapore) 2015
for contributions to magnetic head-media interfaces and tribology

Bhargab Bhattacharya (Kolkata) 2007
for contributions to testing and design of digital integrated circui

Qi Bi (Beijing) 2011
for contributions to code division multiple access

Marcela Bilek (New South Wales) 2015
for contributions to the science and application of plasma processes for materials modification and synthesis

Trevor Bird* (New South Wales) 1997
for contributions to the theory of mutual coupling between antennas with particular application to the design of array feeds for satellite antennas.

Thierry Blu (Hong Kong) 2012
for fundamental contributions to approximation theory in signal and image processing

Vivek Borkar (Bombay) 2002
for contributions to stochastic and adaptive control.

Athman Bouguettaya (Victorian) 2010
for contributions to large scale autonomous and heterogeneous databases and service-oriented computing

Richard Brent* (New South Wales) 1991
for contributions to the development and analysis of parallel algorithms.

Rajkumar Buyya (Victorian) 2015
for contributions to cloud computing

Chi Hou CHAN (Hong Kong) 2002
for contributions to computational electromagnetics

KWANG-CHENG CHEN (Taipei) 2007
for contributions to wireless broadband communications and wireless local area networks

Terrence Caelli (New South Wales) 2002
for contributions to machine vision and pattern recognition

Ning Cai (Xian) 2015
for contributions to network coding theory and arbitrarily varying channels

IEEE FELLOWS - ASIA PACIFIC REGION

Om Prakash Calla* (Delhi) 2013
for leadership in space applications of microwave technology and remote sensing

Antonio Cantoni* (Western Australia) 1998
for contributions to the design of filter, antenna arrays and telecommunications systems using constrained optimization methods.

Jiannong Cao (Hong Kong) 2015
for contributions to distributed computing in mobile wireless networks

Jinde Cao (Nanjing) 2016
for contributions to the analysis of neural networks

Xi-Ren Cao* (Shanghai) 1996
for contributions to perturbation analysis and to performance evaluation of discrete event systems.

Branko Celler (New South Wales) 2014
for contributions to telehealth services for the management of chronic disease

Tian Chai (Harbin) 2008
for contributions to adapt intelligent decoupling control, and integrated automation of complex industrial processes

Zhenming Chai* (Beijing) 1994
for leadership in building a premier research and teaching institute in electronics,   and propelling circuits and systems activities in China.

Chandan Chakraborty (Kharagpur) 2015
for contributions to estimation techniques and control of induction machine and drive systems

James C Chan* (Hong Kong) 1992
for contributions to the advancement of electric drives and electric vehicles.

Mansun Chan (Hong Kong) 2013
for contributions to CMOS device modeling

Tony Chan (Hong Kong) 2016
for contributions to computational models and algorithms for image processing

Yan Chan (Hong Kong) 2004
for contributions to electronic product reliability.

Cheng Chang (Taipei) 2004
for contributions to the theory of providing performance guarantees in communication networks.

Chin-Chen Chang (Taipei) 1999
for contributions to database design, information security, and image compression.

Ching-Ray Chang (Taipei) 2011
for contributions to micromagnetic calculations and computational approaches in spin transport

Chun-Yen Chang* (Taipei) 1988
for contributions to semiconductor device development and to education.

Chung-Ju Chang* (Taipei) 2006
for contributions to radio resource management for mobile communication systems.

Dau-Chyrh Chang* (Taipei) 2004
for technical leadership in antenna design and measurement systems.

EdwardYi Chang (Taipei) 2014
for contributions to compound semiconductor heterojunction transistor technologies

Elizabeth Chang (Australian Capital Terr) 2015
for contributions to industrial informatics and cyber physical systems

Shoou-Jinn Chang (Tainan) 2014
for contributions to nano scale photonic, electronic, and sensing devices

Wen-Kung Chang (Tainan) 2010
for contributions to power system harmonics and interharmonics

Yao-Wen Chang (Taipei) 2013
for contributions to VLSI physical design and manufacturability

Hou Chaohuan* (Beijing) 2004
for technical leadership in advancing VLSI system technology

Kwok Chau (Hong Kong) 2013
for contributions to energy systems for electric and hybrid vehicle

Bidyut Chaudhuri* (Kolkata) 2001
for contributions to pattern recognition, especially Indian language script OCR, document processing and natural language processing.

Subhasis Chaudhuri (Bombay) 2011
for contributions to graduate-level education in electrical engineering

Ben Chen (Singapore) 2007
for contributions to linear systems theory, robust control theory, and industrial control applications

Bor-Sen Chen* (Taipei) 2002
for contributions to fuzzy control theory and its applications

C L Philip Chen (Macau) 2007
for contributions to intelligent manufacturing systems design and integration

Dan Chen* (Taipei) 2003
for contributions to the basic understanding of switching power supplies.

Guanrong Chen (Hong Kong) 1997
for fundamental contributions to the theory and applications of chaos control and bifurcation analysis.

Han-Fu Chen* (Beijing) 1997
for contributions to identification and stochastic adaptive control.

Homer Chen (Taipei) 2003
for contributions to the development of technology and standards for digital image and video coding.

Hsiao-Hwa Chen (Tainan) 2010
for contributions to radio resource allocation in code division multiple wireless systems

I-Ming Chen (Singapore) 2012
for contributions to reconfigurable robotic systems and actuators

Ih-Chin Chen (Taipei) 2001
for leadership in the development of advanced CMOS technologies.

Jian Chen (Beijing) 2008
for contributions to the modeling and analysis and engineering of complex systems

Jie Chen (Hong Kong) 2007
for contributions to fundamental design limitations of feedback control

Jyh-Cheng Chen (Taipei) 2012
for contributions to energy efficient protocols in wireless network

Kevin Chen (Hong Kong) 2014
for contributions to compound semiconductor heterojunction transistor technologies

Liang-Gee Chen (Taipei) 2001
for contributions to algorithm and architecture design for video coding systems.

Wen-Tsuen Chen (Taipei) 1994
for contributions to software engineering and parallel processing systems design.

Xilin Chen (Beijing) 2016
for contributions to machine vision for facial image analysis and sign language recognition

Yung-Chang Chen* (Taipei) 2005
for contributions to low bit rate modeling based coding.

Zhi Ning Chen (Singapore) 2008
for contributions to small and broadband antennas for wireless applications

Daizhan Cheng (Beijing) 2006
for contributions to nonlinear control theory and its applications.

Fan-Tien Cheng (Tainan) 2008
for contributions to semiconductor manufacturing automation and force optimization in multiple-chain robotic mechanisms

Ming Cheng (Nanjing) 2015
for contributions   to the development   and control of stator permanent magnet machines for vehicular propulsion and wind power generation

Roger Cheng (Hong Kong) 2012
for contributions to multiuser communications in wireless system

Shijie Cheng* (Wuhan) 2011
for contributions to control of power systems with energy storage

Wood-Hi Cheng (Taipei) 2010
for contributions to high-speed semiconductor lasers and photonic package technology

Yuhua Cheng (Shanghai) 2007
for contributions to metal-oxide-semiconductor field-effect transistor modeling and its industry applications in integrated circuit design

Nim Cheung* (Hong Kong) 1995
for contributions to the understanding and development of high speed lightwave technology and to the architecture and application of gigabit networks.

Kuo-Ning Chiang (Taipei) 2013
for contributions to design and reliability of electronic packaging

Tihao Chiang (Taipei) 2014
for contributions to the theory and applications of video coding algorithms

Akira Chiba (Tokyo) 2007
for contributions to bearingless AC motor drives

Isamu Chiba (Tokyo) 2010
for leadership in high precision phased array antenna systems with digital signal processing

Albert Chin (Taipei) 2011
for contributions to high-K dielectrics and metal gate electrodes for complementary metal-oxide semiconductor

Francis Chin* (Hong Kong) 1996
for contributions to developments in parallel and distributed computing and to computer science education.

Tung Hai Chin* (Tokyo) 1997
for contributions to the development of adjustable speed drive of induction machines and pioneering research work on power electronics.

P Ching (Hong Kong) 2011
for leadership in engineering education and accreditation

Naoki Chinone* (Tokyo) 2002
for contributions to the development and understanding of semiconductor lasers.

IEEE FELLOWS - ASIA PACIFIC REGION

Gyu-Hyeong Cho (Daejeon) 2016
for contributions to power management circuit design

Sunghyun Choi (Seoul) 2014
for contributions to development of wireless LAN protocols

Hsi-Tseng Chou (Taipei) 2012
for contributions to high frequency electromagnetic analysis and its applications to antenna design

Jyh-Horng Chou (Tainan) 2015
for contributions to hybrid evolutionary optimization approaches for industrial applications

Kwo Chu* (Taipei) 1997
for contributions to the basic understanding of relativistic electron cyclotron interaction with electromagnetic waves and development of high power radiation sources based on such

Paul Chu (Hong Kong) 2003
for contributions to the understanding of plasma implantation and deposition.

Hean Chuah (Malaysia) 2014
for leadership in engineering education

Ching-Te Chuang (Taipei) 1994
for contributions to high-performance bipolar devices, circuits, and technology.

Justin Chuang (Hong Kong) 1997
for contributions to radio link techniques, system architecture, and resource management of low-power wireless personal communications.

Char-Dir Chung (Taipei) 2009
for leadership in the broadband wireless communications industry

Henry Chung (Hong Kong) 2016
for contributions to power electronic converters for lighting

Pau-Choo Chung (Tainan) 2008
for contributions to neural network models for biomedical image analyses

Steve Chung (Taipei) 2006
for contributions to reliability in ultra-thin-oxide complementary metal oxide semiconductor (CMOS) devices.

Wan Kyun Chung (Taegu) 2016
for developments in robust control theory for mechanical system

Yun Chung (Daejeon) 2006
for contributions to optical network performance monitoring and passive optical network architectures.

Jen-Inn Chyi (Taipei) 2011
for contributions to III-V compound semiconductor optoelectronic devices

Andrzej Cichocki (Tokyo) 2013
for contributions to applications of blind signal processing and artificial neural networks

Jeanpierre Colinge (Taipei) 1996
for contributions to silicon-on-insulator devices and technology.

Iain Collings (New South Wales) 2015
for contributions to multiple user and multiple antenna wireless communication systems

Peter Ian Corke (Queensland) 2008
for contributions to visual-based robot control and its applications to field robotics

Jose Cruz* (Republic Of Philippines) 1968
for significant contributions in circuit theory and the senstivity analysis of control systems

Andres Cuevas (Australian Capital Terr) 2014
for contributions to the science and technological development o silicon solar cells

Tie Jun Cui (Nanjing) 2015
for contributions to microwave metamaterials and computational electromagnetics

B Deekshatulu* (Hyderabad) 1995
for technical leadership in the development of remote sensing and image processing technologies, and their successful implementation in natural resource utilization in India.

Serge Demidenko (New Zealand North) 2004
for contributions to electronic testing.

Robert Deng (Singapore) 2016
for contributions to security algorithms, protocols and systems

Carlos Diaz (Taipei) 2008
for contributions to deep sub-micron foundry CMOS technology

Tharam Dillon* (Victorian) 1998
for leadership in the development of optimizations for power systems.

Xiaoqing Ding* (Beijing) 2011
for contributions to multi-lingual character recognition and face recognition systems

Miwako Doi (Tokyo) 2011
for contributions to the human interface of document processing

Hugh Durrant-Whyte (New South Wales) 2006
for contributions with application to decentralized data fusion algorithms with application to simulaneous localization and navigation

Suhash Dutta Roy* (Delhi) 1995
for contributions to research in digital and analog signal processing

Benjamin Eggleton (New South Wales) 2010
for contributions to the development and applications of Bragg gratings and other periodic structures in optical fibers

Masakazu Ejiri* (Tokyo) 1989
for contributions to the development and application of robotics and machine vision technology.

Kazumasa Enami (Tokyo) 2007
for contributions to content production technology in broadcasting

Takatomo Enoki (Tokyo) 2013
for contributions to compound semiconductor high speed integrated circuits for optical and wireless communication systems

Tadayoshi Enomoto* (Tokyo) 1998
for contributions to the development of integrated circuits multimedia.

Karu Esselle (New South Wales) 2016
for contributions to resonance-based antennas

Yoshizu Eto* (Tokyo) 2005
for contributions to digital high definition television recording and standards.

Robin Evans* (Victorian) 2003
for contributions to target tracking, industrial control, and signal processing.

Giuseppe Fabrizio (South Australia) 2016
for contributions to adaptive array signal processing in over-the-horizon radar systems

Changxin Fan* (Xian) 1996
for contributions to and leadership in the area of communication engineering education and research.

Pingzhi Fan (Chengdu) 2015
for contributions to signal design for wireless communications

Da Fang* (Nanjing) 2003
for contributions to the development of the full-wave discrete complex image method and modified matched layer absorbing boundary conditions.

Wai-Chi Fang (Taipei) 2003
for contributions to VLSI systems using neural-based methods.

Weileun Fang (Taipei) 2015
for contributions to measurement methods and process technologies for micro-electro-mechanical systems

Lorenzo Faraone* (Western Australia) 2015
for development of semiconductor optoelectronic materials and devices

Dagan Feng (New South Wales) 2003
for contributions to modeling and data processing for biomedical and multimedia applications.

Gang Feng (Hong Kong) 2009
for contributions to theory and application of fuzzy systems and control

Zhenghe Feng (Beijing) 2012
for contributions to smart antennas and mobile communications, and for leadership in microwave and antenna education

Alan Finkel (Victorian) 2015
for contributions to measurement technology for biomedicine

Gordon Frazer (South Australia) 2015
for contributions to advanced over-the-horizon radar

Li-Chen Fu (Taipei) 2004
for contributions to robotic control and computer-integrated manufacturing systems.

Minyue Fu (New South Wales) 2004
for contributions to robust control and signal estimation.

Shen-Li Fu (Taipei) 2009
for contributions to electronic packaging research and education

Masakatsu Fujie (Tokyo) 2012
for contributions to medical robotics

Nobuo Fujii* (Tokyo) 2002
for contributions to the theory and design of active filters.

Kyohei Fujimoto* (Tokyo) 1990
for contributions to the development and design of small antennas and antennas for mobile communications.

Tadashi Fujino (Tokyo) 2003
for contributions to modulation and demodulation techniques for digital radio communications.

IEEE FELLOWS - ASIA PACIFIC REGION

Hiromu Fujioka* (Kansai) 2004
for contributions to electron beam testing of semiconductor devices and circuits.

Hiromichi Fujisawa* (Tokyo) 2002
for contributions to document understanding including handwritten Chinese character recognition and document retrieval.

Satoru Fujishima (Kansai) 1996
for the development of piezoelectric ceramic filters, SAW filters for TV and SAW filters for mobile communication.

Masayuki Fujita (Tokyo) 2016
for contributions to passivity-based control in robotics and robust control

Yoshihiro Fujita (Shikoku) 2011
for contributions to imaging systems for high resolution television

Hideo Fujiwara* (Kansai) 1989
for contributions to research and development on testing of large integrated circuits.

Tadashi Fukao* (Tokyo) 1994
for developments of synchronous reluctance motors and generator in super-high-speed applications.

Takahiko Fukinuki* (Tokyo) 1991
for contributions to the development of television picture signal processing and transmission.

Toshio Fukuda* (Nagoya) 1995
for the development of distributed intelligent robotics and system control with neuron-fuzzy-genetic-algorithms based computational intelligence.

Shinta Fukui (Tokyo) 2005
for contributions to secure power network operation technologies using intelligent systems.

Yoshitaka Fukuoka (Tokyo) 2009
for development of multichip module and high density substrate technologies

Pascale Fung (Hong Kong) 2015
for contributions to human-machine interactions

Yoji Furuhama* (Kansai) 1998
for contributions to and leadership in optical and millimeter-wave propagation research, especially for its application to satellite communications.

Sadaoki Furui* (Tokyo) 1993
for contributions to speech analysis, speech recognition, and speaker identification.

Katsuhisa Furuta* (Tokyo) 1996
for contributions to digital control theory and its applications to robotics and industrial processes.

Tohru Furuyama (Tokyo) 2006
for contributions to high speed dynamic random access memory (DRAM) design and technologies.

Masaaki Futamoto (Tokyo) 2002
for contributions to perpendicular magnetic recording.

Huijun Gao (Harbin) 2014
for contributions to the theory and industrial applications of networked control systems

Shangkai Gao (Beijing) 2007
for contributions to the study of brain-computer interface

Wen Gao (Beijing) 2009
for contributions to object-based video representation and scalable video coding technologies and standards

Xiqi Gao (Nanjing) 2015
for contributions to broadband wireless communications and multirate signal processing

Ramesh Garg* (Delhi) 2002
for contributions to microstrip antenna technology.

Shuzhi Ge (Singapore) 2006
for contributions to theory and analysis of stable adaptive neural networks for intelligent control systems.

Arindam Ghosh (Western Australia) 2006
for contributions to education in power electronic applications to transmission and distribution systems.

M Gibbard* (South Australia) 2003
for contributions to stabilizer analysis and tuning for power systems.

Lalit Goel (Singapore) 2013
for contributions to the development and application of reliability techniques in electric power systems

Graham Goodwin* (New South Wales) 1986
for contributions to adaptive control and systems identification.

K Gopakumar (Bangalore) 2012
for contributions to design and control of multilevel converters

Masuo Goto* (Shikoku) 1994
for the contributions to the development of power system stability technologies.

Satoshi Goto* (Tokyo) 1987
for contributions to new directions on VLSI CAD research.

Toshio Goto* (Nagoya) 2002
for contributions to plasma processing, gaseous electronics and lasers.

Martin Green* (New South Wales) 1989
for contributions to silicon photovoltaics and to the analysis of semiconductor devices.

Min Gu (Victorian) 2015
for contributions to multiphoton microscopy, endoscopy, and optical data storage

Xiaohong Guan (Xian) 2007
for contributions to optimization of hydrothermal generation scheduling

Baining Guo (Beijing) 2010
for contributions to surface appearance modeling and rendering in computer graphics

Lei Guo (Beijing) 1999
for contributions to the theory of adaptive control and recursive identification of linear stochastic systems

Yingjie Guo (New South Wales) 2014
for contributions to smart, reconfigurable and high gain antennas for broadband wireless communications systems

Kohei Habara* (Tokyo) 1992
for contributions as a technical leader to the development and standardization of integrated services digital networks.

Kazuo Hagimoto (Tokyo) 2008
for contributions to very large capacity optical transmission systems

Yoshiaki Hagiwara (Tokyo) 2001
for pioneering work on, and development of, solid-state imagers

Hiroyuki Hama (Kansai) 2010
for contributions to compact and reliable high-voltage equipment

Hiroki Hamada (Kansai) 2008
for contributions to red semiconductor laser diodes and polycrystalline silicon thin-film transistors

Chihiro Hamaguchi* (Kansai) 1992
for contributions to the understanding of hot-electron effects in semiconductors and the development of modulation spectroscopy.

Te Sun Han* (Tokyo) 1990
for contributions to the theory of multiuser information systems and distributed signal detection systems.

Yunghsiang Han (Taipei) 2011
for contributions to decoding techniques

Chang Hang (Singapore) 1998
for contributions to the research and development of advanced control design techniques and to education in control engineering.

Hsueh-Ming Hang (Taipei) 2002
for contributions to video compression algorithms and systems.

Masanori Hara* (Fukuoka) 2006
for contributions to electrical insulation technology in superconducting power devices.

Shinji Hara (Tokyo) 2006
for contributions to robust, servo tracking, and sampled-data control theories.

Fumio Harashima* (Tokyo) 1988
for contribution to motion control systems and industrial electronics.

K.V.S. Hari (Bangalore) 2015
for contributions to high-resolution signal parameter estimation

Jayant Haritsa (Bangalore) 2013
for contributions to data management systems

Tomohiro Hase (Kansai) 2016
for contributions to embedded software for real-time application

Akira Hasegawa* (Kansai) 1979
for contributions to linear and nonlinear wave dynamics in laboratory and space plasmas, to nonlinear optics, and to nonlinear fluid dynamics.

Tatsuro Hasegawa* (Tokyo) 1996
for contributions to industrial electronics and control systems.

Hideki Hashimoto (Tokyo) 2006
for contributions to mechatronics systems.

Ken-Ya Hashimoto (Tokyo) 2005
for contributions to simulation and design for surface acoustic wave devices.

Masahiro Hashimoto* (Kansai) 1998
for contributions to electromagnetic theory, especially for guided wave optics.

Tsutomu Hashimoto* (Tokyo) 1991
for contributions to and leadership in the development of microwave transmission lines and circuits for practical satellite communication antennas.

Yutaka Hata (Kansai) 2010
for contributions to fuzzy logic based image processing in biomedical informatics

Mitsutoshi Hatori* (Tokyo) 2000
for contributions in communication engineering and broadcasting engineering.

IEEE FELLOWS - ASIA PACIFIC REGION

Takeo Hattori (Tokyo) 2001
for his contributions to the studies on the formation and the characterization of ultrathin gate oxides for ULSI devices.

Hideki Hayashi* (Tokyo) 2006
for contributions to and leadership in compound semiconductor device technologies.

Kozo Hayashi* (Tokyo) 1995
for leadership in, and contributions to HDTV research and development.

Jinliang He (Beijing) 2008
for contribution to lightning protection and grounding of power transmission systems

Sailing He (Nanjing) 2013
for contributions to subwavelength photonics

Xiang Ning He (Nanjing) 2010
for leadership in establishing   a power electronics   research institute in China

Yun He (Beijing) 2014
for contributions to video coding and communication technologies

Gernot Heiser (New South Wales) 2016
for contributions to security and safety of operating systems

Malcolm Heron* (Northern Australia) 2012
for contributions to the application of radio science to oceanic and terrestrial remote sensing

Taketos Hibiya* (Tokyo) 1998
for contributions to liquid-phase epitaxial growth of magnetic garnet films for telecommunication applications.

Kunihiko Hidaka (Tokyo) 2012
for contributions to measurement and electrical insulation technologies in high voltage engineering

Tatsuo Higuchi* (Sendai) 1992
for contributions to the theory of multidimensional signal processing and the development of the beyond-binary VLSI signal processing techniques.

Mitsutaka Hikita (Tokyo) 2002
for contributions to the development of surface-acoustic-wave devices for mobile communications.

D Hill* (Hong Kong) 1993
for contributions to the stability analysis of complex interconnected nonlinear dynamical systems and applications to power systems

Takao Hinamoto* (Hiroshima) 2001
for contributions to the design, synthesis, realization and sensitivity minimization of two-dimensional digital filters.

Shuji Hirakawa* (Tokyo) 2002
for contributions to the innovation of coded-modulation and set-partitioning, and applications of error-correcting codes to a real digital broadcasting system.

Kotaro Hirano* (Kansai) 1998
for contributions to analog and digital signal processing, and to engineering education.

Kazuhiro Hirasawa* (Tokyo) 2006
for contributions to antennas for mobile communications.

Shigeichi Hirasawa* (Tokyo) 1997
for contributions to the development of channel coding schemes and error-connecting codes.

Jiro Hirokawa (Tokyo) 2012
for contributions to high-gain and high-efficiency millimeter-wave planar waveguide slot arrays

Botaro Hirosaki* (Tokyo) 1996
for contributions to the development of high-speed digital communications technologies and systems

Akira Hirose (Tokyo) 2013
for contributions to theory and radar applications of complex-valued neural networks

Digh Hisamoto (Tokyo) 2011
for contributions to complementary metal-oxide semiconductor devices

Donald Holmes (Victorian) 2013
for contributions to the modulation and control of solid-state power electronic conversion equipment

Hsiao-Wuen Hon (Beijing) 2007
for contributions to speech recognition research and product development

Minghwei Hong* (Taipei) 2008
for contributions to III-V semiconductor MOSFET transistors

Wei Hong (Nanjing) 2012
for contributions to substrate integrated waveguide circuits and computational electromagnetics

Kazuhiko Honjo* (Tokyo) 1997
for contributions to the development of gallium-arsenide integrated circuits.

S R Hoole (Sri Lanka) 1995
for contributions to computational methods for design optimization of electrical devices.

Takamasa Hori* (Nagoya) 1992
for contributions to the development of speed control systems for industrial alternating current motors.

Toshikazu Hori (Nagoya) 2015
for contributions to broadband antennas for cellular and satellite communications

Yoichi Hori (Tokyo) 2005
for contributions to advanced motion control.

Masashi Horiguchi (Tokyo) 2010
for contributions to circuit technologies for high-density low-power memories

Ray-Hua Horng (Taipei) 2015
for contributions to high brightness light emitting diodes

Tzyy-Sheng Horng (Tainan) 2016
for contributions to system-in-package modeling and design

Kazuo Hotate (Tokyo) 2003
for contributions to fiber optic gyroscopes and distributed fiber optic sensors.

Masao Hotta (Tokyo) 2001
for contributions to the development of low-power video-frequency Analog to Digital converters for mixed-signal system Large Scale Integrated circuits.

Jiunn Hsu* (Taipei) 1999
for leadership in the field of communication switching, and network systems.

Powen Hsu (Taipei) 2010
for leadership in electrical engineering education

Wen-Lian Hsu (Taipei) 2006
for contributions to natural language systems and bioinformatics

Ching-Wen Hsue (Taipei) 2010
for contribution to discrete-time signal processing in microwave engineering

Genda Hu (Taipei) 1994
for contributions to the understanding and solutions to the latchup phenomenon in CMOS VLSI.

Xian-Sheng Hua (Nanjing) 2016
for contributions to multimedia content analysis and image search

Jianwei Huang (Hong Kong) 2016
for contributions to resource allocation in wireless systems

Jie Huang (Hong Kong) 2005
for contributions to nonlinear control theory and applications.

Jiwu Huang (Beijing) 2016
for contributions to multimedia data hiding and forensics

Qiang Huang (Beijing) 2016
for contributions to the design and control of biped robots

Qing-An Huang (Nanjing) 2016
for contributions to modeling and packaging of microsensors and microactuators

Tiao-Yuan Huang* (Taipei) 1995
for invention and demonstration of fully-over-lapped lightly-doped-drain MOS transistors.

Yennun Huang (Taipei) 2012
for contributions to fault tolerant and failure avoidance software

Shu Yuen Hui (Hong Kong) 2003
for contributions   to power electronic circuits and modeling techniques.

Chang Hwang (Seoul) 2002
for contributions to, and leadership in, device and process technologies for high density memories.

Wei Hwang* (Taipei) 2001
for contributions to high density cell technology and high speed Dynamic Random Access Memory design.

Dong-Seok Hyun* (Seoul) 2003
for contributions to the design, analysis, and implementation of high performance power conversion systems and for leadership in power electronics education.

Kenji Iba (Tokyo) 2004
for contributions to the control and planning technology of voltage/reactive power.

Eishi Ibe (Tokyo) 2008
for contributions to neutron-induced soft-error analysis for semiconductor memory devices

Makoto Ibuka* (Tokyo) 1995
for contributions to, and leadership in, the development of superconducting quantum devices and their application to precise measurement.

Tadao Ichikawa* (Hiroshima) 1988
for contributions to semantic databases.

Mei-Kei Ieong (Hong Kong) 2015
for leadership in development of advanced complementary metal-oxide-semiconductor device technologies

Kenichi Iga* (Tokyo) 1987
for contributions to lightwave transmission and integrated optical devices including surface emitting semiconductor lasers and planar microlenses.

Toshio Iguchi (Tokyo) 2014
for contributions to spaceborne meteorological instruments and radar

IEEE FELLOWS - ASIA PACIFIC REGION

Hirokazu Ihara* (Tokyo) 1991
for leadership in and the development of decentralized control systems and fault-tolerant computers.

Takashi Iida* (Tokyo) 2001
for contributions and leadership in satellite communications systems.

Hiroaki Ikeda* (Tokyo) 2003
for contributions to RF power generation using MOS field effect transistors and leadership in the development of RF power technologies.

Hiromasa Ikeda* (Tokyo) 1992
for contributions to and leadership in the development of digital switching systems and technologies.

Hisatoshi Ikeda* (Tokyo) 1999
for contributions to the development of high voltage gas circuit breakers.

Katsuo Ikeda* (Kansai) 2006
for contributions and leadership in informatics education.

Masao Ikeda* (Kansai) 2004
for contributions to the theory of large scale systems and decentralized control.

Shuji Ikeda (Tokyo) 2004
for contributions to the development and manufacturing of static random access memory.

Yoshikazu Ikeda* (Kansai) 1992
for contributions to the multinational development of an advanced signaling system for international telecommunications services.

Katsushi Ikeuchi (Tokyo) 1998
for contributions to the advancement of robot vision technology.

Hiroyoshi Ikuno* (Fukuoka) 2002
for contributions to the development of new numerical methods and asymtotic techniques in computational electromagnetics.

Hajime Imai* (Tokyo) 1997
for contributions to the development of laser diodes for optical transmission systems.

Hideki Imai* (Tokyo) 1992
for contributions to the theory of coded modulation and two-dimensional codes.

Koichi Inada* (Tokyo) 1994
for contributions to the development of low-loss, high reliability optical fiber and cables

Naoki Inagaki* (Nagoya) 2006
for contributions to array antenna design.

Barry Inglis* (New South Wales) 1995
for fundamental contributions in advancing the science of precise ac-dc transfer metrology.

Hiroaki Inoue (Tokyo) 2005
for contributions to semiconductor optical switches and modulators.

Takeshi Inoue* (Tokyo) 2008
for contributions to bulk wave piezoelectric devices and applications

Yuji Inoue* (Tokyo) 2002
for contributions to the development of technologies for Integrated Services Digital Network (ISDN) networking architecture and multimedia networks.

Masao Iri* (Tokyo) 1989
for contributions to theory of networks and its applications to circuit and system design.

Koichiro Ishibashi (Tokyo) 2005
for technical contributions to developments of low-power static random access memories.

Tadao Ishibashi (Tokyo) 2005
for contributions to high-speed and optoelectronic semiconductor devices.

Hisao Ishibuchi (Kansai) 2014
for contributions to evolutionary multiobjective optimization and fuzzy rule-based classifier design

Osami Ishida (Nagoya) 2002
for leadership in research and development of microwave devices for mobile communication.

Toru Ishida (Kansai) 2002
for contributions to autonomous agents and multiagent systems.

Osamu Ishihara* (Nagoya) 1998
for contributions to the discovery of the quasilinear mechanism turbulent heating and the understanding of collective effects of wave-particle interaction in plasma turbulence.

Masaru Ishii (Tokyo) 2004
for contributions to improvement of lightning performance of power lines and to the standardization of the measurement of lightning impulse voltages.

Rokuya Ishii* (Tokyo) 1997
for contributions to the theory of and applications to digital signal processing.

Hiroshi Ishikawa (Tokyo) 2002
for contributions to semiconductor and new material lasers.

Kazunari Ishimaru (Tokyo) 2014
for contributions to static random access memory and complementary metal-oxide semiconductor devices

Hiroshi Ishiwara (Tokyo) 2001
for contributions to Si-based heterostructure devices and ferroelectric memories.

Fumitada Itakura* (Nagoya) 2003
for pioneering contributions to speech processing.

Koichi Ito* (Tokyo) 2005
for contributions to the development of antennas for mobile communications and medical applications.

Kiyohiko Itoh* (Sapporo) 2003
for contributions to the development of small antennas and their applications.

Kiyoo Itoh* (Tokyo) 1996
for seminal and sustained contributions to high-density DRAMs.

Hiroshi Iwai* (Tokyo) 1997
for contributions to ultra-small geometry CMOS BiCMOS devices

Makoto Iwasaki (Nagoya) 2015
for contributions to fast and precise positioning in motion controller design

Shun-Ichi Iwasaki* (Sendai) 1984
for contributions to the development of magnetic high-density recording technology.

Tatsuo Izawa* (Tokyo) 1999
for contributions to the development of optical fiber fabrication and planar optical waveguide devices.

Takehiro Izumi* (Tokyo) 1996
for leadership in the planning and institution of direct broadcasting by satellite and the development of channeling plan for such broadcasting.

Masayuki Izutsu* (Tokyo) 2004
for contributions to integrated optics and broad-band guided-wave light modulators.

Chennupati Jagadish (Australian Capital Terr) 2002
for contributions to III-V compound semiconductor optoelectronic device integration.

Abbas Jamalipour (New South Wales) 2007
for contributions to next generation networks for traffic control

Graeme James* (New South Wales) 1991
for contributions to geometrical theory of diffraction and mode-matching techniques for corrugated waveguides and horns.

Matthew James (Australian Capital Terr) 2002
for contributions to the theory of robust control design for nonlinear systems.

Mu-Der Jeng (Taipei) 2007
for applications of Petri nets to semiconductor manufacturing automation

Yoon-Ha Jeong* (Taegu) 2012
for the development of single-electron and high-electron mobility transistors

Ashok Jhunjhunwala (Madras) 2009
for leadership in development of cost-effective telecommunications in remote areas

Xiaohua Jia (Hong Kong) 2013
for contributions to distributed computing systems and multicast communications

Weihua Jiang (Shin-Etsu) 2014
for contributions to repetitive pulsed power generation utilizing solid-state device technology

Ya-Qiu Jin (Shanghai) 2004
for contributions to an electromagnetic scattering model for remote sensing applications.

Richard Jones (New Zealand South) 2015
for contributions to human performance engineering and neurorehabilitation

Jing-Yang Jou (Taipei) 2005
for contributions to the computer aided design of digital circuits.

Michio Kadota (Sendai) 2009
for contributions to surface acoustic wave devices

Yukio Kagawa* (Sendai) 1986
for the development of the finite and boundary element methods and their applications to acoustic simulation.

Shivkumar Kalyanaraman (Bangalore) 2010
for contributions to traffic management in computer communication networks

Pooi-Yuen Kam (Singapore) 2010
for contributions to receiver design and performance analysis for wireless communications

Hisao Kameda (Tokyo) 2008
for contributions to performance optimization methods for information processing systems

Michitaka Kameyama* (Sendai) 1997
for contributions to the development of multiple-valued intelligent integrated systems.

Kenzo Kamiyama* (Tokyo) 2001
for contributions to the development of digital motor drives and their applications.

Makoto Kaneko (Kansai) 2006
for contributions to design, sensing, and manipulation schemes for robotic hands.

Sung Mo Kang* (Daejeon) 1990
for technical contributions to and leadership in the development of computer-aided design of very-large-scale integrated (VLSI) circuits and systems.

Mohan Kankanhalli (Singapore) 2014
for contributions to multimedia content processing and security

Y. Karasawa* (Tokyo) 2010
for contributions to the measurement and modeling of propagation effects in radio communication systems

Nikola Kasabov (New Zealand North) 2010
for the applications of neural networks and hybrid systems in computational intelligence

Junzo Kasahara (Tokyo) 2009
for contributions to submarine seismic technology

Akinobu Kasami* (Tokyo) 1996
for contributions to, and technical leadership of, the development of red and green LED's and red visible laser diodes

Akihiko Kasukawa (Tokyo) 2008
for contributions to high power semiconductor lasers as pump sources for optical amplifiers

Takashi Katagi* (Tokyo) 1994
for contributions to the theory of reflector and horn antennas, as applied to communication satellites.

Shigeru Katagiri (Kansai) 2001
for contributions to discriminative learning theory and its applications to speech recognition.

Shoei Kataoka* (Tokyo) 1984
for contributions to the field of compound semiconductor devices

Teruo Kataoka* (Tokyo) 1992
for contributions to the theory f rotating machines and the application of power electronics to drives.

Masakazu Kato (Tokyo) 2002
for contributions to the development of electric power network operation systems using artificial intelligence technologies.

Nei Kato (Sendai) 2013
for contributions   to satellite systems and network intrusion detection

Shuzo Kato* (Tokyo) 2000
for contributions to satellite and personal communications systems.

Masao Kawachi (Tokyo) 2002
for contributions to optical fiber communications using silica-based optical fibers and planar lightwave circuits.

Haruo Kawahara* (Tokyo) 1999
for developments and commercialization of computer control and operation of power generation plants.

Takayuki Kawahara (Tokyo) 2007
for contributions to low-voltage low-power random access memory circuits

Shoji Kawahito (Nagoya) 2009
for contributions to sensor interfacing, sensor signal processing and multiple-level signaling

Kensuke Kawai* (Tokyo) 2003
for contributions to human-machine systems for computerized power-plant automation.

Shojiro Kawakami* (Sendai) 1990
for contributions to the development of optical fibers and microoptic components.

Hirohisa Kawamoto* (Kansai) 1992
for contributions to materials, device, and systems technologies for the use of video systems.

Atsuo Kawamura (Tokyo) 2002
for contributions to real-time digital feedback control of PWM inverters and its application to UPS.

Tatsuo Kawamura* (Tokyo) 1991
for leadership in high-voltage engineering of substations and transmission components

Tetsuya Kawanishi (Tokyo) 2013
for contributions to high-speed and precise lightwave modulation technologies

Rodney Kennedy (Australian Capital Terr) 2005
for contributions to processing for nearfield arrays and equalization indigital communications.

Ming-Dou Ker (Taipei) 2008
for contributions to electrostatic protection in integrated circuits, and performance optimization of VLSI micro-systems

Sergey Kharkovsky (New South Wales) 2011
for contributions to microwave techniques for the evaluation of materials and structures

Masatsuga Kidode* (Kansai) 2006
for contributions to high-speed local parallel image processors.

Takamaro Kikkawa (Hiroshima) 2010
for contributions to interconnect technologies for integrated circuits

Kazuro Kikuchi (Tokyo) 2013
for contributions to coherent optical communication systems

Bumman Kim* (Taegu) 2007
for contributions to linear power amplifiers, gallium arsenide microwave and millimeter-wave power devices and monolithic microwave integrated circuits

Byoung Kim (Daejeon) 1999
for contributions to the theory and practice of fiber optic devices, including few-mode devices, for telecommunications and sensing applications.

Changhyun Kim (Seoul) 2011
for contributions to low voltage, high performance, high density memory design

Jong-Hwan Kim (Daejeon) 2009
for contributions to evolutionary algorithms

Joungho Kim (Daejeon) 2016
for contributions to modeling signal and power integrity in 3D integrated circuits

Kiho Kim (Seoul) 2011
for contributions to microelectromechanical systems

Kinam Kim (Seoul) 2003
for contributions to the development of high-density dynamic random access memory.

Yongmin Kim (Daejeon) 1996
for the development of new techniques in medical imaging, computer modeling of the human body, picture archiving and communication systems, and the transfer of novel technology to

Youngky Kim (Seoul) 2015
for leadership in mobile communication systems

Tsunenobu Kimoto (Kansai) 2015
for contributions to silicon carbide materials and devices

Hidenori Kimura* (Tokyo) 1990
for contributions to the theory of robust linear multivariable control systems.

Shin-I Kimura (Tokyo) 2011
for contributions to advanced stack memory cells for high density dynamic randon access memories

Tatsuya Kimura* (Tokyo) 1987
for contributions to advanced optical fiber transmission including long wavelength and coherent optical systems, as well as the characterization of optical devices and fibers.

Kozo Kinoshita* (Kansai) 1995
for contributions to testing methods for memory and logic circuits

Katsumi Kishino (Tokyo) 2016
for contributions to III-V light emitter technology

Nobuhik Kitawaki* (Tokyo) 2005
for contributions to speech quality assesment for low bit rate encoders and associated standards.

Kenichi Kitayama* (Nagoya) 2003
for contributions to optical fiber communications, radio-on-fiber communications, and photonic networks.

Makoto Kitazawa* (Tokyo) 1993
for contributions to the development of television broadcasting transmitters and for leadership in the development of all solid-state high-power television transmitters.

Kuniji Kito* (Nagoya) 1995
for contribution to the research and development of extra-high-strength suspension insulators for high-voltage power transmission.

Yukio * (Nagoya) 1994
for contributions to the research and development of high-power engineering, especially heavy current interruption phenomena.

Masaru Kitsuregawa (Tokyo) 2013
for contributions to high performance database technology

Hitoshi Kiya (Tokyo) 2016
for contributions to filter structure, data hiding, and multimedia security

W Kleijn (New Zealand Central) 1999
for contributions to modeling the spectral fine structure of speech and its application to low-rate speech coding.

Sung Jea Ko (Seoul) 2012
for contributions to digital camera technologies

Hisato Kobayashi* (Tokyo) 2002
for contributions to the research field of human-robot interactive communication.

Kingo Kobayashi* (Tokyo) 2003
for contributions to the theory of finitary information systems.

Kohroh Kobayashi* (Tokyo) 1996
for contributions to the development of high performance long wavelength semiconductor lasers and other optoelectronics devices for optical fiber communications.

Misao Kobayashi* (Tokyo) 1997
for contributions to development and production of Metal Oxide Gapless Surge Arrester.

Sumio Kobayashi* (Tokyo) 2000
for contributions to the development of advanced high voltage light-fired thyristors.

Takao Kobayashi (Tokyo) 2017
for contributions to expressive speech synthesis based on a statistical parametric approach

Tetsuro Kobayashi* (Kansai) 2006
for contributions to ultrafast optoelectronics and electrooptic devices.

Yoshio Kobayashi* (Tokyo) 1999
for contributions to the analysis of dielectric resonators and their applications to material measurements and filter designs.

V Prasad Kodali* (Hyderabad) 1980
for leadership in the planning of radar development.

IEEE FELLOWS - ASIA PACIFIC REGION

Shinzo Kodama* (Kansai) 1995
for contributions to research and education in systems and control theory.

Toshio Koga (Tokyo) 2003
for contributions to video compression technologies based on motion compensation and for the development of digital television transmission equipment and systems.

F Kohli* (Bombay) 1976
for leadership, planning, control technology, and management of efficient and reliable power systems.

Ryuji Kohno (Tokyo) 2012
for contributions to spread spectrum and ultra wideband technologies and applications

Keiji Kojima* (Tokyo) 1988
for contributions to the development and application of extra-high-voltage power cables.

Yasuo Kokubun (Tokyo) 2010
for contributions to integrated photonic devices

Hiroyoshi Komiya* (Kansai) 1996
for contributions to the development and operation of a fully automated semiconductor manufacturing line.

Hiroshi Kondoh* (Tokyo) 2015
for contributions to microwave and millimeter wave MMIC technologies

Israel Korn* (New South Wales) 1994
for contributions to the analysis of digital communication systems

Masamit Kosaki* (Nagoya) 1998
for contributions to the understanding of electrical insulation characteristics of polymers in the cryogenic temperature region and the development of extruded polymer insulated

Masanori Koshiba* (Sapporo) 2003
for contributions to the modeling of optical wave propagation in photonics devices.

Kazuhiro Kosuge (Sendai) 2006
for contributions to multiple robots coordination and human-robot interface.

Alex Kot (Singapore) 2006
for contributions to performance analysis systems and jammer suppression in communication systems.

Dwarkad Kothari (Bombay) 2011
for contributions in electrical engineering education

Youji Kotsuka* (Tokyo) 2006
for contributions to ferrite application to RF/microwave devices.

Shiban Koul (Delhi) 2010
for contributions to analysis and design of microwave and millimeter wave components and circuits

Fumio Koyama (Tokyo) 2008
for contributions to semiconductor optical devices for broadband optical communications

Mitsumasa Koyanagi* (Sendai) 1997
for the invention of the stacked capacitor DRAM cell.

Raghuram Krishnapuram (Bangalore) 2006
for contributions to soft computing for computer vision and media mining.

Keiichi Kubota (Tokyo) 2008
for contributions to HDTV compression and transmission systems

Anurag Kumar (Bangalore) 2006
for contributions to communication networks and distributed computing systems.

PVijay Kumar (Bangalore) 2002
for contributions to the theory of error-correcting codes and low correlation sequence design.

Tsuneo Kume* (Fukuoka) 2005
for contributions to high-performance ac motor drives.

Tosiyasu Kunii* (Tokyo) 1991
for contributions to visual computer and visual computation.

Hao-Chung Kuo (Taipei) 2015
for contributions to light emitting diodes and vertical cavity surface emitting lasers

James Kuo (Taipei) 2000
for contributions to modeling CMOS VLSI devices.

JenTsai Kuo (Taipei) 2014
for contributions to planar microwave components and numerical electomagnetics

Sy-Yen Kuo (Taipei) 2001
for contributions to dependable computing and software reliability engineering.

Tei-Wei Kuo (Taipei) 2011
for contributions to real-time embedded systems and flash-memory storage systems

Way Kuo (Hong Kong) 1992
for contributions to design for reliability in engineering education

Mamoru Kurata* (Tokyo) 1989
for contributions to semiconductor device modeling, for design and optimization of high-power silicon gate turnoff thyristors and GaAlAs/GaAs heterojunction bipolar transistors.

Tadahiro Kuroda (Tokyo) 2006
for contributions to low-power and high-speed very large scale integrated (VLSI) design.

Fujio Kurokawa (Fukuoka) 2011
for contributions to switching power converter control

K Kurokawa* (Tokyo) 1974
for contributions to microwave solid-state circuits, oscillators, and devices.

Noriyoshi Kuroyanagi* (Tokyo) 1990
for contributions to high-speed PCM and technical leadership in communications research.

Jun-Ichi Kushibiki* (Sendai) 2010
for contributions to ultrasonic metrology and acoustic microscopy

Hideo Kuwahara* (Tokyo) 2006
for contributions to high capacity optical fiber communication technologies.

Masaaki Kuzuhara (Nagoya) 2005
for contributions to Group III-V microwave power devices.

Hoi-Sing Kwok* (Hong Kong) 2003
for pioneering research in liquid crystal display technology.

Yu Kwong Kwok (Hong Kong) 2014
for contributions to resource scheduling algorithms in parallel and distributed systems

Wook Kwon* (Seoul) 1999
for contributions to the control and stability analysis of delay systems.

Sam Kwong (Hong Kong) 2014
for contributions to optimization techniques in cybernetics and video coding

Kazuo Kyuma (Tokyo) 1997
for contributions to optical information processing including optical neuro-chip and artificial retina chips.

Chong Kyung (Daejeon) 2009
for contributions to system on chip processors

WEN LI (Hong Kong) 2011
for contributions to the advancement of image and video coding

Yen-Shin Lai (Taipei) 2014
for contributions to power converters and motor drives controlled by pulse width modulation

Edmund Lam (Hong Kong) 2015
for contributions to modeling and computational algorithms in imaging applications

James Lam (Hong Kong) 2012
for contributions to analysis and synthesis of control systems

Roy Lang* (Tokyo) 1994
for contributions to the development of optoelectronic devices and materials.

Kei May Lau (Hong Kong) 2001
for contributions to III-V compound semiconductor heterostructure materials and devices.

Kin Lau (Hong Kong) 2012
for contributions to wireless communication systems with channel feedback

Byeong Lee* (Seoul) 1997
for contributions to digital transform and filtering, to broadband telecommunications, and to digital scrambling.

Byoungho Lee (Seoul) 2014
for contributions to diffractive optics and three-dimensional display technologies

Chang-Hee Lee (Daejeon) 2010
for contributions to wavelength division multiplexed-passive optical network

Ching-Ting Lee (Tainan) 2009
for contributions to galium nitride-based optoelectronic and electronic devices

Choong Lee* (Seoul) 1989
for contributions to research and development of superwide-band AM, FM demodulators, medical electronics, and engineering education.

Der Tsai Lee* (Taipei) 1992
for contributions to computational geometry and design and analysis of algorithms.

Elhang Lee* (Seoul) 2003
for contributions to optical devices for communication.

Inkyu Lee (Seoul) 2016
for contributions to multiple antenna systems for wireless communications

Jae Hong Lee (Seoul) 2011
for contributions to high-speed wireless communication systems

Jay Lee (Daejeon) 2011
for contributions to model-based predictive control applications

Jong Ho Lee (Seoul) 2016
for contributions to development and characterization of bulk multiple-gate field effect transistors

Kwang Bok Lee (Seoul) 2011
for contributions to wireless communication systems

Kwyro Lee (Daejeon) 2014
for management and R&D leadership in semiconductor technology

IEEE FELLOWS - ASIA PACIFIC REGION

Lin-Shan Lee (Taipei) 1993
for contributions to computer voice input/output techniques for Mandarin Chinese and to engineering education.

Richard Lee (Taipei) 1989
for contributions to computer engineering education.

Sanghoon Lee (Daejeon) 2000
for contributions to ATM technology, broadband networks, and to the opening of packet video field.

Seong-Whan Lee (Seoul) 2010
for contributions to pattern recognition for biometrics and document image analysis

Shi-Wei Lee (Hong Kong) 2008
for contributions to solder joint reliability and the development of three dimensional packaging technologies

Si-Chen Lee (Taipei) 2002
for contributions to heterojunction bipolar transistor technology in low noise and high gain applications.

Sukhan Lee* (Seoul) 1998
for contributions to human-machine systems and intelligent robots through development of teleoperator control systems and neural networks.

Sung-Ju Lee (Daejeon) 2013
for contributions to algorithms for routing, multicasting, and interference mitigation in wireless local area networks

Ta Sung Lee (Taipei) 2016
for leadership and contributions in communication systems and signal processing

Tony Lee (Shanghai) 2005
for contributions to high-speed scalable packet switching technology for broadband telecommunications networks..

Tsu-Tian Lee (Taipei) 1997
for contributions to the analysis and control of walking robots and leadership in robotics engineering education.

Yong Lee (Daejeon) 2008
for contributions to photonic devices based upon vertical cavity surface emitting lasers and photonic crystals

Shaw-Min Lei (Taipei) 2006
for contributions to video and image coding standards.

Khaled Letaief (Hong Kong) 2003
for contributions to the analysis, design, and performance evaluation of high-speed wireless communication systems

Kwok Wa Leung (Hong Kong) 2011
for contributions to the development of the dielectric resonator antenna

Bo Li (Hong Kong) 2011
for contributions to content distribution via the internet

Er Li (Singapore) 2008
for contributions to electromagnetic modeling and simulation in high speed electronics

Haizhou Li (Singapore) 2014
for leadership in multilingual speaker and language recognition

Han-Xiong Li (Hong Kong) 2011
for contributions to distributed shared memory, cluster communication, and deduplication storage systems

Pai-Chi Li (Taipei) 2008
for contributions to ultrasonic imaging technologies

Ping Li (Hong Kong) 2010
for contributions to iterative signal processing, multi-user detection and concatenated error control codes

Shaoqian Li (Chengdu) 2016
for leadership in development of broadband wireless networks

Shipeng Li (Beijing) 2011
for contributions to applications of fuzzy logic control

Shuo-Yen Li (Hong Kong) 2007
for contributions to network coding and switching theories

Stan Li (Beijing) 2009
for contributions to face recognition, pattern recognition and computer vision

Victor Li (Hong Kong) 1992
for contributions to the design and analysis of communications networks.

Xuelong Li (Xian) 2012
for contributions to pattern recognition and its applications in multimedia signal processing

Yanda Li* (Beijing) 2013
for contributions to research and education in signal processing and bioinformatics

Zexiang Li (Hong Kong) 2008
for contributions to robotic manipulation, nonholonomic motion planning and workpiece utilization

Zhiwu Li (Xian) 2016
or contributions to Petri nets and their applications to automated manufacturing systems

Yong Lian (Shanghai) 2009
for contributions to the design of low-power high-performance digital filters

Shunlin Liang (Beijing) 2013
for contributions to remote sensing from satellite observations

Tsorng-Juu Liang (Tainan) 2016
for contributions to power conversion for lighting and sustainable energy

Ying-Chang Liang (Singapore) 2011
for contributions to cognitive radio communications

Hong-Yuan Liao (Taipei) 2013
for contributions to image and video forensics and security

Wanjiun Liao (Taipei) 2010
for contributions to communication protocols in multimedia networking

Soung Liew (Hong Kong) 2012
for contributions to wireless communications and networking

Yong-Ching Lim (Singapore) 2000
for contributions to the design of FIR digital filters.

Bao-Shuh Lin* (Taipei) 2007
for leadership in technology and industry development of broadband information network and digital video

Burn Lin* (Taipei) 2003
for contributions to lithography theory, tooling, masks, and fabrication technology.

Chih-Jen Lin (Taipei) 2011
for contributions to support vector machine algorithms and software

Chih-Min Lin (Taipei) 2010
for contributions to fuzzy system, neural network, and cerebellar model articulation controllers

Chin Teng Lin (New South Wales) 2005
for contributions to biologically inspired information Systems.

Ching Fuh Lin (Taipei) 2010
for contributions to broadband semiconductor optical devices

Jason Yi-Bing Lin (Taipei) 2003
for contributions to the design and modeling of mobile telecommunications networks and leadership in personal communications services education.

Kwang-Lung Lin (Tainan) 2011
for contributions to development of lead-free solder alloys and material interactions

Weisi Lin (Singapore) 2016
for contributions to perceptual modeling and processing of visual signals

Xuemin Lin (New South Wales) 2016
for contributions to algorithmic paradigms for database technology

Ying-Dar Lin (Taipei) 2013
for contributions to multi-hop cellular communications and deep packet inspection

Bin-Da Liu* (Tainan) 2006
for contributions to very large scaled integrated (VLSI) processors for neural networks and video signal processing.

Chao-Han Liu* (Taipei) 1981
for contributions to the analysis of nonlinear circuits and systems

Cheng-Lin Liu (Beijing) 2015
for contributions to handwritten document analysis

Chih-Wen Liu (Taipei) 2013
for applications of phasor measurements to fault location and dynamics monitoring in power networks

Derong Liu (Beijing) 2005
for contributions to nonlinear dynamical systems and recurrent neural networks.

Guoping Liu (Harbin) 2011
for contributions to networked control systems

Jane Liu* (Taipei) 1995
for contributions to real-time task scheduling methods for computing systems.

Jiming Liu (Hong Kong) 2011
for contributions to web intelligence and multi-agent autonomy-oriented computing

Ruey Wen Liu* (Shanghai) 1981
for contributions to wave propagation in the ionosphere and to engineering education.

Shen-Iuan Liu (Taipei) 2010
for contributions to high-speed phase-locked and delay-locked loop circuit design

Sheng Liu (Wuhan) 2014
for leadership in engineering development of LED packaging

Yun-Hui Liu (Hong Kong) 2009
for contributions to robotic multi-fingered grasping and adaptive visual servo systems

Yunhao Liu (Beijing) 2015
for contributions to wireless sensor networks and systems

Zhen Liu (Beijing) 2007
for contributions to evaluation and optimization of parallel and distributed systems

Nigel Lovell (New South Wales) 2011
for contributions to medical device technologies including telehealth systems and visual prostheses

Teck-Seng Low (Singapore) 2001
for leadership in the development of technology for magnetic data storage.

Arthur Lowery (Victorian) 2009
for leadership in computer modeling of optical communication systems

Chan-Nan Lu (Tainan) 2008
for contributions to power delivery and to power engineering education

Chih-Yuan Lu* (Taipei) 1995
for contributions to semiconductor technology, and for leadership in the growth of the Taiwan integrated circuit industry

Jianhua Lu (Beijing) 2015
for contributions to the theory and engineering applications of wireless transmission technologies

Jinhu Lu (Beijing) 2013
for contributions to complex networks and nonlinear circuits and systems

Nicky Lu (Taipei) 1991
for contributions to semiconductor memory design and technology.

Qiang Lu* (Beijing) 2003
for contributions to optimal control theory applications in power systems.

Shih-Lien Lu (Taipei) 2016
for contributions to low-voltage microarchitecture and approximate computing

John C. S. Lui (Hong Kong) 2010
for contributions   to performance   modeling and analysis of storage communication systems and peer-to-peer networks

Kwai-Man Luk (Hong Kong) 2003
for contributions to the development of wideband microstrip patch antennas and dielectric resonator antennas.

Ren-Chyuan Luo* (Taipei) 1992
for contributions to intelligent sensors and robotics.

Howard Luong (Hong Kong) 2014
for contributions to CMOS radio-frequency transceiver design

Michael Rung-Tsong Lyu (Hong Kong) 2004
for contributions to software reliability engineering and software fault tolerance.

HELEN MENG (Hong Kong) 2013
for contributions to spoken language and multimodal systems

JAEKYUN MOON (Daejeon) 2005
for contributions to signal processing and coding for magnetic recording.

Jian-Guo Ma (Beijing) 2016
for leadership in microwave electronics and RFIC applications

Kai-Kuang Ma (Singapore) 2013
for contributions to image processing and digital video coding

Wei-Ying Ma (Beijing) 2011
for contributions to multimedia information retrieval

Yi Ma (Shanghai) 2013
for contributions to computer vision and pattern recognition

Mohammad Madihian (Nagoya) 1998
for contributions to the design and development of microwave as well as millimeter-wave solid state monolithic integrated circuits for personal computing and wireless networking systems.

Hisaaki Maeda* (Tokyo) 2002
for contributions to the theory of floating structures and wave energy absorption.

Souvik Mahapatra (Bombay) 2016
for contributions to CMOS transistor gate stack reliability

Naoki Maki* (Tokyo) 1997
for contributions to the development of superconducting generators and magnetically levitated systems.

Mitsuo Makimoto* (Tokyo) 2003
for contributions to the development of microwave and radio frequency devices.

Tsugio Makimoto* (Tokyo) 1997
for leadership in the development and production of MOS integrated circuits and memory.

Shinichi Makino* (Tokyo) 1994
for leadership in the research and development of multipath signal suppression techniques employed in television equipment.

Shoji Makino (Tokyo) 2004
for contributions   to adaptive filtering technologies   and the realization of acoustic echo cancellation.

Ranjan Mallik (Delhi) 2012
for contributions to channel characterization in wireless communication systems

Kim Man (Hong Kong) 2009
for contributions to evolutionary optimization in industrial electronics

Jonathan Manton (Victorian) 2016
for contributions to geometric methods in signal processing and wireless communications

Jun Fa Mao (Shanghai) 2012
for contributions to interconnects and passive components in integrated circuits and systems

Iven Mareels (Victorian) 2001
for contributions to the analysis, design and implementation of adaptive systems.

Rikio Maruta* (Tokyo) 1993
for contributions to the practical application of digital signal processing techniques for telecommunications systems through the development of algorithms and DSP LSI chips.

Akira Masaki* (Tokyo) 1994
for contributions to integrated technologies for high-performance computer logic.

Kenichi Mase* (Tokyo) 2005
for contributions to communications network traffic control.

Toshiaki Masuhara* (Tokyo) 1994
for contributions in the invention and development of NMOS circuits and high-speed CMOS static memories.

Fujio Masuoka* (Sendai) 1995
for invention of the Flash memory and pioneering work in the area.

Nobuyuki Matsui* (Nagoya) 2002
for contributions to the theory and practice of control of AC mot drives.

Hiroshi Matsumoto (Kansai) 2003
for contributions to the understanding of waves in nonlinear plasmas and microwave power transmission.

Tadashi Matsumoto (Nagoya) 2010
for contributions to signal processing for wireless communications

Takashi Matsumoto* (Tokyo) 1985
for pioneering contributions to nonlinear circuit theory.

Shinji Matsuo (Tokyo) 2016
for contributions to heterogeneous integration of semiconductor lasers

Kouki Matsuse* (Tokyo) 1996
for contributions to sensorless control of induction motors and adjustable speed ac drives.

Yuichi Matsushima (Tokyo) 2012
for contributions to semiconductor optical devices for transoceanic optical undersea cable systems

Yasuo Matsuyama* (Tokyo) 1998
for contributions to learning algorithms with competition.

Akira Matsuzawa (Tokyo) 2002
for contributions to high-speed A/D converters and mixed-signal integrated circuits

Janina Mazierska* (Northern Australia) 2005
for contributions to measurements of high temperature superconducting and dielectric materials.

Hugh Mcdermott (Victorian) 2012
for contributions to improved sound-processing techniques for cochlear implants and hearing aids

Hong Mei (Beijing) 2015
for contributions to software architecture and component-based software engineering

Shengwei Mei (Beijing) 2015
for contributions to power systems robust control and complexity analysis

Max Qing Hu Meng (Hong Kong) 2008
for contributions to medical robotics

Richard Middleton (New South Wales) 1999
for contributions to control theory and applications.

Katsumi Midorikawa (Tokyo) 2007
for contributions to generation of intense coherent soft x-ray radiation

Masatoshi Migitaka* (Tokyo) 2000
for contributions to research and development of silicon high temperature integrated circuits.

Tetsuya Miki* (Tokyo) 2000
for contributions to optical transmission systems and Fiber-To-The-Home.

Yoshihiko Mikuni* (Tokyo) 1997
for contributions to TV broadcasting and receiving antennas.

Anthony Milne (New South Wales) 2011
for leadership in remote sensing applications

Takashi Mimura* (Tokyo) 1993
for contributions to semiconductor devices and the demonstration of the high electron mobility transistor (HEMT).

Yinghua Min* (Beijing) 1997
for technical leadership in electronic testing and fault-tolerant computing.

Robert Minasian (New South Wales) 2003
for contributions to photonic signal processing of microwave signals.

Sushmita Mitra (Kolkata) 2012
for contributions to neuro-fuzzy and hybrid approaches in pattern recognition

Tsuneo Mitsui* (Tokyo) 1989
for contributions to power system operations and research and development activities.

Yoshima Miura (Shin-Etsu) 2003
for contributions and leadership in research and development of high-density magnetic storage technology.

Mitiko Miura-Mattausch (Hiroshima) 2007
for contributions to nanoscale metal oxide semiconductor field effect transistor compact modeling

Hideo Miyahara* (Kansai) 1997
for contributions to modeling and performance evaluation of computer communication networks.

Makoto Miyake (Tokyo) 2003
for contributions to the development of error-correction receivers and their applications to wireless communication terminals.

Kazuhiro Miyauchi* (Tokyo) 1987
for contributions to the development and application of high-speed digital transmission technology in communications.

Tetsuya Mizumoto (Tokyo) 2012
for contributions to waveguide optical nonreciprocal devices for optical communications

Akira Mizuno (Nagoya) 2005
for the reduction of gaseous pollutants.

Koji Mizuno* (Sendai) 1993
for contributions to the development of electron devices for the short millimeter and submillimeter-wave regions.

Kunika Mizushima* (Tokyo) 1989
for contributions to the development of power-system control and high-voltage direct current transmission technology.

Takashi Mizutani* (Nagoya) 2009
for contributions to device physics, nanostructures and heterostructure devices

Teruyos Mizutani* (Nagoya) 1995
for contributions to the understanding and development of polymeric insulating materials.

Yukou Mochida* (Tokyo) 2004
for contributions to the development and deployment of digital transport system.

Hitoshi Mochizuki* (Tokyo) 1984
for contributions to maritime communications systems.

Tohru Mogami (Tokyo) 2012
for contribution to surface-channel pMOSFET and nanoscale transistor technology

Kaneo Mohri* (Nagoya) 1995
for contributions to the research and development of sensor-magnetic.

Philip Mok (Hong Kong) 2014
for contributions to the design of analog power-management integrated circuits

Hisayo Momose (Tokyo) 2005
for contributions to ultra-thin gate oxide metal oxide semiconductor fields effect transistors.

Vincent Morgan* (New South Wales) 1991
for contributions to the analysis of the thermal behavior of overhead power conductors.

Kinji Mori* (Tokyo) 1995
for contributions to distributed computer systems.

Norihiko Morinaga* (Kansai) 2001
for contributions to and leadership in the development of intelligent radio communication systems and broadband radio on fiber systems.

Akihiko Morino* (Tokyo) 2001
for contributions to the development of System-on-a-Chip for multimedia applications.

Takehiro Moriya (Tokyo) 2003
for contributions to speech compression and audio coding technologies and their standardization.

David Moss (New South Wales) 2016
for contributions to all-optical signal processing chips and commercial products for fibre optic communications

Stefan Mozar (New South Wales) 2015
for development of safety solutions for electronic equipment

Subhas Mukhopadhyay (New South Wales) 2011
for development of low-cost smart sensors and sensing systems

Koso Murakami* (Kansai) 2004
for contributions to switching technologies and systems for broadband communications networks.

Tokumichi Murakami* (Tokyo) 1999
for contributions to the research and development of image coding, signal processing and transmission technologies.

Kazuo Murano* (Tokyo) 2002
for contributions to the research and development of communications signal processing and DSP LSIs, and the standardization of ISDN user-network interface.

Hiroaki Muraoka (Sendai) 2008
for contributions to perpendicular magnetic recording and to recording heads and media

Hiroshi Murase (Nagoya) 2006
for contributions to image recognition and multimedia content monitoring systems.

Takuro Muratani* (Tokyo) 1994
for contributions to digital satellite communication system and to efficient use of the geostationary satellite orbit.

Ross Murch (Hong Kong) 2009
for contributions to multiple antenna systems for wireless communications

S Murthy* (Bangalore) 2013
for contributions to self-excited induction generators and renewable energy applications

Sivaram Murthy (Madras) 2012
for contributions to resource management in high performance real-time computing and communication systems

Y Mushiake* (Sendai) 1976
for contributions to linear antennas and self-complementary antennas

Shoji Nagasaki* (Kansai) 1993
for contributions to the development and application of high-voltage extruded solid dielectric power cables.

Minoru Nagata* (Tokyo) 1986
for contributions to the fields of integrated circuits and power transistors.

Tadao Nagatsuma (Kansai) 2015
for contributions to millimeter and terahertzwave communications using photonics

Malkondaiah Naidu (Hyderabad) 2006
for contributions to electrical machines and drives for automotive systems.

Katsuhiko Naito* (Nagoya) 1990
for contributions to research and development of high-voltage insulators.

Yoshinobu Nakagome (Tokyo) 2011
for pioneering development of low-voltage dynamic random access memory circuits and low-leakage complementary metal-oxide semiconductor circuits

Michiha Nakamura* (Tokyo) 1991
for contributions to the development and application of advanced semiconductor lasers.

Satoshi Nakamura (Kansai) 2016
for contributions to speech recognition and speech-to-speech translation

Tadao Nakamura* (Sendai) 2003
for contributions to pipelined computer architecture and computer engineering education.

Tohru Nakamura* (Tokyo) 1999
for contributions to the development of high-speed bipolar integrated circuits.

Yoshihiko Nakamura (Tokyo) 2011
for contributions to robotics

Yoshihisa Nakamura* (Sendai) 1998
for contributions and leadership in the field of high-density magnetic recording and the basic development of perpendicular magnetic recording.

Yukihir Nakamura* (Kansai) 2004
for contributions to very large scale integration synthesis methodologies.

Koichiro Nakanishi (Kansai) 1997
for contributions to the study of dc gas insulation and its application to high voltage switchgears.

Hisamatsu Nakano* (Tokyo) 1992
for contributions to the design of spiral and helical antennas.

Takao Nakano* (Kansai) 1995
for leadership in the development and early industrialization of VLSI DRAMs.

Masayuki Nakayama* (Tokyo) 2000
for contributions to the development and standardization of the 3.5 inch floppy disk drive system.

Wataru Nakayama* (Tokyo) 2003
for contributions to thermal science and engineering for electronic packaging.

Masataka Nakazawa (Sendai) 1995
for contributions to high-speed optical solution communication using erbium-doped fiber amplifiers, femtosecond lasers, and nonlinear fiber optics.

Seiichi Namba* (Tokyo) 2004
for contributions to integrated digital broadcasting systems.

Ashwini Nanda (Delhi) 2010
for leadership in high performance computer systems

Janardan Nanda* (Delhi) 2006
for contributions to power system analysis, stability and control.

Takashi Nanya* (Tokyo) 2002
for contribution to the theory and design of self-checking and asynchronous VLSI systems.

Koichi Nara* (Tokyo) 2011
for contributions to automation of power distribution systems

Yadati Narahari (Bangalore) 2008
for contributions to the design of manufacturing systems, supply chain networks, and electronic markets

Dragan Nesic (Victorian) 2008
for contributions to the analysis and control of networked nonlinear sampled-data systems

IEEE FELLOWS - ASIA PACIFIC REGION

Tony Ng* (Hong Kong) 2003
for contributions to signal processing techniques in spread spectrum communications.

King Ngan (Hong Kong) 2000
for contributions to the theory and applications of visual signal processing and communications.

Lionel Ni* (Macau) 1994
for contributions to parallel processing and distributed systems.

Zaiping Nie (Chengdu) 2013
for leadership in engineering and education in electromagnetics

Bin Ning (Beijing) 2014
for contributions to train operation control systems

Tamotsu Ninomiya* (Fukuoka) 2001
for contributions to the development of high-frequency switching power converters.

Kenji Nishi (Tokyo) 2001
for contributions to semiconductor process and device modeling and the development of software for their simulation.

Tetsuo Nishi* (Fukuoka) 1996
for contributions to linear and nonlinear circuit theory.

Shogo Nishida (Kansai) 1998
for contributions to emergency control schemes for stabilization of power systems and to power engineering education.

Akinori Nishihara* (Tokyo) 2003
for contributions to the theory and design of digital signal processing.

H Nishihara* (Kansai) 1993
for contributions to lightwave electronics, especially for integrated-optic devices and micro-optic components.

Tadashi Nishimura (Kansai) 2003
for leadership in the development of advanced CMOS devices and process technologies.

Shojiro Nishio* (Kansai) 2012
for contributions to data and knowledge management in database systems

Takao Nishitani* (Tokyo) 1998
for contributions to the development of LSI chip architectures on digital signal processors.

Susumu Nishiwaki* (Tokyo) 2002
for contributions to the understanding of high voltage switching phenomena.

J Nishizawa* (Sendai) 1969
for technical contributions to solid-state electronics, and leadership in related professional activities.

Taiji Nishizawa (Tokyo) 2002
for contributions to broadcast engineering.

Takao Nishizeki* (Sendai) 1995
for contributions to graph algorithms with applications to physical design of electronic systems.

Zhisheng Niu (Beijing) 2012
for contributions to collaborative radio resource management in wireless networks

Masaaki Niwa (Sendai) 2013
for contributions to CMOS technology using high dielectric constant materials and metal gate

Jong-Seon No (Seoul) 2012
for contributions to sequences and cyclic difference sets for communications algorithms

Sawaki Nobuhiko* (Nagoya) 2004
for contributions to the development of group III-nitride semiconductor materials and devices

Susumu Noda (Kansai) 2008
for contributions to photonic crystals and nanophotonics

Masaya Notomi (Tokyo) 2013
for leadership in the development of photonic crystals and applications

Hiroshi Nozawa (Tokyo) 2004
for contributions to nonvolatile semiconductor memories.

Anthony Oates (Taipei) 2012
for contributions to the engineering and understanding of interconnect reliability in integrated circuits

Minoru Obara* (Tokyo) 1999
for contributions to the development of high-power excimer lasers and soft x-ray lasers.

Hidehito Obayashi* (Tokyo) 2005
for contributions to critical dimension scanning electron microscopy..

Shunri Oda (Tokyo) 2012
for contributions to silicon quantum dot devices

Tetsuji Oda* (Tokyo) 2015
for contributions to electrostatics and high-pressure plasmas for environmental protection

Shinji Odanaka (Kansai) 2007
for contributions to numerical modeling and simulation of scaled complementary metal oxide semiconductor integrated circuit processes and devices

Hiroyo Ogawa (Tokyo) 2007
for contributions to microwave and millimeter-wave technology

Yasutaka Ogawa* (Sapporo) 2011
for contributions to estimation techniques and antenna signal processing

Yisok Oh (Seoul) 2009
for contributions to microwave remote sensing of soil moisture and surface roughness

Juro Ohga* (Tokyo) 2006
for research, development and standardization activity for electroacoustical transducers of telephony.

Takashi Ohira (Nagoya) 2004
for contributions to variable microwave signal processing circuits and antennas.

Kiyoshi Ohishi (Shin-Etsu) 2015
for contributions to development of fast and robust motion control systems

Yoshimichi Ohki* (Tokyo) 2000
for contributions to understanding of high-field and laser induced dielectric phenomena in insulating materials.

Tadahiro Ohmi* (Sendai) 2003
for contributions and leadership in semiconductor engineering.

Shingo Ohmori (Tokyo) 2005
for contributions to mobile satellite communication systems.

Yutaka Ohmori* (Tokyo) 2005
for contributions to the development of organic and semiconductor light emitting materials and devices.

Kouhei Ohnishi (Tokyo) 2001
for contributions to the development of disturbance observer and its applications to motion control.

Eiichi Ohno* (Tokyo) 1989
for contributions to and leadership in the development of power electronics and industrial control systems using microprocessors.

Naohisa Ohta (Tokyo) 2000
for contributions to the research and development of technologies and applications for high quality digital image and video communications.

Akira Ohte* (Tokyo) 1997
for contributions to and leadership in the development of a fully automatic nuclear quadrupole resonance thermometer and its application to precise temperature measurement.

Tatsuo Ohtsuki* (Tokyo) 1984
for contributions to circuit theory and computer-aided circuit analysis.

Katsunari Okamoto (Tokyo) 2003
for contributions to optical fiber technologies and wavelength-division-multiplexed communications.

Masahiro Okamura* (Tokyo) 1995
for contributions to research and development of high power semiconductor devices.

Shinji Okazaki* (Tokyo) 2005
for contributions to the resolution enhancement technology in optical and electron-beam lithography.

Eiji Oki (Tokyo) 2013
for contributions to high-performance packet switching and path computation technologies

Sakae Okubo* (Tokyo) 2011
for contributions to video coding and multimedia communication systems

Haruhiko Okumura (Tokyo) 2016
for contributions to image processing and display technologies

Hiroshi Okuno (Tokyo) 2012
for contributions to robot audition technology

Yasuhisa Omura (Kansai) 2010
for contributions of silicon on insulator devices technology, analysis, and modeling

Fumitaka Ono* (Tokyo) 1995
for contributions to the research and development of Markov source coding, and arithmetic codes and applications.

Beng Chin Ooi (Singapore) 2009
for leadership in data management technology

Y Oono* (Fukuoka) 1962
Unspecified

Ian Oppermann (New South Wales) 2012
for contributions to mobile communication systems

Kenichi Osada (Tokyo) 2016
for contributions to reliable and low-power nanoscale SRAM

Tetsuya Osaka (Tokyo) 2002
for contributions in the field of high-density magnetic recording

Taiichi Otsuji (Sendai) 2014
for contributions to plasmonic semiconductor integrated device technology for terahertz sensing

Kanji Otsuka* (Tokyo) 1998
for contributions to Ceramic Multilayer Substrate, IC and LSI Packaging Technology and Multichip Module Technology.

Kazuhiro Ouchi* (Tokyo) 2000
for contributions to the development of Co-Cr alloy based thin film magnetic recording media.

Yuzo Ozaki* (Tokyo) 1988
for contributions to insulation coordination and technology of high-current arcs in power transmission systems.

Venkata Padmanabhan (Bangalore) 2012
for contributions tonetworked and mobile computing systems

Nikhil Pal (Kolkata) 2005
for contributions to neural networks and fuzzy logic in pattern recognition.

IEEE FELLOWS - ASIA PACIFIC REGION

Sankar Kumar Pal* (Kolkata) 1993
for contributions to pattern recognition and image processing using fuzzy set theoretic methods.

Surendra Pal (Pune) 2004
for contributions to space-borne communication systems.

M Palaniswami (Victorian) 2012
for contributions to computational intelligence, learning systems, and nonlinear modelling

Daniel Palomar (Hong Kong) 2013
for contributions to convex optimization-based signal processing for communications

Ci-Ling Pan (Taipei) 2012
for contributions to optoelectronic and liquid crystal devices for ultrafast and terahertz photonics

Donggun Park (Seoul) 2008
for contributions to nano-scale CMOS development for memorie

Frank Park (Seoul) 2013
for contributions to geometric methods in robot mechanics

Jong Park (Seoul) 2013
for contributions to design of electricity markets

Kyu Tae Park* (Seoul) 1999
for contributions to education in computer and image processing technology and for technical leadership.

Lalit Patnaik* (Bangalore) 1992
for contributions to distributed and parallel computing.

Dean Patterson* (New South Wales) 2007
for contributions to the design of permanent magnet machines and power electronics education

Soo-Chang Pei* (Taipei) 2000
for contributions to the development of digital eigenfilter design, color image coding and signal compression, and to electrical engineering education in Taiwan.

Ian Petersen (Australian Capital Terr) 2000
for contributions to the theory of robust control system design.

M Pitke* (Bombay) 1989
for technical leadership in the deign and implementation of a family of digital switches for India's national telecommunications network.

S Pookaiyaudom (Thailand) 2006
for contributions to circuits and systems and engineering education.

Simon Poole (New South Wales) 2001
for research leading to the Erbium-doped fiber amplifier and the optical fiber laser.

Fatih Porikli (Australian Capital Terr) 2014
for contributions to computer vision and video surveillance

Li Qiu (Hong Kong) 2007
for contributions to robust and optimal control of multirate and periodic systems

Min Qiu (Nanjing) 2016
for contributions to nanophotonic devices

Long Quan (Hong Kong) 2010
for contributions to three-dimensional computer vision

Susanto Rahardja (Singapore) 2011
for leadership in digital audio and signal processing

Muhammed Rahman* (New South Wales) 2014
for contributions to direct torque control of integrated permanent magnet machines

B Rajan (Bangalore) 2014
for contributions to high performance and low complexity space-time code designs for wireless communication systems

Jagath Rajapakse (Singapore) 2012
for contributions to computational techniques for magnetic resonance imaging

S Ramadorai* (Bombay) 2004
for leadership in the development of multidisciplinary software solutions.

M Ramamoorty* (Hyderabad) 1988
for technical leadership in the establishment of electric power research in India.

Krithi Ramamritham (Bombay) 1998
for contributions to the theory and design of real-time systems.

Bhaskar Ramamurthi (Madras) 2015
for development of wireless technology in India

Ramachandran Ramjee (Bangalore) 2007
for contributions to architecture, protocols, and performance of wireless networks

Vellenki Reddy* (Hyderabad) 1999
for contributions to adaptive spectral estimation and eigensubspace estimation.

Wonjong Rhee (Seoul) 2012
for leadership in dynamic spectrum management systems

John Richards* (Australian Capital Terr) 1996
for scientific contributions in the fields of earth observational remote sensing.

David Rosenblum (Singapore) 2006
for contributions to scalable, distributed component- and event-based software systems.

Xinbo Ruan (Nanjing) 2016
for contributions to switching-mode power converter topologies and modulation strategies

Yong Rui (Beijing) 2010
for contributions to image and video analysis, indexing and retrieval

Victor Ryzhii (Sendai) 2004
for contributions to the development of quantum well infrared photodetectors and quantum dot infrared photodetectors.

Hiroshi Saito (Tokyo) 2005
for contributions to traffic control for integrated packet networks.

Tadao Saito* (Tokyo) 2000
for contribution to digital switching networks.

Shigekazu Sakabe (Kansai) 1999
for contributions to the analysis and development of electrical machines.

Hideaki Sakai* (Kansai) 2007
for contributions to statistical and adaptive signal processing

Hiroyuk Sakaki* (Nagoya) 1998
for seminal contributions to quantum effects in semiconductor nanostructure and devices.

Ken Sakamura* (Tokyo) 2002
for contributions to the development of computer architecture.

Shojiro Sakata* (Tokyo) 2002
for contributions to the theory of multidimensional arrays and codes

Hiroshi Sakou (Tokyo) 2006
for contributions to machine vision technology.

Koji Sakui (Tokyo) 2012
for the contribution to NAND flash memories

Masaru Sakurai (Tokyo) 2003
for contributions to digital signal processing technology in HDTV systems.

Takayasu Sakurai (Tokyo) 2003
for contributions to the modeling and design of high speed VLSI circuits.

Seiichi Sampei (Kansai) 2007
for contributions to the development of fading compensation and adaptive modulation techniques for wireless communication systems

David Sampson (Western Australia) 2016
for contributions to fiber-optic biophotonics and biomedical optical imaging

Jorge Sanz (Singapore) 1991
for contributions to the theory, algorithms, and architectures of multidimensional signal processing.

Hajime Sasaki* (Tokyo) 1996
for contributions to the development of advanced VLSI systems

Tsutomu Sasao* (Tokyo) 1994
for contributions to the design theory and techniques of combinational logic circuits.

Ken-Ichi Sato (Nagoya) 1999
for contributions to the architecture and technologies of Asynchronous Transfer Mode networks and photonic networks.

Motoyuki Sato (Sendai) 2010
for contributions to radar remote sensing technologies in environmental and humanitarian applications

Takuro Sato (Tokyo) 2013
for contributions to W-CDMA cellular standardization

Kunio Sawaya* (Sendai) 2012
for contributions to computational electromagnetics and characterization of antennas in plasmas

Kensuke Sekihara (Tokyo) 2009
for contributions to electromagnetic brain imaging

Yasuo Sekii* (Tokyo) 2000
for contribution to understanding and development of extra-high voltage AC and DC cross-linked polyethylene insulated cable system.

Yasuji Sekine* (Tokyo) 1981
for contributions to the methodology of power systems analysis, planning, control, and operation

Timoleon Sellis (Victorian) 2010
for contributions to database query optimization, and spatial data management

Sachio Semmoto (Tokyo) 1996
for technical and entrepreneurial contributions to telecommunications industry in Japan.

Masakazu Sengoku* (Shin-Etsu) 2001
for contributions to graph theoretic research on circuits and communication network systems.

Jong-Soo Seo (Seoul) 2014
for contributions to digital multimedia and mobile broadcasting technologies

Zong Sha* (Beijing) 1997
for technical leadership in radiowave-propagation research, practice, and education.

IEEE FELLOWS - ASIA PACIFIC REGION

Mansoor Shafi* (New Zealand Central) 1993
for contributions to the propagation modeling of microwave radio paths and for leadership in the development of digital radio.

Asrar U Sheikh* (Lahore) 2004
for contributions to railroad control systems.

Bing Sheu (Taipei) 1996
for contributions to signal processing and neural network systems using VLSI processors

Jang Ping Sheu (Taipei) 2009
for contributions to mobile computing and parallel processing

Raghunath Shevgaonkar (Bombay) 2012
for leadership in electrical engineering education in India

Bertram Shi (Hong Kong) 2001
for contributions to the analysis, implementation and application of cellular neural networks.

Jiancheng Shi (Beijing) 2014
for contributions to active and passive microwave remote sensing

Peng Shi (South Australia) 2015
for contributions to control and filtering techniques for hybrid dynamical systems

Yuhui Shi (Beijing) 2016
for contributions to particle swarm optimization algorithms

Han-Ping Shieh (Taipei) 2008
for leadership in the display and optical data storage industries

S Shieh (Taipei) 2014
for advances in pattern-oriented intrusion detection and fault-tolerant protection

William Shieh (Victorian) 2013
for contributions to coherent optical orthogonal frequency-division multiplexing

Naoyuki Shigyo (Tokyo) 2002
for contributions to the development of technology-oriented computer-aided design of semiconductor devices.

Kiyohiro Shikano* (Tokyo) 2007
for contributions to speech recognition, dialog systems, voice conversion, and acoustic field realization

Masanobu Shimada (Tokyo) 2011
for contributions to radar remote sensing technologies

Sadakuni Shimada* (Tokyo) 1988
for contributions to and leadership in the developments of optical fiber transmission systems.

Noriyuki Shimizu (Nagoya) 2008
for contributions to the understanding of degradation mechanisms of polymeric insulating materials

Toru Shimizu (Tokyo) 2014
for development of integrated multi-core microprocessors with large memories

Naohisa Shimomura* (Tokyo) 1996
for contributions and leadership in the development of Japanese language information processing technologies.

Takatoshi Shindo (Tokyo) 2001
for contributions to lightning protection design of power transmission systems and understanding of the physics of laser-guided discharges.

Stephen Shing-Toung Yau (Beijing) 2003
for contributions to the mathematical aspects of nolinear filtering

Shoji Shinoda* (Tokyo) 2001
for contributions to graph-theoretic researches on flow and tension networks, electrical circuits, and cellular mobile communication systems.

Tadashi Shiosaki* (Kansai) 2002
for contributions to SAW devices and nonvolatile memories.

T Shiozawa* (Kansai) 2001
for contributions to engineering-oriented relativistic electromagnetic theory and theoretical study of free-electron lasers.

Isao Shirakawa* (Kansai) 1990
for contributions to network theory and its applications to computer-aided circuit analysis and design.

Norio Shiratori* (Sendai) 1998
for contributions to the theory and practice of advanced computer networks.

Yoshihiro Shiroishi (Tokyo) 2015
for leadership in the development of high density magnetic recording technologies and devices

Sandeep Shukla (Uttar Pradesh) 2014
for contributions to applied probablistic model checking for system design

R Shyamasundar (Bombay) 1999
for contributions to logic programming.

Jyuo-Min Shyu (Taipei) 2008
for leadership in the microelectronics industry

Rui SilvaMartins (Macau) 2008
for leadership in engineering education

Johnny Sin (Hong Kong) 2012
for contributions to the design and commercialization of power semiconductor devices

Bhim Singh (Delhi) 2010
for contributions to active power filters and multipulse AC-DC converters

V R Singh* (Delhi) 1996
for contributions to the research and development in transducers and instrumentation systems for scientific and biomedical applications.

Bhabani Sinha (Kolkata) 2002
for contributions to the design of algorithms and interconnection networks for parallel/distributed computing.

Pradeep Sinha (Bombay) 2013
for leadership in distributed and parallel processing systems

Vishwanath Sinha* (Delhi) 2010
for contributions to electrical engineering education

Donald Sinnott* (South Australia) 1997
for contributions to the development of computational electromagnetics and technological leadership of defense research and development in Australia.

Wan Chi Siu* (Hong Kong) 2012
for leadership in signal processing and contributions to video technologies

Krishna Sivalingam (Madras) 2014
for contributions to medium access control and energy-efficient protocol design in communication networks

David Skellern* (New South Wales) 2007
for contributions to high speed devices and systems for wireless and wireline communications networks

Peter Smith (New Zealand Central) 2015
for contributions to statistical modeling and analysis of wireless communication systems

Hing Cheung So (Hong Kong) 2015
for contributions to spectral analysis and source localization

Haruhisa Soda (Tokyo) 2015
for contributions to vertical-cavity surface-emitting and distributed-feedback lasers

Victor Solo* (New South Wales) 1994
for contributions to the theory of adaptive signal processing, identification, and control.

Sang-Hyuk Son (Taegu) 2013
for contributions to data management and scheduling in real-time systems

Iickho Song (Daejeon) 2009
for application of signal detection theory to vehicular communication systems

Jian Song (Beijing) 2016
for contributions to digital television broadcasting

Yonghua Song (Beijing) 2008
for contributions to optimization techniques for power systems

Frank Soong* (Beijing) 2010
for contributions to speech processing

Shun-Feng Su (Taipei) 2010
for contributions to computational intelligence and intelligent control

Yan-Kuin Su (Tainan) 2007
for contributions to optoelectronics and nanophotonics research and education

Toshio Sudo (Tokyo) 2004
for contributions to high-density packaging.

YASUHARU Suematsu* (Tokyo) 1980
for contributions to semiconductor lasers, integrated optical circuits, and optical waveguides.

Tadasi Sueta* (Kansai) 1989
for contributions to research and development on optical and quantum electronics, especially in the fields of guide-wave optics

Shigeki Sugano (Tokyo) 2007
for contributions to design, control and system integration of human symbiotic robots

Takuo Sugano* (Tokyo) 1983
for contributions to semiconductor technology and devices and to engineering education.

Ponnuthurai Suganthan (Singapore) 2015
for contributions to optimization using evolutionary and swarm algorithms

Toshiharu Sugie (Kansai) 2007
for contributions to tracking control and its application to mechanical systems

Hiroaki Sugiura (Kansai) 2011
for leadership in color management technology in multimedia systems

Akihiko Sugiyama (Tokyo) 2011
for contributions to speech and audio signal processing

Il-Hong Suh (Seoul) 2016
for contributions to the design and control of redundant and multiple-arm robot systems

Seung Sul (Seoul) 2000
for contributions to the development of pulse-width-modulated inverters and ac motor drives.

Sun Sumei (Singapore) 2016
for leadership in design and standardization of wireless communication systems

Chi-Kuang Sun (Taipei) 2009
for contributions to high resolution medical microscopy and nano ultrasonic imaging

Dong Sun (Hong Kong) 2015
for contributions to robot-aided manipulation of biological cells

Qibin Sun (Singapore) 2011
for contributions to multimedia security

Yuan-Chen Sun (Taipei) 2000
for contributions to advanced CMOS technology.

Hideo Sunami* (Tokyo) 1998
for contributions to the development of trench-capacitor DRAM cells and ultra-high density DRAMs.

N Sundararajan* (Singapore) 1996
for technical leadership in the indigenous design and development of India's satellite launch vehicles and for contributions to the development of aerospace systems.

Dan Keun Sung (Daejeon) 2015
for contributions to network resource management

W Sung (Seoul) 2015
for contributions to real-time signal processing systems

Myung Hoon Sunwoo (Seoul) 2011
for contributions to multimedia and communications

Hiroshi Suzuki* (Tokyo) 1993
for contributions to power system analysis technology.

Masatoshi Suzuki (Tokyo) 2006
for contributions to high-speed optical communication systems.

Senichi Suzuki (Tokyo) 2014
for contributions to high-density integrated silica-based planar lightwave circuits for optical communications

Shigehiko Suzuki* (Tokyo) 2001
for leadership in the development and standardization of technologies for intelligence in telecommunications networks.

Toshio Suzuki* (Tokyo) 1992
for contributions to the understanding of long airguns, lighting, and switching surges on transmission lines

Suzuki (Tokyo) 1994
for contributions to the reliability of substation equipment through application of insulating materials.

Simon Sze* (Taipei) 1977
for contributions to semiconductor device research and to education.

Kunio Tada* (Tokyo) 1989
for contributions to semiconductor photonic and electronic devices, including optical directional-coupler switches, distributed-feedback lasers, and Schottky-clamped transistors

Susumu Tadakuma* (Tokyo) 1993
for contributions to industrial motor drive systems.

Satoshi Tadokoro (Sendai) 2009
for leadership in the development and deployment of rescue robotics

Shuichi Tahara (Tokyo) 2006
for contributions to superconducting digital integrated circuits and single-flux quantum electronics.

Ichiro Tai (Tokyo) 2012
for leadership in development of nuclear instrumentation and control systems

Takunori Taira (Nagoya) 2014
for contributions to micro solid-state photonics

Tatsuo Takada* (Tokyo) 1999
for contributions to the development of technology to measure space charge in solid and liquid dielectric materials.

Hideaki Takagi* (Tokyo) 1996
for contributions to the performance analysis of communication networks and queueing systems.

Tasuku Takagi* (Sendai) 1994
for contributions in the field of electromagnetic compatibility, specifically electric contact phenomena.

Hiroshi Takahashi (Tokyo) 2014
for contributions to arrayed-waveguide gratings

Kazuhiro Takahashi* (Tokyo) 1999
for contributions to the development and application of sparse matrix techniques for power utilities.

Toshi Takamori* (Kansai) 2004
for contributions to robotic and mechatronic systems.

Tadashi Takano* (Tokyo) 2001
for development of antennas for radio communications and space activities.

Yoshitaka Takasaki* (Tokyo) 1993
for contributions to digital communication systems design.

T Takasuna* (Tokyo) 1993
for contributions to the development of vacuum and gas circuit breakers.

Eiji Takeda* (Tokyo) 1995
for contributions to the characterization and understanding of hot-carrier effects in MOS devices and their device applications.

Yasutsughu Takeda* (Tokyo) 1990
for technical leadership in optoelectronics, particularly in optical storage and recording.

Yasuo Takemura* (Tokyo) 1994
for contributions to color television camera technologies.

Tadashi Takenaka* (Tokyo) 2010
for research on properties and applications of lead-free piezoelectrics and ferroelectric ceramics

Seiichi Takeuchi* (Tokyo) 1997
for pioneering work in fiber optic network systems.

Tadasu Takuma* (Tokyo) 1991
for contributions to the understanding of the discharge characteristics of gaseous dielectrics and to the development of numerical field calculation methods for high-voltage

Hirotaka Tamura (Tokyo) 2013
for contributions to technology for high speed interconnects

Shinichi Tamura* (Kansai) 2009
for contributions to pattern recognition and image analysis

Kay Tan (Singapore) 2014
for contributions to evolutionary multiobjective optimization

Tieniu Tan (Beijing) 2004
for contributions to pattern recognition research and applications.

Hatsukazu Tanaka* (Kansai) 2001
for contributions to the theory of source and channel coding and its applications, as well as for contributions to education in engineering.

Hidehiko Tanaka* (Tokyo) 2005
for contributions to high performance computation models.

Kazuo Tanaka (Tokyo) 2014
for contributions to fuzzy control system design and analysis

Kunimaro Tanaka* (Tokyo) 1992
for contributions to digital audio recording technology

Toshika Tanaka (Fukuoka) 2001
for contributions to the understanding of high field and aging phenomena in polymeric insulation.

Xiaoou Tang (Hong Kong) 2009
for contributions to pattern recognition and video processing

Yuan Yan Tang* (Macau) 2004
for contributions to wavelet analysis to pattern recognition and document analysis.

Kenji Taniguchi (Kansai) 1998
for contributions to the development of MOS device fabrication processes, particularly dielectric breakdown and oxygen-enhanced diffusion.

Tomohiko Taniguchi (Tokyo) 2006
for contributions to speech coding technologies and development of digital signal processing (DSP) based communication systems.

Masayuki Tanimoto* (Nagoya) 2013
for contributions to the development of free-viewpoint television and its MPEG standard

Toru Tanzawa (Tokyo) 2016
for contributions to integrated high-voltage circuits

Dacheng Tao (New South Wales) 2015
for contributions to pattern recognition and visual analytics

Hisao Taoka (Nagoya) 2014
for contributions to computing technology for power system analysis and control

Yasuo Tarui* (Tokyo) 1985
for contributions to semiconductor devices and integrated circuits, and for leadership in the field of integrated circuits.

David Taubman (New South Wales) 2015
for contributions to image and video communications

D Taylor* (New Zealand South) 1994
for contributions to the theory and practice of signal space encoding signaling.

Nobukazu Teranishi (Kansai) 2010
for contribution to the development of charge-coupled device image sensors

Nitish Thakor (Singapore) 1997
for contributions to the field of biomedical signal processing and instrumentation.

Mandayam A Thathachar* (Bangalore) 1991
for contributions to the theory of learning automata with applications to adaptive networks and to engineering education.

Jie Tian (Beijing) 2010
for contributions to medical image processing, pattern recognition, and molecular imaging

Michael Tobar (Western Australia) 2007
for contributions   to high-Q dielectric   resonator technology, precision microwave oscillators and low noise phase and amplitude measurement systems

Iwao Toda* (Tokyo) 1990
for contributions to on-line computer systems, computer networks, and switching theory.

Yoshihiro Tohma* (Tokyo) 1980
for, contributions to the theory and design of fault-tolerant digital systems, and to engineering education.

IEEE FELLOWS - ASIA PACIFIC REGION

Yuichi Tohmori (Tokyo) 2015
for contributions to tunable semiconductor lasers for optical fiber communications

Keiichi Tokuda (Nagoya) 2014
for contributions to hidden Markov model-based speech synthesi

Masamit Tokuda* (Tokyo) 2007
for leadership in development and international standardization of electromagnetic compatibility for telecommunication systems

Tsuneo Tokumitsu (Tokyo) 2006
for contributions to uniplanar and 3-dimensional monolithic microwave integrated circuits (MMICs).

Takashi Tokuyama* (Tokyo) 1989
for contributions to the research and development of integrated semiconductor devices and processing technologies

Shoji Tominaga* (Tokyo) 2005
for contributions to the analysis of physical phenomena in digital color imaging..

Osamu Tomisawa* (Kansai) 2004
for contributions to low power, high speed integrated circuits.

Ho-Ming Tong (Taipei) 2007
for leadership in leading-edge integrated circuits technology

Koji Torii* (Kansai) 2000
for contributions to empirical software engineering.

Akira Toriumi (Tokyo) 2016
for contributions to device physics and materials engineering for advanced CMOS technology

David Townsend (Singapore) 2006
for contributions to positron emission tomography (PET).

Toru Toyabe* (Tokyo) 1996
for contributions to numerical device modeling and physics of metal-oxide-semiconductor devices.

Trieu-Kien Truong* (Tainan) 1999
for contributions to the decoding of algebraic error-correcting codes.

Din Ping Tsai (Taipei) 2012
for contributions to nanophotonics and near-field optics for microscopy and storage

Danny Tsang (Hong Kong) 2012
for contributions to the optimization of communications networks

Chi Tse (Hong Kong) 2006
for contributions to power electronics circuits and applications.

Tseung Tseng (Taipei) 2002
for contributions to ceramic capacitor and sensor technologies

Yu-Chee Tseng (Taipei) 2012
for contributions to wireless and mobile networks

Haruhiko Tsuchiya* (Tokyo) 2013
for contributions to single-mode optical fiber transmission

Toshiaki Tsuchiya (Hiroshima) 2002
for contributions to the understanding of the reliability physics of MOS devices and the development of hot-carrier-immune CMOS technologies.

Toshitaka Tsuda (Tokyo) 2003
for contributions to digital signal processing and its application to the communication industry, and leadership in broadband telecommunications.

Hidenori Tsuji* (Kansai) 1991
for contributions to the research on computer vision and robotics

T Tsukada* (Tokyo) 1991
for contributions to the development of semiconductor lasers and leadership in amorphous semiconductor devices.

Rodney Tucker* (Victorian) 1990
for contributions to microwave frequency optoelectronic circuits and the direct modulation of high-speed semiconductor lasers.

J Scott Tyo (Australian Capital Terr) 2012
for contributions to transient electromagnetics ultra-wideband antennas, and mesoband radiating systems

Yonhua Tzeng (Tainan) 2005
for contributions to diamond manufacturing processes.

Clive Tzuang (Nanjing) 1999
for contributions to the analysis and design of complex wave guiding structures and the design of integrated leaky-mode arrays.

Seng-Pan U (Macau) 2016
for leadership in the analog circuit design

Naoya Uchida* (Tokyo) 1991
for contributions to the design and development of optical-fiber cables.

Kunio Uchiyama (Tokyo) 2011
for contributions to power-efficient microprocessors

Masaru Uchiyama* (Sendai) 2011
for contributions to design, modeling, and control of robotic structures

Daisuke Ueda (Kansai) 2008
for contributions to power-saving semiconductor devices and circuits

Hiromi Ueda (Tokyo) 2008
for contributions to synchronous digital hierarchy transmission systems and optical access systems

Shunsuke Uemura* (Kansai) 2003
for contributions to research and education of database engineering.

Shin-Ichiro Umemura (Sendai) 2000
for contributions to biomedical ultrasonics.

Tamaki Ura (Tokyo) 2007
for contributions to autonomous underwater vehicle technologies

Masashi Usami (Tokyo) 2015
for contributions to development of high reliability semiconductor optical devices for undersea cable systems

Shiro Usui* (Nagoya) 1994
for contributions to applications of neural networks to color vision discrimination.

Andre Van Schaik (New South Wales) 2014
for contributions to neuromorphic circuits and systems

Juzer Vasi* (Bombay) 2005
for leadership in microelectronics education.

Darryl Veitch (New South Wales) 2010
for contributions to measurement, estimation, and characterization of internet traffic and performance

K Venugopal (Bangalore) 2016
for contributions to computer science and electrical engineering education

N Viswanadham* (Bangalore) 1993
for contributions to the modeling and performance analysis of flexible manufacturing systems.

Emanuele Viterbo (Victorian) 2011
for contributions to coding and decoding for wireless digital communications

Branka Vucetic* (New South Wales) 2003
for contributions to the theory and applications of channel coding.

Osamu Wada* (Kansai) 1997
for his contributions to III-V semiconductor Optoelectronic Integrated Circuit (OEIC).

Benjamin Wah (Hong Kong) 1991
for contributions to the field of parallel processing.

Ping Kong Wai (Hong Kong) 2012
for contributions to optical networks and optical fiber communication systems

Chi-Hsu Wang (Taipei) 2008
for contributions to fuzzy logic, neural networks and intelligent control

Chin-Liang Wang (Taipei) 2012
for contributions to signal processing algorithms and architectures for digital communications

Chorng-K Wang* (Taipei) 2008
for contributions to communications circuit design and for leadership in promoting the profession

Feiyue Wang (Beijing) 2004
for contributions to intelligent control systems and applications to complex systems.

Huei Wang (Taipei) 2006
for contributions to broadband and millimeter-wave monolithic millimeter-wave integrated circuits (MMICs) and radio frequency integrated circuits (RFICs)

Jhing Wang (Tainan) 1999
for contributions to software-hardware co-development of large-vocabulary Mandarin speech processing and recognition systems.

Jun Wang (Hong Kong) 2007
for contributions to recurrent neural networks for optimization and engineering applications

Keh-Chung Wang (Taipei) 2012
for contributions to GaAs HBT integrated circuits for high speed data conversion and optical fiber communication systems

Li-Chun Wang (Taipei) 2011
for contributions to cellular architectures and radio resource management in wireless networks

Wei-Yen Wang (Taipei) 2013
for contributions to observer-based adaptive fuzzy-neural control for uncertain nonlinear systems

Wen-June Wang (Taipei) 2008
for contributions to the design and development of fuzzy systems and theorems

Xi-Fan Wang (Xian) 2009
for contributions to power system planning and power engineering education

Xi-Zhao Wang (Beijing) 2013
for contributions to development of fuzzy decision tree and clustering techniques

Yang Yuan Wang* (Beijing) 2001
for leadership in China's semiconductor research and education

Yu Wang (Hong Kong) 2007
for contributions to frictional contact and impact modeling, and robotic workholding and fixturing, for manufacturing automation

IEEE FELLOWS - ASIA PACIFIC REGION

Kiyotaka Wasa* (Kansai) 1990
for contributions to the development and application of a cathodic sputtering technology to materials processing.

Katsuyoshi Washio (Sendai) 2006
for contributions to high-speed silicon and silicon germanium bipolar/Bi complementary metal oxide semiconductors (CMOS) device and circuit technologies.

Masao Washizu (Tokyo) 2002
for contributions to the application of electric fields to the manipulation of molecules and cells for biological research

Tadashi Watanabe* (Tokyo) 2006
for contributions to supercomputer architectures.

Geoffrey Webb (Victorian) 2015
for contributions to machine learning, data mining and knowledge discovery

Changyun Wen (Singapore) 2010
for contributions to adaptive control, switching and impulsive systems

Xiaoqing Wen (Fukuoka) 2012
for contributions to testing of integrated circuits

Neil Weste* (New South Wales) 1996
for contributions to the methods of design of full custom integrated circuits.

Kyu Whang* (Daejeon) 2007
for contributions to physical database design, query processing, and database management system architecture

C Wong (Hong Kong) 1992
for the development and applications of silicone polymers used in the packaging of electronics.

Kin-Lu Wong (Tainan) 2007
for contributions to microstrip and planar antenna designs

Kit Wong (Western Australia) 2002
for contributions to the theory and applications of intelligent systems in power engineering.

Wing Shing Wong (Hong Kong) 2002
for contributions to estimation theory of nonlinear systems and application of system theory to communication and information processing problems.

An-Yeu (Andy) Wu (Taipei) 2015
for contributions to DSP algorithms and VLSI designs for communication IC/SoC

Bing Fei Wu (Taipei) 2012
for contributions to intelligent transportation and multimedia systems

Chang-Yu Wu* (Taipei) 1994
for technical leadership in the design of an electromagnetic compatibility laboratory.

Cheng-Wen Wu (Taipei) 2004
for contributions to design and test of array structures.

Chung-Yu Wu (Taipei) 1998
for contributions to implementation of analog neural network integrated circuits.

Ed Wu (Hong Kong) 2014
for contributions to in vivo magnetic resonance imaging methods

Enboa Wu (Hong Kong) 2012
for contributions to light emitting diode and packaging technologies

Felix Wu* (Hong Kong) 1991
for contributions to the development of theory and computational methods for power system planning operation

Feng Wu (Nanjing) 2013
for contributions to visual data compression and communication

Ja-Ling Wu (Taipei) 2008
for contributions to image and video analysis, coding, digital watermarking, and rights management

Jean-Lien Wu* (Taipei) 2009
for leadership in information and communication education

Ji Wu (Beijing) 2015
for leadership in satellite remote sensing programs

Jianping Wu (Beijing) 2012
for leadership in the establishment of internet in China

Jieh Wu (Taipei) 2016
for contributions to design and calibration of high-performance data converters

Jingshown Wu* (Taipei) 2005
for leadership in higher education and wireless industry development.

Ke-Li Wu (Hong Kong) 2011
for contributions to non-planar microwave filters and embedded radio frequency passive circuits

Ruey-Beei Wu (Taipei) 2010
for contributions to coplanar waveguide passive components

Tzong-Lin Wu (Taipei) 2013
for contributions to noise mitigation technologies and electromagnetic compatibility design on printed circuit boards

Lihua Xie (Singapore) 2007
for contributions to robust control and filtering

Min Xie (Hong Kong) 2006
for contributions modeling and analysis of systems and software reliability.

Changsheng Xu (Beijing) 2014
for contributions to multimedia content analysis

Dehong Xu (Nanjing) 2013
for contributions to power electronic applications to renewable energy systems

Jian-Xin Xu (Singapore) 2012
for contributions to motion control systems

Lei Xu (Shanghai) 2001
for contributions to learning in neural networks.

Shanjia Xu* (Nanjing) 2008
for contributions to dielectric waveguiding structures

Yangsheng Xu (Hong Kong) 2003
for contributions to the design and control of space robot and dynamically stabilized systems.

Quan Xue (Hong Kong) 2011
for contributions to microwave transmission line structures and integrated circuits

Toshiaki Yachi* (Tokyo) 2002
for contributions to power semiconductor and micro-magnetic devices.

Shuzo Yajima* (Kansai) 2001
for contributions to the development of computers and the theory of logic circuits.

Hiroshi Yamada (Tokyo) 2007
for contributions to packaging technology of integrated circuits

Isao Yamada (Tokyo) 2015
for contributions to inverse problems and learning in signal processing

Minoru Yamada* (Nagoya) 2010
for contribution to semiconductor laser theory and development of low-noise semiconductor lasers for disc applications

Osamu Yamada* (Tokyo) 2003
for contributions to digital broadcasting systems.

Masatsune Yamaguchi* (Tokyo) 2001
for contributions to highly piezoelectric leaky surface acoustic waves.

Yoshio Yamaguchi (Shin-Etsu) 2002
for contributions to the development of real-time and fully polarimetric synthetic aperture radar systems for short-range sensing of buried objects.

Takeshi Yamakawa (Fukuoka) 2009
for contributions in hardware implementation of fuzzy logic and other soft computing systems

Hirosuke Yamamoto (Tokyo) 2011
for contributions to source coding and information-theoretic secure coding

Mitsuyoshi Yamamoto* (Tokyo) 1982
for contributions to advanced electrical devices for energy generation and transmission.

Seiichi Yamamoto (Kansai) 2004
for leadership in the development of spoken language communication systems.

Toshiak Yamamoto (Tokyo) 2009
for contributions to pollution and contamination control

Yutaka Yamamoto* (Kansai) 1998
for contributions to the theory of sampled-data systems, digital control, and infinite-dimensional systems.

C Yamanaka* (Kansai) 1983
for contribution to high power laser system for materials processing and nuclear fusion and for leadership in education.

Naoaki Yamanaka (Tokyo) 2000
for contribution to ultra-high-speed communication technologies and systems.

Masamichi Yamanishi* (Nagoya) 1997
for his contributions to the theory of electro-optic properties in semiconductor quantum well structures.

Kazuhiko Yamanouchi* (Sendai) 1995
for research and development in surface acoustic waves and surface optical waves.

Hiro Yamasaki* (Tokyo) 1994
for individual contributions and leadership in intelligent sensing technology.

Masakazu Yamashina (Tokyo) 2007
for leadership in high performance microprocessor circuits

Junji Yamauchi (Tokyo) 2012
for contributions to electromagnetic waveguides and design of surface wave antennas

Shumpei Yamazaki* (Tokyo) 2010
for contributions to, and leadership in the industrialization of nor volatile memory and thin film transistor technologies

Hong Yan (Hong Kong) 2006
for contributions to image recognition techniques and applications.

Satoru Yanabu* (Tokyo) 1990
for contributions to research and development of advanced switcher and application in transmission and distribution systems

Fuqing Yang* (Beijing) 2003
for leadership in software research and practice.

IEEE FELLOWS - ASIA PACIFIC REGION

Guu-Chang Yang (Taipei) 2012
for contributions to optical code division multiple access

Howard Yang (Shanghai) 2010
for leadership in mixed-signal integrated circuit design and manufacturing

Jarferr Yang (Tainan) 2007
for contributions to fast algorithms and efficient realization of video and audio coding

Qiang Yang (Hong Kong) 2009
for contributions to understanding and application of intelligent planning, learning and data mining

Kaoru Yano* (Tokyo) 2008
for leadership in development of digital transmission systems

Kazuo Yano (Tokyo) 2005
for contributions to nanostructured-silicon devices and circuits and advanced CMOS logic.

Masao Yano* (Kansai) 1991
for contributions to the development of static VAR compensators and static converters for industrial systems.

Yutaka Yasuda (Tokyo) 2008
for contributions to mobile digital satellite communication systems

Kiyotos Yasumoto (Fukuoka) 2010
for contributions to electromagnetic wave scattering and wave guiding

Bayya Yegnanarayana* (Hyderabad) 2013
for contributions to digital signal processing research and education

Kiat-Seng Yeo (Singapore) 2016
for contributions to low-power integrated circuit design

Tat Soon Yeo (Singapore) 2003
for contributions to scattering and synthetic aperture radar.

Daniel Yeung (Hong Kong) 2004
for contributions to sensitivity anaylsis of neural networks and fuzzy expert systems

Raymond Yeung (Hong Kong) 2003
for contributions to network coding theory.

Wen-Yan Yin (Nanjing) 2013
for contributions to multi-physics solutions for intentional electromagnetic interference and nanostructure electromagnetic compatibility

Naoki Yokoyama* (Tokyo) 2000
for contributions to the development of self-aligned gallium arsenide MESFET integrated circuits.

Ryuichi Yokoyama* (Tokyo) 2009
for leadership in electrical power system management

Hoi-Jun Yoo (Daejeon) 2008
for contributions to low-power and high-speed VLSI design

Okio Yoshida* (Tokyo) 1995
for contributions to the development of photoelectronic imaging devices from vidicon-type camera tubes to CCD image sensors.

Tsuneo Yoshikawa* (Kansai) 2000
for contributions to the analysis and control of robotic mechanisms.

Yuzo Yoshikuni (Tokyo) 2010
for contributions to semiconductor lasers and integrated optical devices

Katsumi Yoshino (Hiroshima) 2004
for contributions to organal electronic and optoelectronic materials.

Takehiko Yoshino (Tokyo) 2001
for contributions to the development of transmission systems via satellite.

Katsuichi Yotsumoto* (Tokyo) 1998
for contributions to highly efficient and reliable telecommunications energy systems.

Chen-Hua Yu (Taipei) 2013
for leadership in development of interconnect technology for integrated circuits

Xiao-Hu Yu (Nanjing) 2012
for leadership in the development of mobile communications in China

Xinghuo Yu (Victorian) 2008
for contributions to variable structure systems theory and applications in intelligent and complex systems

Zhiping Yu* (Beijing) 2009
for contributions to modeling and simulation of advanced semiconductor devices

Jinhong Yuan (New South Wales) 2016
for contributions to multi-antenna wireless communication technologies

Chik Patrick Yue (Hong Kong) 2015
for contributions to the advancement of CMOS radio-frequency integrated circuits and devices modeling

Ken-Ichi Yukimatsu (Tokyo) 2004
for contributions on photonic switching technologies and systems

Tak-Shing Yum (Hong Kong) 2013
for contributions to the architecture and resource management of communication networks

EdwardK Yung* (Harbin) 2012
for contributions to engineering education and research in applied electromagnetics

Shinichi Yuta* (Tokyo) 2000
for contributions to navigation, programming, and architectures of sensor-based mobile robots.

Alexander Zelinsky (Australian Capital Terr) 2008
for contributions to vision-based robotics

Bing Zeng (Chengdu) 2016
for contributions to image and video coding

Wenjun Kevin Zeng (Beijing) 2012
for contributions to multimedia communication and security

Boming Zhang (Beijing) 2010
for contributions to algorithm development for energy management systems in power system control centers

Dapeng Zhang (Hong Kong) 2009
for contributions to biometric identification and systems

Hongjiang Zhang (Beijing) 2004
for contributions to media computing and leadership in content-based visual media analysis, retrieval and browsing.

Huaguang Zhang (Harbin) 2015
for contributions to stability analysis of recurrent neural networks and intelligent control of nonlinear systems

Jifeng Zhang (Beijing) 2014
for contributions to parameter identification and adaptive control of stochastic systems

Qi Tu Zhang* (Hong Kong) 2009
for contributions to wireless communications systems

Qian Zhang (Hong Kong) 2012
for contributions to the mobility and spectrum management of wireless networks and mobile communications

Wei Zhang (New South Wales) 2015
for contributions to cognitive radio communications

Wen-Xun Zhang* (Nanjing) 1999
for developments in electromagnetics including antennas, waveguides and scattering.

Wenjun Zhang (Shanghai) 2012
for contributions to digital television systems and standards

Ya-Qin Zhang (Beijing) 1998
for contributions to and leadership in the development of digital video compression and communications technology, standards, and products.

Yi Zhang (Chengdu) 2016
for contributions to convergence theory for neural networks and subspace learning

Yuanting Zhang (Hong Kong) 2007
for contributions to the field of wearable devices and signal processing algorithms for mobile healthcare

Yue Ping Zhang (Singapore) 2010
for contributions to integrated antennas and subsurface radio

Zhijun Zhang (Beijing) 2015
for contributions to antenna design and propagation modeling in mobile communication devices

Feng Zhao (Beijing) 2010
for contributions to networked embedded computing and sensor networks

Wei Zhao (Macau) 2001
for contributions in real-time computing systems and networks.

Yilin Zhao (Beijing) 2004
for contributions to location and navigation technologies and systems.

Nan-Ning Zheng (Xian) 2006
for contributions to information processing.

Wei Zheng (New South Wales) 2014
for contributions to signal processing and system identification

Kun Zhou (Nanjing) 2015
for contributions to shape modeling and GPU computing

Xiaoxin Zhou* (Beijing) 1996
for leadership and innovation contributions to power technology

Zhi-Hua Zhou (Nanjing) 2013
for contributions to learning systems in data mining and pattern recognition

Lei Zhu (Macau) 2012
for contributions to modeling, design and development of planar microwave filters

Wenwu Zhu (Beijing) 2010
for contributions to video communications over the internet and wireless

Albert Zomaya (New South Wales) 2004
for contributions to the solution of scheduling problems in parallel computing systems.

Moshe Zukerman (Hong Kong) 2007
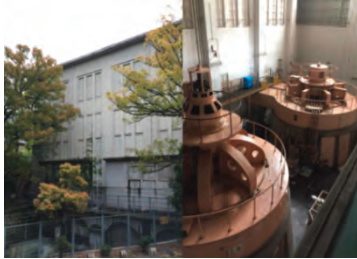for contributions to performance evaluation of communication systems and networks

5.

IEEE Milestones in Region 10

Editors - Akinori Nishihara, Harish Mysore

Keage Power Station, 1890-1897
Dedicated on 12 September 2016

Keage Power Station is the Japan's first commercial hydroelectric generation using water intake from the Lake Biwa Canal. Construction of the station began in 1890, and was completed in 1897 with a total capacity of 1,760 kW, pioneering the start-up of power generation. A second canal revitalized the station in 1936 with a capacity of 5,700 kW, contributing to Japan's technological modernization.

Birth and Growth of Primary and Secondary Battery Industries in Japan, 1893-1971
Dedicated on 12 April 2014

Yai Dry Battery Limited Partnership Company received a patent for Yai's battery invention in 1893, giving birth to the Japanese dry battery industry, and contributing to its growth. Following this success, GS Yuasa Corporation and Panasonic Corporation pioneered a huge market of both primary and secondary batteries installed in industrial equipment and in home appliances. It advanced Japanese battery industries and consumer electronics.

Millimeter-Wave Communication Experiments- J.C. Bose, 1894-96
IEEE Milestone recognized on Sep 15 2012 (Kolkata – India)

Sir Jagdish Chandra Bose demonstrated (in Calcutta, India) the generation, transmission and reception of electromagnetic waves at 60 GHz frequency over a distance of 23 meters through two intervening walls by ringing a bell, and detonating gun powder in 1895. He developed several components such as a spark-gap transmitter, coheror, horn antenna, dielectric lens polarizer, and cylindrical diffraction grating. Some of his concepts and components, in a further refined form, continue to be used in modern-day space communications. His work is considered to be at least 50-years ahead of his times.

J.C. Bose at
Royal Society, London 1897

Directive Short Wave Antenna, 1924
Dedicated on 17 June 1995

Hidetsugu Yagi and Shintaro Uda designed and constructed a sensitive and highly-directional antenna. A driven element, usually ½λ is connected to the transmitter through coax cable. In close proximity to the driver, but not physically connected to it is a reflector, usually more than ½λ and one or more directors (usually less than ½λ). The antenna, which is effective in the higher-frequency ranges, has been important for radar, television, and amateur radio.
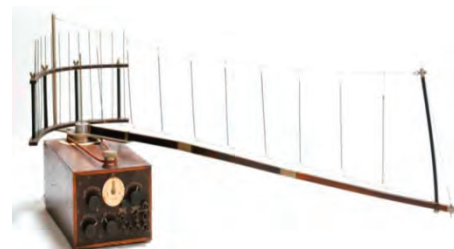
Development of Electronic Television, 1924-1941
Dedicated on 12 November 2009

Professor Kenjiro Takayanagi started his research program in television at Hamamatsu Technical College (now Shizuoka University) in 1924. He transmitted an image of the Japanese character イ (i) on a cathode-ray tube on 25 December 1926 and broadcast video over an electronic television system in 1935. His work, patents, articles, and teaching helped lay the foundation for the rise of Japanese television and related industries to global leadership.

Yosami Radio Transmitting Station, 1929
Dedicated on 19 May 2009

In April 1929, the Yosami Station established the first wireless communications between Japan and Europe with a long wave operating at 17.442 kHz. An inductor-type high-frequency alternator provided output power at 500kW. The antenna system used eight towers, each 250m high. The facilities were used for communicating with submarines by the Imperial Japanese Navy from 1941 to 1945 and by the United States Navy from 1950 to 1993.

Development of Ferrite Materials and Their Applications, 1930-1945
Dedicated on 13 October 2009

In 1930, at Tokyo Institute of Technology, Drs. Yogoro Kato and Takeshi Takei invented ferrite, a magnetic ceramic compound containing oxides of iron and of other metals with properties useful in electronics. TDK Corporation began mass production of ferrite cores in 1937 for use in radio equipment. The electric and electronics industries use ferrites in numerous applications today.

Raman Scattering
IEEE Milestone recognized 15 Sep 2012 (Kolkata, India)

Raman-effect is the change in wavelength, which occurs when a beam of light is reflected by molecules. Most of scattered light is at the same wavelength as the incident light (Raleigh effect). However, a small fraction f the reflected light has a different wavelength (Raman effect). Sir Chandrasekhar Venkata Raman received 1930 Nobel Prize in Physics for his discovery (work done in Calcutta, India). Today's applications of Raman Effect range from non-destructive identification of minerals to early detection of life-threatening diseases.
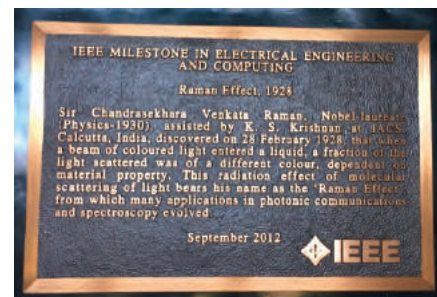
Invention of a Temperature-Insensitive Quartz Oscillation Plate, 1933
**Dedicated on 6 March 2017**

Issac Koga established his precise theoretical analysis of thickness vibration of anisotropic quartz crystal in 1932, and showed the existence of a zero-temperature-coefficient plate in April 1933. His continued in-depth research clarified a precise angle of 54°45' (10 October 1933). Koga discovered another zero-temperature-coefficient angle 137°59' (December 1933). These were later called R_1 and R_2 cut, respectively. This kind of crystal plates have been widely used in communication systems and clocks.

The Discovery of the Principle of Self-Complementarity in Antennas and the Mushiake Relationship, 1948
Dedicated on 27 July 2017

In 1948, Prof. Yasuto Mushiake of Tohoku University discovered that antennas with self-complementary geometries are frequency independent, presenting a constant impedance, and often a constant radiation pattern over very wide frequency ranges. This principle is the basis for many very-wide-bandwidth antenna designs, with applications that include television reception, wireless broadband, radio astronomy, and cellular telephony.
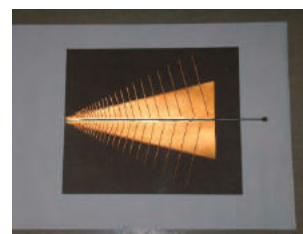
Example of modified self-complementary antenna (stacked and proportionally spaced unipole-notch array antenna fabricated on a dielectric substrate), made and photographed by Prof. Takayuki Ishisone

Kurobe River No. 4 Hydropower Plant, 1956-1963
Dedicated on 9 April 2010
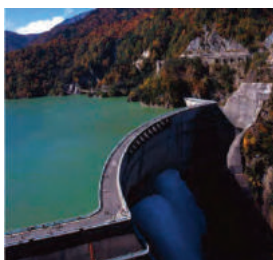
Kansai Electric Power Co., Inc., completed the innovative Kurobe River No. 4 Hydropower Plant, including the subterranean power station and Kurobe Dam, in 1963. The 275kV long-distance transmission system delivered the generated electric power to the Kansai region and solved serious power shortages, contributing to industrial development and enhancing living standards for the population.

Commercialization and Industrialization of Photovoltaic Cells, 1959-1983
Dedicated on 9 April 2010

Sharp Corporation pioneered the development and commercialization of photovoltaic (PV) cells for applications ranging from satellites to lighthouses to residential uses. From the beginning of research into monocrystal PV-cells in 1959, to the mass production of amorphous PV-cells in 1983, this work contributed greatly toward the industrialization of photovoltaic technologies and toward the mitigation of global warming.
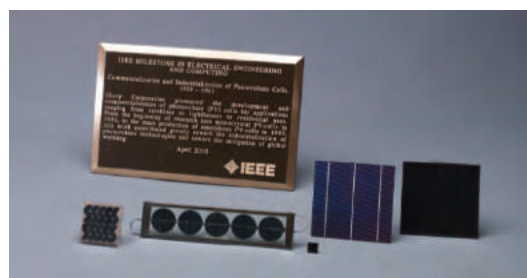
First Transpacific Reception of a Television (TV) Signal via Satellite, 1963
Dedicated on 23 November 2009

「IEEEマイルストーン」銘板   「茨城第4アンテナ」〈IBA-4〉

On 23 November 1963, Ibaraki Satellite Communication Center received the first transpacific transmission of a TV signal from Mojave earth station in California, U.S.A., via the Relay 1 communications satellite. The Ibaraki earth station used a 20m Cassegrain antenna, the first use of this type of antenna for commercial telecommunications. This event demonstrated the capability and impact of satellite communications and helped open a new era of intercontinental live TV programming relayed via satellite.

Mount Fuji Radar System, 1964
Dedicated on 6 March 2000

Completed in 1964 as the highest (3776m) weather radar in the world in the pre-satellite era, the Mount Fuji Radar System could observe major weather phenomena over 800 km away. In addition to advancing the technology of weather radar, it pioneered aspects of remote-control and low-maintenance of complex electronic systems. The radar was planned by the Japan Meteorological Agency and constructed by Mitsubishi Electric Corporation.

Courtesy Japan Meteorological Agency, from
http://www.jma.go.jp/jma/kishou/jma-magazine/1403/

Tokaido Shinkansen (Bullet Train), 1964
Dedicated on 13 July 2000

Tokaido Shinkansen 0-series

Tokaido Shinkansen (Bullet Train) was designed with the world's most advanced electrical and mechanical train technologies to operate at speeds up to 210 km/h, a world record when it began service in 1964. It has carried over 100 million passengers per year for many years with an excellent safety record.

Pioneering Work on Electronic Calculators, 1964-1973
Dedicated on 1 December 2005

A Sharp Corporation project team designed and produced several families of electronic calculators on the basis of all-transistor (1964), bipolar and MOS integrated circuit (1967), MOS Large Scale Integration (1969) and CMOS-LSI/Liquid Crystal Display (1973). The integration of CMOS-LSI and LCD devices onto a single glass substrate yielded battery-powered calculators. These achievements made possible the widespread personal use of hand-held calculators.
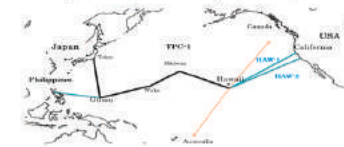
The First Transpacific Cable System (TPC-1), 1964
Dedicated on 12 November 2014

The transpacific undersea coaxial telephone cable system linking Japan, Hawaii, and the U.S. mainland became operational in 1964. President Lyndon Johnson and Prime Minister Hayato Ikeda inaugurated this communications link on 19 June 1964. The joint project involving American Telephone and Telegraph, Hawaiian Telephone Company, and Kokusai Denshin Denwa improved global communication and contributed to deep-water submarine cable technologies.

The High Definition Television System, 1964-1989
Dedicated on 11 May 2016
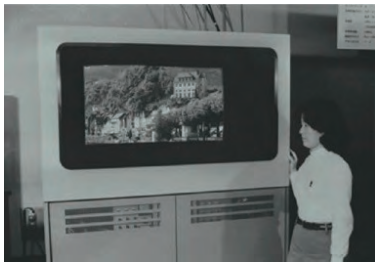
NHK (Japan Broadcasting Corporation) developed high-definition television (HDTV), a high-resolution and wide-screen television system designed to convey a strong sense of reality to viewers. Research began in 1964, ranging from psychophysical experiments to system development. In 1989, the world's first HDTV broadcast via satellite opened a new era in broadcasting. Since 1989, HDTV has spread throughout the world.

Railroad Ticketing Examining System, 1965-1971
Dedicated on 27 November 2007

Pioneering ticket examining machines, designed to speed commuter railroad use substantially, were first installed in 1965, based on work by a joint research team of Osaka University and Kintetsu Corporation. Following this work, an improved version – based on joint work by Omron, Kintetsu, and Hankyu Corporations using punched cards and magnetic cards – was first deployed in 1967 and at nineteen stations in 1971.

Electronic Quartz Wristwatch, 1969
Dedicated on 25 November 2004

After ten years of research and development at Suwa Seikosha, a manufacturing company of Seiko Group, a team of engineers headed by Tsuneya Nakamura produced the first quartz wristwatch to be sold to the public. The Seiko Quartz-Astron 35SQ was introduced in Tokyo on December 25, 1969. Crucial elements included a quartz crystal oscillator, a hybrid integrated circuit, and a miniature stepping motor to turn the hands. It was accurate to within five seconds per month.

The First Word Processor for the Japanese Language, 1971-1978
Dedicated on 4 November 2008

Between 1971 and 1978, the first Japanese-language word processor was developed. Researchers headed by Ken-ichi Mori created a wholly new concept of Japanese word processing. Their first practical system, JW-10, was publicly unveiled on 3 October 1978. The JW-10, and improved versions, played a major role in advancing the Information Age in Japan, and provided the basis for Japanese-language word-processing software in personal computers.

First Practical Field Emission Electron Microscope, 1972-1984
Dedicated on 31 January 2012

Hitachi developed practical field emission electron source technology in collaboration with Albert Crewe of the University of Chicago, and commercialized the world's first field emission scanning electron microscope in 1972. This technology enabled stable and reliable ultrahigh resolution imaging with easy operation. Field emission electron microscopes have made invaluable contributions to the progress of science, technology and industry in physics, biology, materials, and semiconductor devices.

Line Spectrum Pair (LSP) for high-compression speech coding, 1975
Dedicated on 22 May 2014

Line Spectrum Pair, invented at NTT in 1975, is an important technology for speech synthesis and coding. A speech synthesizer chip was designed based on Line Spectrum Pair in 1980. In the 1990s, this technology was adopted in almost all international speech coding standards as an essential component and has contributed to the enhancement of digital speech communication over mobile channels and the Internet worldwide.

N. Suganuma & F. Itakura, Speech Analysis and Synthesis Methods Developed at ECL in NTT – From LPC to LSP -, Speech Communication, Vol.5, Issue 2, pp.199-215, June 1986

Gapless Metal Oxide Surge Arrester (MOSA) for electric power systems 1975
Dedicated on 18 August 2014

Meidensha Corporation developed MOSA and its mass production system by innovating on Panasonic Corporation's ZnO varistor basic patent. MOSA dramatically raised performance levels against multiple lightning strikes and contamination, and led to UHV protective device development. This technology contributed to improving the safety and reliability of electric power systems and to establishing international standards.

Development of VHS, a World Standard for Home Video Recording, 1976
**Dedicated on 11 October 2006**

At the Yokohama Plant of Victor Company of Japan, Limited, a team of engineers headed by Shizuo Takano and Yuma Shiraishi developed VHS (Video Home System) format. They looked ahead to the need for home video tape recorders and embodied their idea in unique inventions. The first model JVC HR-3300 was announced on 9 September 1976. Their basic design with subsequent improvement gained wide customer acceptance. VHS became the world standard for home video tape recorders.

Vapor-phase Axial Deposition Method for Mass Production of High-quality Optical Fiber, 1977-1983
Dedicated on 21 May 2015

In 1977, Dr. Tatsuo Izawa of Nippon Telegraph and Telephone Corp. (NTT) invented the vapor-phase axial deposition (VAD) method suitable for the mass production of optical fiber. NTT, Furukawa Electric, Sumitomo Electric, and Fujikura collaboratively investigated the fabrication process. The technology successfully shifted from research and development to commercialization. The VAD method contributed greatly to the construction of optical-fiber networks.
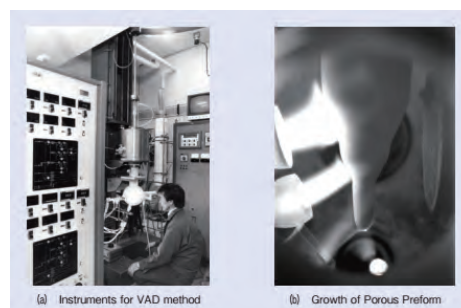
NTT Technical Journal, p.97, Sept. 2015
http://www.ntt.co.jp/journal/1509/files/jn201509094.pdf

20-inch Diameter Photomultiplier Tubes, 1979-1987
Dedicated on 5 November 2014

Hamamatsu Photonics K.K. began developing 20-inch diameter photomultiplier tubes at Toyooka Factory in 1979 for a 3000-ton water-filled Cherenkov particle detector, Kamiokande-II, in response to a request by Professor Masatoshi Koshiba. 1071 PMTs on it collected photons induced in the water by the particles falling on it. Kamiokande-II detected a neutrino burst in the Supernova SN1987A in 1987, earning Professor Koshiba a Nobel Prize in 2002.

International Standardization of G3 Facsimile, 1980
Dedicated on 5 April 2012

This site commemorates the creation of the Modified READ two-dimensional coding for G3 facsimile developed through the careful collaboration of NTT and KDDI. Strong Japanese leadership with intense international discussion, testing, and cooperation produced the International Telecommunications Union G3 recommendation in 1980. This innovative and efficient standard enabled the worldwide commercial success of facsimile.

G3 facsimile using MR (modified READ) method
© NTT Cyber Space Laboratories, NTT Corporation

Outdoor large-scale color display system, 1980
Dedication date: TBD

Mitsubishi Electric developed the world's first large-scale emissive color video display system and installed it at Dodger Stadium, Los Angeles, California in 1980. It achieved bright, efficient, high-quality moving images using matrix-addressed cathode-ray tubes (CRT) as pixels. With increased dimensions and resolution, the system has entertained and informed millions of people in sports facilities and public spaces worldwide.

Automotive Navigation System, 1981
Dedicated on 2 March 207

The world's first map-based automotive navigation system, 'Honda Electro Gyrocator', was released in 1981. This system was based on inertial navigation technology using mileage and gyro sensors. It pioneered the on-board display of the destination path of a moving vehicle on overlaying transparent road-map sheets, and contributed to the advancement of automotive navigation systems.

Nobeyama 45-m Telescope, 1982
Dedicated on 14 June 2017

© National Astronomical Observatory of Japan

In 1982, the Tokyo Astronomical Observatory in collaboration with Mitsubishi Electric Corporation completed the 45-m telescope as the world's largest antenna for millimeter-wave radio astronomy. The 45-m telescope's innovative engineering contributed to the progress of radio astronomy by enabling high-resolution and high-sensitivity observations. Notable discoveries included new interstellar molecules and a black hole.

First Direct Broadcast Satellite Service, 1984
Dedicated on 18 November 2011

NHK began the world's first direct broadcast satellite service in May, 1984. This was the culmination of eighteen years of research that included the development of an inexpensive low-noise receiver and investigations of rain attenuation in the 12 GHz band. RRL, NASDA, TSCJ, Toshiba Corporation, General Electric Company, and NASA participated with NHK to make satellite broadcasting to the home a practical reality.

The MU (Middle and Upper atmosphere) Radar, 1984
Dedicated on 13 May 2015

In 1984, Kyoto University built the MU (Middle and Upper atmosphere) radar as the first large-scale MST (Mesosphere, Stratosphere, and Troposphere) radar with a two-dimensional active phased array antenna system, with the collaboration of Mitsubishi Electric Corporation. The MU radar enabled continuous and flexible observation of the atmosphere, and has contributed to the progress of atmospheric science and radar engineering.

Toshiba T1100, a Pioneering Contribution to the Development of Laptop PC, 1985
Dedicated on 29 October 2013

The Toshiba T1100, an IBM PC compatible laptop computer that shipped in 1985, made an invaluable contribution to the development of the laptop PC and portable personal computers. With the T1100, Toshiba demonstrated and promoted the emergence and importance of true portability for PCs running packaged software, with the result that T1100 won acceptance not only among PC experts but by the business community.

Emergency Warning Code Signal Broadcasting System, 1985
Dedicated on 11 May 2016

Radio set which can receive Emergency Warning Code Signal
https://www.nhk.or.jp/strl/open2016/tenji/f4.html

NHK (Japan Broadcasting Corporation) began broadcasting emergency warning code signals in 1985. The system embedded signals within AM and FM radio broadcasts that provided reliable and prompt transmission of emergency warning information to the public. During the course of digital TV standardization, the warning codes were integrated into technical standards of international satellite and terrestrial broadcasting.

Sharp 14-inch Thin-Film-Transistor Liquid-Crystal Display (TFT-LCD) for TV, 1988
Dedicated on 10 Jun3 2014

Sharp demonstrated a fourteen-inch TFT-LCD for TV in 1988 when the display size of the mass-produced TFT-LCD was three inches. The high display quality in Cathode Ray Tube size convinced other electronic companies to join the infant TFT-LCD industry aimed at emerging full-color portable PCs. Two decades later, TFT-LCDs replaced CRTs, making the vision of RCA's LCD group in the 1960s a reality.

IEEE

IEEE REGION 10

China Council & Sections
- Beijing Section
  (Subsection: Guangzhou, Shandong)
- Chengdu Section
- Harbin Section
- Nanjing Section
  (Subsection: Hefei, Zhejiang)
- Shanghai Section
- Wuhan Section
- Xian Section

Korea Council & Sections
- Changwon Section
- Daejeon Section
- Kwangju Section
- Seoul Section
  (Honam Subsection)
- Taegu Section

Japan Council & Sections
- Fukuoka Section
- Hiroshima Section
- Kansai Section
- Nagoya Section
- Sapporo Section
- Sendai Section
- Shikoku Section
- Shin-etsu Section
- Tokyo Section

China Council

Korea Council

Japan Council

Afghanistan Subsection

Islamabad Section
(Peshawar Subsection)

Lahore Section
(Bahawalpur Subsection)

Karachi Section

India Council

Nepal Subsection

Bangladesh Section

Taipei Section
Tainan Section

Hong Kong Section
Macau Section

Republic of Philippines Section

Vietnam Section

Thailand Section

Sri Lanka Section
(Sri Lanka Central Region Subsection)

Malaysia Section
(Sarawak Subsection)

Brunei Darussalam Subsection

Singapore Section

Indonesia Section

☆ **Council**

○ **Section**
(outside Council)

◎ **Subsection**
(represented by its country)

India Council & Sections
- Bangalore Section
  (Mangalore Subsection)
- Bombay Section
  (Madhya Pradesh Subsection)
- Delhi Section
  (Subsection Chandigarh, Rajasthan)
- Gujarat Section
- Hyderabad Section
  (Subsection: Ananthapuramu, Guntur, Vizag Bay)
- Kerala Section
  (Subsection: Kochi, Malabar)
- Kharagpur Section
- Kolkata Section
  (Subsection: Bhubaneswar)
- Madras Section
  (Podhigai Subsection)
- Pune Section
- Uttar Pradesh Section
  (Roorkee Subsection)

Australia Council

Fiji Subsection

New Zealand Council

Australia Council & Sections
- Australia Capital Territory Section
- New South Wales Section
- Northern Australia Section
- Queensland Section
- outh Australia Section
- Victorian Section
  (Tasmania Subsection)
- Western Australia Section

New Zealand Council & Sections
- New Zealand Central Section
- New Zealand North Section
- New Zealand South Section

"Created by Ewell Tan, June 2017"