

Foreword

On behalf of my team it is a great pleasure to present the R10 Newsletter Special Supplement for the 2016 SYWL Congress, held to mark the start of 50 Years Celebrations of IEEE Region 10. It contains motivating messages from IEEE leadership and some past and present R10 Coordinators, as well as a brief overview of historical facts about the impressive growth of R10 over the past fifty years. The Special Supplement contains separate sections for all four SYWL Congress tracks and the WIE Global Summit. We have tried to make it interesting as well as attractive and to be an important document for future reference.

While celebrating the 50 Years of R10, it is important to remember and cherish our volunteers from across the Asia-Pacific countries whose selfless and dedicated hard work has transformed the IEEE Region 10 into the most dynamic and largest vibrant region of the IEEE. Many of these dedicated volunteers also served on the R10 EXCOM and worked tirelessly to progress the mission of IEEE and created opportunities for IEEE members to enhance their skills for advancing their careers. Some of those R10 EXCOM members worth mentioning include Late Professor Marzuki bin Khalid, who as the R10 SAC was the driving force behind the first R10 Student Congress at Singapore in July 2002. His successors Professor Mini Thomas, Professor Takao Onoye and Om Perakash Batra continued the momentum and organised bigger Student Congresses, attracting WIE and GOLD to join them. Similarly, the R10 WIE picked up the pace when Professor Ramalatha Marimuthu took charge as the R10 WIE Coordinator. She was followed by another strong WIE Coordinator Professor Takako Hashimoto. Both Ramalatha and Takako Hashimoto were recognised for their leadership and given the responsibility to lead the MGA WIE. On the Young Professionals side both Helene Fung and Timothy Wong successfully led GOLD activities as R10 Coordinators. Timothy also went on to serve at the MGA level and was instrumental in changing the focus as well the name from GOLD to Young Professionals to make it more relevant to members in their early careers. Some of these volunteers have kindly contributed write-ups about their experiences in this Special Supplement. I would like to express my sincere gratitude to all of them for their support to my team and me.

I would also like to acknowledge the efforts of my team members, Shamli Singh and Isha Pachkawade for their excellent efforts to collect the material and edit it, Kinjal Sanghvi and Shriya Hardikar for the graphic design work and the title page for the Special Supplement. They did all this excellent work on top of the immense pressure of their exams period. Thank you so much and I am confident you will excel in your exams too!

Special thanks to Professor Rajesh Ingle for providing a wonderful team of student volunteers mentioned above from Pune Institute of Computer Technology, India.

Zia Ahmed
Editor, The IEEE Region 10 Newsletter (2016)

Table of Contents

Foreword

Messages

Barry L. Shoop, IEEE President 2016
Karen Bartleson, IEEE President-Elect 2016
Lawrence Wong, Vice President, Member and Geographic Activities
Ramakrishna Kappagantu, R10 Director/Delegate 2015-16

50 Golden Years of IEEE Region 10

Region 10 SYWL 2016 and WIE Global Summit

R10 Student Activities

Message from R10 SAC Chair Dr. Rajesh Ingle
Activities of R10 SAC
Larry K. Wilson Award Winners Speak
Revamping Student Branches in Region 10

R10 Young Professionals

Message from R10 Young Professionals Coordinator Nivas Ravichandran
Young Professionals Track of R10 SYWL Congress 2016
Early Achievements of R10 GOLD
Transition from GOLD to Young Professionals

IEEE WIE Global Summit - *Embracing Engineering and Technology, Breaking Barriers*

R10 Women In Engineering

Message from R10 WIE Coordinator Dr. Celia Shahnaz
Message from IEEE President-Elect 2016 Karen Bartleson
Dawn and Rise of R10 WIE: An Inspiring Story

Messages

Ramalatha Marimuthu, Chair, IEEE WIE Special Events Committee
Takako Hashimoto, Chair, IEEE WIE (2015-16)
Laura Edelson, Chair, IEEE Humanitarian Activities Committee
Jyotji Ramaswami, Chair of First WIE AG in R10 - Kerala Section, 2002
Er. Seenu Crispin, Chair of First WIE SB AG in R10 - Chengannur College of Engineering, IEEE Kerala Section, 2003

Record of R10 WIE Award Winners

R10 Life Members

Message from R10 Life Member Coordinator V. K. Damodaran

Activities of Life Members Affinity Groups

Kerala Section - Shastra Vismaya & Bottom of the Pyramid

Japan - Life Members Activities - Tokyo and Kansai Sections' LM Affinity Groups

Bombay Section

Host for R10 SYWL Congress 2016

IEEE Bangalore Section, IEEE Bangladesh Section
IEEE Delhi Section, IEEE Hyderabad Section
IEEE Pune Section, IEEE Uttar Pradesh Section

The theme of the IEEE Region 10 Student/Young Professionals/Women-in-Engineering/Life Member Congress 2016, Bangalore, India is **Technology: A Global Change Agent**. The title page depicts this idea by showing transition of the roots i.e. old technologies, on whose foundation rises the tree and its foliage i.e. the latest technologies. Technology is not bound by geographical partitions and yet it touches all of us equally. That is the spirit we celebrate on the mark of 50th year of Region 10.

Message from IEEE President 2016



IEEE members and delegates, it is an honor to welcome you to the IEEE Region 10 Student/Young Professional/Women in Engineering/Life Member (SYWL) Congress 2016.

I would like to thank all the volunteers, chairs, and coordinators who have given unselfishly of their time, energy, and expertise in creating this truly exceptional event. This year's SYWL Congress is an extra special event as it is the start of the 50th anniversary celebration of IEEE in Asia-Pacific. This yearlong commemoration marks the formation of IEEE Region 10.

IEEE Region 10 has always been one of the most dynamic and vibrant regions of IEEE. The generations of engineers and technologists who formed IEEE Region 10 have developed it into one of the powerhouse regions within IEEE's global presence, and whose accomplishments advanced—and continue to advance—the technologies of our world. Since its origin, IEEE Region 10 has nurtured its young leaders and built an open, diverse community of members across its numerous borders. I congratulate you on 50 years of endeavor and achievement—and I look forward to the strides you will make over the next 50 years.

Heralding the next generation of IEEE leaders and innovators, the R10 2016 SYWL Congress provides a forum for collaboration among IEEE members across the region. Young women and men just starting to explore the possibilities within technology. Active engineers currently working in business, in government, and in academia. Retired professionals with a wealth of acquired knowledge.

I ask you all to inspire those around you to learn, to innovate, and to discover. I encourage the participants in this Congress to become leaders at the local, Regional, Societal, or global levels.

Carry forward IEEE's long-standing tradition of commitment to advancing technology for the benefit of humanity.

Barry L. Shoop
2016 IEEE President and CEO

Message from IEEE President-Elect 2016



Greetings, IEEE members and delegates! I welcome you to the IEEE Region 10 Student/Young Professional/Women in Engineering/Life Member (SYWL) Congress 2016. I would also like to wish a happy and successful 50th anniversary year to all members of Region 10.

For the past half-century, the members and volunteers of IEEE Region 10 have been a driver of technological advancement and economic growth. You have harnessed the unmatched power of technology to improve people's lives in this diverse and dynamic part of the world.

When Region 10 was founded 50 years ago, cars had AM radios and carburetors, telephones were connected by wires, and huge computers stored their bits of data on cards and tape. Today, our cars talk to satellites or even drive themselves. Our telephones go everywhere – they can stream video or even monitor our biorhythms. Now, anyone can store 4TB of data at home on a drive the size of milk carton.

As the faster-than-ever pace of technological and social change continues to quicken, flexibility and agility are increasingly the hallmarks of sustainable, successful, and relevant institutions. Our leading association dedicated to the advancement of technology must itself evolve to sustain that distinction.

IEEE members are responsible for guiding the organization through the opportunities and challenges of the next 50 years. I encourage all of our members to be engaged, be involved, and be informed. Our annual elections opened in August. Be sure to contribute your voice to the future of IEEE by voting. Consider adding your names to a future ballot as the upcoming leaders of IEEE!

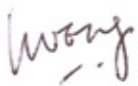
Karen Bartleson
2016 IEEE President-Elect

Message from Vice President, MGA Board



A warm welcome to all the participants of the 2016 IEEE Region 10 Student/YP/WIE/LM Congress. This year's Congress is an especially significant event as it coincides with the celebration of the 50th Anniversary of the IEEE Region 10. It will be an opportunity for the four volunteer communities

of students, young professionals, women-in-engineering and life members to share experiences and network. The program provides a variety of interesting tracks on Technology, Innovation, Business and Social entrepreneurship that will include eminent speakers. I wish to congratulate the organizing committee for their dedicated efforts to bring together such an exciting event. Finally, I wish all participants a wonderful and memorable Congress.



Lawrence Wong
2016 IEEE Vice President, Member and Geographic Activities

Message from IEEE R10 Director/Delegate



Dear Valuable Delegates to IEEE 2016 R10 SYWL Congress,

Warm welcome to India! It is indeed a privilege to host you all at the congress.

As you are aware, IEEE R10 is celebrating an eventful 50 years Anniversary, for IEEE in advancing technology

and making a difference to members, the academic community and industry practitioners in the Asia-Pacific Region. The R10 celebrations will start on 24th Aug 2016 in Bangalore, India and will be having year-long activities culminating with IEEE Sections Congress 2017 at Sydney, Australia.

This year's IEEE R10 SYWL Congress is first part of the celebrations as we wanted to engage various sections of membership during celebrations. The organisers have put together a very colourful and innovative agenda for 3 days and I am sure that you will derive maximum benefit out of this Congress. I urge you to make this Congress a grand success by active involvement and fruitful interaction in the Congress.

I wish to thank hosting section (Bangalore) and partner sections (Bangladesh, Delhi, Hyderabad, Pune and Uttar Pradesh) in putting together this event along with R10 SYWL Co-ordinators. Special thanks to all our sponsors and well wishers.

Together we can engineer and achieve maximum. Let's meet, Interact, Engage, Enrich and Enjoy Congress network.

Ramakrishna Kappagantu
IEEE Board of Directors
Region 10 (Asia-Pacific) Director

50 GOLDEN YEARS OF IEEE REGION 10



An Overview of R10 Growth

Fifty Golden Years of IEEE Region 10 Growth

The IEEE Region 10 is today a thriving community of over one hundred and thirteen thousand members spread over the Asia-Pacific region and constitutes the largest part of IEEE membership outside the USA. The trend of growth in membership of IEEE in the Asia-Pacific region is a good indicator of changing socioeconomic conditions in the region which houses from some of the poorest to most technologically advanced countries in the world. The story of IEEE membership's growth in R10 is an important chapter of the story of the Asia-Pacific development. At the beginning of 21st century with China joining the World Trade Organization and China, India plus few other countries rapidly emerging on the world stage, the prospect of IEEE membership growth in the region greatly enhanced. The number of educational institutes across the region have been growing steadily to meet the demands of developments and emerging market with standard of education significantly improving. The IEEE and its members have been an important part of this transformation, bring more technical conferences, conducting more training programs, creating vast opportunities for professional development and thus introducing technology for far reaching changes in socioeconomic condition of Asia-Pacific countries.

At the time of establishment of R10 in January 1967 there were two IEEE Sections in the Asia-Pacific, namely the IEEE Tokyo Section and IEEE India Section. Some other Sections were formed within few years after 1967. At the time of the formation of Region 10, named as "Rest of the World" and covering Asia and parts of Africa, the total membership was around two and half thousand, which was smaller than that in Regions 7 and 8. With the appointment of Dr Shigeo Shima of Japan as the inaugural steering Director of R10 for 1967 – 1968, the establishment of IEEE Sections and the gradual expansion of IEEE community in the Asia-Pacific began. Four years after region's formation the R10 Committee was created with the participation of India, New Zealand, Pakistan and Tokyo Sections as committee members and the first regional meeting took place at the Peninsular Hotel, Hong Kong in July 1971.

By the end of first decade (1967 – 1976) the number of Sections had grown to 11 and the membership stood around 6000. In India where just one country Section had been formed initially, new independent Sections were established in the larger cities. The formation of multiple IEEE Sections in India was followed by establishment of the IEEE India IEEE Council on 20 May 1976.

In the second decade (1977 – 1986) 16 new Sections

were established. In December 1980, the numbers of IEEE members were around 7000. In 1981 the African continent was transferred from Region 10 to Region 8 and the IEEE Board of Directors changed the geographical area description of R10 as Asia-Pacific Region. And yet the membership at the end of 1981 passed the 10,000 mark, indicating a growth rate of better than 10% sustained for many years. In the same period (1981-1982) the inception of region's flagship international technical conference TENCON took place and the first conference was hosted by Hong Kong Section and co-sponsored by R10. The TENCON immensely boosted IEEE visibility among the engineering and scientific community and attracted more members. By the end of second decade the total number of Sections were 27.

In the third decade (1987 – 1996) another 9 Sections were established and the total number of Sections grew to 36. The formations of two new Councils also took place in this decade with IEEE New Zealand Council forming on 22 August 1980 and the IEEE Australia Council on 30 May 1986 after the IEEE Australia Section was renamed as the NSW Section.

By the end of third decade, R10 membership touched 35,276, which was 11.3% of total IEEE membership. With this growth rate the Region 10 was on track to become the largest region outside the US.

In the fourth decade (1997 to 2006) another 17 Sections were added bringing the total number of Sections to 53. Until November 1998 the IEEE Tokyo Section was only one Section in Japan, serving to share technical, professional and personal interests among Japanese IEEE members, who scattered geographically over Japan. In order to provide better service to Japanese IEEE members the Tokyo Section was divided into eight IEEE Sections in November 1998 and subsequently the IEEE Japan Council was formed on 25 June 1999.

The membership growth rate was fastest from mid-nineties to 2001. The growth of student membership also became high in this period and the number of Student Branches being set up was at more than 1 per month. Membership growth, total membership (inclusive of student members), of R10 continued to grow for the 4th consecutive year in 2001. The growth in student members for R10 was at a tremendous 19.1%, while that for higher member grades was only 1.1% for 2001.

By 2003-04 Region 10 had 4 Councils, 44 Sections, 4 Sub-sections, 211 Chapters and 245 Student Branches with a total membership of about 55,000 from 16 countries in Asia and the Pacific. It was now the largest and the fastest growing Regions in IEEE. By 2008 the total number of members reached about 67,000, making it as one of the fastest growing regions.

Membership development has been always a priority for R10 leadership and much attention has been paid towards establishment of new Sections, especially in the Asia-Pacific countries where there was no or little IEEE presence. These efforts led to the establishment of IEEE Sections in Vietnam and China. Six new Sections were established in China in 2005 -2006. One new Section, Shin-Etsu Section, was set up in Japan in 2006 and the New Zealand Central started in August 2007. Also in 2007 the IEEE China Council came into being on 15 June 2007. The IEEE Korea Council which had collapsed was re-established on 27 June 2009 and thus becoming the sixth Council in R10.

By December 2015, the R10 membership stood at 113,573, 58 Sections, 24 Subsections and over 1200 Student Branches. R10 has added two more conference, the TENSYP and the R10 Humanitarian Technology Conference (HTC) to its flagship events. The bar chart below shows the incredible increase of membership in R10. Tables 1 – 3 show the various membership trends over the last ten years and top 10 Sections around the globe in terms of percentage of change in membership figures. With the impressive growth of R10 for five decades, it is not surprising to see that now almost half of top 10 Sections in these tables belong to R10. In Table 1 the phenomenal membership growth in India and China is notable. Similarly in Table 3 the remarkable growth of student membership in India over the last ten years is worth noting. The student membership in China over the same period increase by three fold.

R10 Membership Growth in 50 Years

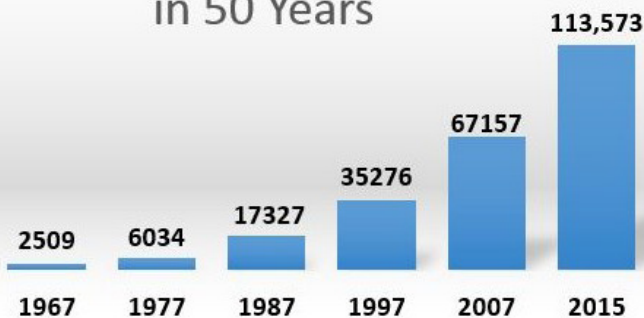


Table 1. Total IEEE Membership Trends in Top 10 Countries

2015 Rank	Country	2005 Membership	2015 Membership	% Change Since 2005
1	USA	218,260	194,167	-11.0%
2	India	22,134	46,721	111.1%
3	Canada	15,380	17,163	11.6%
4	China	3,414	15,041	340.6%
5	Japan	12,703	14,326	12.8%
6	UK & Ireland	9,524	11,212	17.7%
7	Germany	5,940	8,179	37.7%
8	Australia	6,078	7,954	30.9%
9	South Korea	2,648	4,971	87.7%
10	Italy	3,885	4,916	26.5%

Table 2. Higher Grade Membership Trends in Top 10 Countries

2015 Rank	Country	2005 HG Membership	2015 HG Membership	% Change Since 2005
1	USA	190,878	164,638	-13.7%
2	India	9,033	14,820	64.1%
3	Canada	12,026	13,418	11.6%
4	Japan	11,488	12,435	8.2%
5	China	2,375	10,390	337.5%
6	UK and Ireland	7,605	8,744	15.0%
7	Australia	5,007	6,445	28.7%
8	Germany	4,830	6,192	28.2%
9	Italy	3,180	3,914	23.1%
10	France	2,429	3,429	41.2%

Table 3. Student Membership Trends in Top 10 Countries

2015 Rank	Country	2005 Student Membership	2015 Student Membership	% Change Since 2005
1	India	13,101	31,901	143.5%
2	USA	27,382	29,529	7.8%
3	China	1,039	4,651	347.6%
4	Canada	3,354	3,745	11.7%
5	UK and Ireland	1,919	2,468	28.6%
6	Germany	1,110	1,987	79.0%
7	Japan	1,215	1,891	55.6%
8	South Korea	666	1,689	153.6%
9	Australia	1,071	1,509	40.9%
10	Brazil	1,108	1,424	28.5%

Zia Ahmed

Member, R10 History Committee (2016)



It gives me immense pleasure to write this message for R10 Newsletter Special Supplement for the Student/Young Professionals/Women in Engineering/Life Members (SYWL) Congress 2016, which is being organised to begin 50th

year celebration of Region 10, at Bangalore, India. This Congress provides platform for all including student members to showcase their talent, views and further strengthens IEEE activities in the region.

It is a great pleasure to serve as a Student Activities Chair at Region 10. This year is very important for Student Activities as we have established three new awards, and these awards will be presented on 'Awards Night' to be held on 25th August, 2016 during the Congress. We have also successfully launched new projects in the region, and the response to these projects and contests is overwhelming. I am grateful to all the Student members and R10 Student Activities Committee members for their commendable efforts.

Region 10 Student Activities Committee takes care of the needs of 45,000+ student members spread over 1,250+ student branches in the Asia-Pacific region (Region 10) of the IEEE. The committee conducts regular and special activities for students to improve technical knowledge, management skills and to enhance networking among members and student branches.

I thank all the volunteers for their contributions and interest. On behalf of IEEE R10 Students Activities Committee, I congratulate all organising sections and wish this Congress all success.

Dr. Rajesh Ingle
Student Activities Chair
IEEE Region 10 (Asia Pacific)
Chair - IEEE Pune Section, 2014
Member, IEEE India Council

Activities of Region 10 SAC

An Overview

The Region 10 Student Activities Committee (R10 SAC) strives to take care of the needs of 45,000+ student members in thousands of educational institutes and more than 1300 Student Branches. The R10 SAC completely aligns itself with the vision and mission of MGA Student Activities Committee, which are:

Vision: *To be recognized as the global platform to inspire, enable, develop, and support students as the future leaders of our profession. Student Branches in the region.*

Mission: *To deliver a common, high quality IEEE Student member experience globally, for lifelong, professional success through IEEE.*

The R10 SAC conducts regular and special activities to enhance students' technical knowledge, management skills and provide opportunities for promotion of networking among members and Student Branches. Some of the regular activities organised by the R10 SAC include Undergraduate & Post-graduate Paper Contest, Website Contest, Larry Wilson Award and Exemplary Student Branch Awards. R10 SAC committee also sponsors the first prize winner of the paper contest for the post-graduate category to present the paper at TENCON. Many new activities are specifically designed to energize the inactive Student Branches and to encourage them to take up an active role in IEEE once again.

Since the Student Branch Counsellors play a vital role in keeping the Student Branches active and assist in a smooth changeover in student leadership of the Branch, it has been recognized to empower and motivate the Branch Counsellors by organizing 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.

The flagship event to promote R10 SAC objectives is the R10 Students Congress held every second year to network, learn about the latest IEEE programs, and share strategies for enhancing membership value. The R10 Students has evolved to be the biggest IEEE Region 10 event for the students, young professionals and women in engineering (WIE) providing ample opportunities to explore ideas, develop skills and discuss issues in their profession.

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

In 2002 the then R10 Student Activities Coordinator Late Professor Marzuki Bin Khalid and



Marzuki Bin Khalid



The participants of the 1st R10 Students Congress with IEEE President Dr Wallace Reads



Darrel Chong

Student Representative Darrel Chong planned for a regional student congress. As always the first step to launch a new program needed lots of brainstorming and planning to lay the solid foundation for the endeavour to be successful and thrive. Prof Marzuki and Darrel plans for a R10 Student Congress were endorsed by the R10 Executive Committee in 2001.

The first IEEE Region 10 Student Congress was held in Singapore from the 16 - 20th July 2002 and hosted by two local Student Branches, the NUS SB and NTU SB. The main objectives for the Student Congress to provide a platform for the mutual exchange of ideas between the members of R10 Student Branches. The congress concluded with a number of suggestions to improve the membership and effectiveness of the Student Branches.

The Second R10 Student Congress held at Hong Kong on 16-18 July 2004 and was attend by around 90 students and Professor Jung Uck Seo, R10 Director, Professor Seichi Takeuchi, R10 Director-Elect 2005-06 and Cecilia Jankowski, MD of Regional Activities Board. Several keynote speakers from industry also attend the congress and gave talks. The host for the second R10 Students Congress were the three Student Branches of The Hong Kong University, The Chinese University of Hong Kong and The Hong Kong Polytechnic University. The key features of the congress include brainstorming the important issues for student members and presentation by guest VIPs from IEEE and industry. An unexpected challenged faced by the congress organisers and delegates was a strong typhoon forcing rescheduling the program on

the spot and still making it a successful event.

The Third IEEE Region 10 Student Congress was held from 13 to 17 July, 2006 in Beijing China. The congress focused on widening the outlook of R10 Student Branches towards the whole Asia-Pacific region and create opportunities for them to know about China. The main objectives for the congress were:

- How to improve communication and corporation among SBs and student members to tackle common issues, identified by the previous two Student Congresses such as Student Branch susscess and membership retention. Share the experience of Student Branch activities; make better plans on improving IEEE student members' academic abilities.
- Nurture the management and leadership capabilities of the student representatives with an emphasizing on developing the communication skills, especially for members from non-English speaking countries.

A key development with the third R10 Student Congress was its broadening by including a two-day R10 GOLD Congress in conjunction to Student Congress. The GOLD congress was held on 14 and 15 July 2006. The GOLD Congress was jointly organized by R10 and IEEE Beijing Section. One of main purposes of the GOLD Congress was for student and GOLD members to work together to explore the issue of transition from student to GOLD member. The GOLD Congress gave the student delegates the great opportunity to meet other IEEE members and discuss all affairs of their Branches. The Congress had several international speakers from industry and academia including Professor Michael Lightner.



Professor Ramalatha Marimuthu welcoming guests to the 2008 R10 SWG Congress



Delegates and dignitaries of IEEE 125 Anniversary Region 10 Students Congress

The GOLD Congress featured a diverse and exciting program, which included workshops and superb 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 Student 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 27-30th 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 student part of the congress was from 27 – 30 January whereas the GOLD and WIE part of the congress was held from 28 – 30 January 2008. The SGW Congress program combined serious technical and leadership lessons with fun filled activity sessions.

IEEE President Lewis M. Terman attend the event and .gave the inaugural address to a joint inauguration of the GOLD/WIE Congress. Also present at the congress were R10 Director Professor Janina Mazierska and IEEE WIE Chair Karen Panetta, IEEE President Elect 2008 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.

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

The fifth R10 Student Congress was held to mark the IEEE 125th Anniversary. It was held from July 16 to July 19, 2009 at the National University of Singapore; from 16 -19th July 2009. 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 dignitaries from IEEE, industry and academia. This was one of the most significant student celebrations for the 125th Anniversary of IEEE. Also present at congress were IEEE President 2008 Dr Lewis M. Terman, IEEE Foundation President Dr. Richard Gowen, Vice President and Chair MGAB Mr. Joe Lillie, R10 Director Dr. Yong Jin Park, R1 Director Dr. Howard Michael, R8 Director Elect Dr. Marko Delimar, R10 Director Elect Dr. Lawrence Wong, Past R10 Director Dr. Tek Seng Low and a galaxy of other dignitaries from IEEE and Industry. The MGAB Student Committee members from all IEEE Regions also attended the event making it a truly global congress.

The 2009 R10 Student Congress was a huge success where student from R10 had the opportunity to network at a global scale and get educated from the very learned IEEE leaders.

The next R10 Student 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 The University of Auckland and was a great opportunity for GOLD, Student and WIE member



2011 R10 SGW Congress delegates

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.

The theme of the R10SC was “Emerging Technologies: Realizing innovative ideas that will define 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”. Such a multifaceted programme encouraged participants to envision the future, and was a delicate mix that stimulated the collaboration of world-changing technologies.

The seventh R10 Student/GOLD/WIE Congress was hosted from 11th to 14th July 2013 at Hotel Taj Krishna, 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 the 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 told the delegates seven very convincing to be proud to be an IEEE member, including IEEE’s global reach and its humanitarian activities, and leadership in research and standards. At the gala award ceremony the top volunteers in the region were honoured with awards.

The 2015 R10 Student/Young Professionals/WIE Congress 2015 was held from 09 - 12 July 2015 at the Galadari Hotel Colombo, Sri Lanka and hosted by the



2013 R10 SGW Congress delegates

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 friendships and networking and the 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.

Zia Ahmed
Member, R10 History Committee (2016)



2015 R10 SYW Congress delegates

Larry K. Wilson Award Winners Speak

Karthik Siddavaram, 2013

My volunteering journey commenced during undergraduate college. Our branch was new and had few members with a vision to provide a platform for students to express. We planned events that enabled two things: (a) focused interaction between students in the college and (b) promotion of IEEE within college.



In third year, I chaired the branch with a focus to have efficient operations. We were able to form dedicated teams for planning, member development, reporting and execution. This was possible because of academic freedom in our college for people with proven track record. After this we focused on new initiatives. This led to formation of 3 student branch chapters (CS, PES and CommSoc). We won the Best Student Branch Award in our Section back then (2010). Recently we repeated this at Region 10 level. I was later selected as the Section Student Representative for Hyderabad in 2011. The section encouraged me to experiment with various ideas and guided wherever necessary. I was later part of R10 SAC India team (2012) where I helped in establishing a collaborative platform for student activities in India.

Volunteering helped me to shoulder additional responsibilities even before I am ready for them. This pushed me to learn various skills quickly which are enabling me to perform in my career. Volunteering with IEEE has helped me to connect with global community, understand and embrace diverse cultural aspects which is a key in today's workplace environment. Always open to volunteer and continue my association with IEEE.

Karthik Siddavaram previously held the positions of Section Student Representative, IEEE Hyderabad Section (2011) and Member, IEEE India Strategic Initiative Task Force (2015), among many others. He currently serves as South Asia Coordinator, R10 SAC.

Esther Ling, 2014

Achieving something big can seem like an insurmountable goal, but broken into small steps, one can get there. That would be my reflection on being the Larry K. Wilson Award recipient in 2014. It was a series of opportunities that happened: first as a student branch newsletter writer, to student branch chair, section student representative, and then serving on the R10 SAC team.



Many people have asked how do you win this award? I don't have a one size fits all answer. But I would not think it was about having the most number of activities, rather, it was about identifying issues faced locally and how you went about solving them sustainably. This is what I strived to achieve during my term as student branch chair and section student representative. One example was closing the gap between student interaction from different universities. The first Malaysian Student Congress was birthed in 2013 from that. Another was declining

student members in my student branch, which prompted me to raise the question: "What was the reason for lack of interest towards membership?" We realized member benefit awareness were low and worked to improve that. If you look at the numbers today, membership at the student branch has more than doubled since 2013 and continues to be sustained by the current student leaders.

Looking back, IEEE has given me the platform to grow attributes not taught in a syllabus, such as leadership, managing priorities and resilience. As R10 celebrates the 50th year anniversary, I hope that my story could inspire more to contribute meaningfully to IEEE's presence in this region. I am truly thankful to IEEE for giving me the opportunity to meet with and work with great people along the way.

Esther Ling was previously IEEE Curtin Sarawak Student Branch Chair and Malaysia Section Student Representative. She now serves on the R10 Young Professionals team as the South-East Asia Coordinator.

Subodha Charles, 2015



I started my IEEE career in 2011 volunteering for IEEEExtreme 5.0 at University of Moratuwa Student Branch under Sri Lanka Section. It was a very satisfying journey ever since. IEEE has offered me a lot - experience, skills, knowledge and most importantly, lifelong friendships. Receiving the Larry K Wilson was indeed an honour. It is

my biggest achievement to date in IEEE. The recognition it gave allowed me to join several global committees including IEEE IAS Chapter & Membership Development Committee and IEEE SIGHT Events Committee

IEEE is a place where you can do something that actually makes in impact. It is really fulfilling to see the initiatives you take and the work you do contribute to the betterment of your target group. That can range from your university colleagues to the society at large. The emotions you get at the end of something successful is priceless. That kept me going ever since I joined IEEE. I wanted to fill the gaps I saw in the Student Branch and the Section. If you are a trend setter, it automatically gives you the upper hand and to be recognized.

True that IEEE is a voluntary position. But, we chose to volunteer. IEEE didn't force us to. IEEE always had a similar importance among my other commitments. If we commit to something and skip it, that affects not only your reputation, but also the entire team you are working with. If you can't walk the talk, don't even mention it. If you are dedicated and committed, IEEE has plenty to offer. Give your best and you will definitely get much more than you expect.

Subodha Charles was earlier Section Student Representative, IEEE Sri Lanka Section (2014-15) and Secretary, IEEE Region 10 Congress, 2015. Currently he is the Student Activities Committee Chair, IEEE Sri Lanka Section.

Revamping Student Branches in Region 10

Quantity and Quality are two extremely essential parameters that define the success and impact of an organization. IEEE Region 10 Student Activities Committee (R10 SAC) has had constant focus on both these two metrics and regularly tries to improve on these fronts. In terms of Quantity and growth of IEEE in Region 10, there were a total of 1259 Student Branches in Region 10 as of December 2015, but since then, more than 37 new Student Branches have been formed in educational institutes all across Asia Pacific, taking the total count of Student Branches in the Region to a figure of 1295. This number is likely to increase even more in the coming months due to the excessive efforts of R10 to expand and develop more SB's by sending IEEE volunteers to different institutes and encouraging them to form a Student Branch.

The R10 SAC is already working determinedly for the promotion and betterment of IEEE for student community, and helping in improving the quality of events, both of technical and nontechnical nature. Yet there are 25% Student Branches in the R10 which have been reported as inactive and have no IEEE member. Working on revamping of SBs in R10, a project named "IEEE R10 SB Mentors Forum" is initiated. Under the project one of the key tasks includes revival of dormant Student Branches by appointing a mentor to each inactive SB to help them. The SB Mentors Forum is designed to maximize the interaction between IEEE Student Branches and their local Sections. The project requires a mentor to be assigned to all SB's, especially the dormant SB's so that these mentors can visit the inactive SB's and get in touch with previous Counsellor to overcome the issues faced by them and help to make the SB active again. The Mentors would act as a crucial link between the Section and the SB by helping the SB's reporting their events and conducting membership drives. The importance of having good quality mentors can't be stressed enough, as the entire project depends on their interaction and work. The role of the Branch Mentor is meant to augment the valuable contributions of the Counselor. Student Branches, which due to any reason or problem become dormant, would be again activated under this project by providing them with every possible mean and resource by R10 SAC.

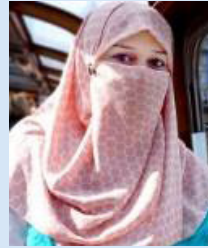
The greatest impact of this project would be on the student members and volunteers of the Student Branch on which mentor would be investing his/her energies. With the help of mentor, students would not only learn and groom themselves, but would also come to know how things move on basic and grass root level and how to avail different opportunities. To spread awareness of the project, a 12-Hour Live Twitter was organized on 25th June, 2016. Anyone who had questions to the R10 SAC could ask it on Twitter using the tags [#R10MentorsForum](#) and [#R10SBRevamp](#). During the Twitter session R10 SAC team was available to answer all queries. A total of 291 posts, with a reach of 14,582 were achieved in the 12-Hours of the Twitter Chat.

A Section Student Representatives Network comes under the revamping project. It includes all Section Student Representatives from large & medium Sections of R10. This group of people can learn from each other and can share best practices. And as mentioned earlier, along with quality, quantity is needed, hence we need support from Sections to make this project a success and improve the quality of SB's in R10 and thus make it sustainable. Hence R10 SB Mentors forum involves all SB officers (existing

or previous) and all IEEE Young professional members so that quality mentors can be chosen to work closely with these SB's and this will also resolve membership retention issue.

We hope to have further discussions on the project with the participants of R10 SYWL Congress 2016.

Revamping SBs Project Team IEEE R10 SAC 2016



We at IEEE Region 10 Student Activities Committee (R10 SAC) consider our volunteers our foremost priority, and we believe in providing best of the best opportunities for our student members. As RSR, I have witnessed the best

IEEE events in R10. R10 SAC is also pleased for the increased participations in regional contests, competitions, twitter chat sessions and webinars. Recently there has been record breaking MGA SAC Awards nominations and a higher number of Vtool SB reporting as compared to previous years.

We have started to see great revival in Student Branch activities in R10. During the execution of very challenging SB revamping project 'IEEE SB Mentors Forum', I came across amazing team members, mentors and future IEEE leaders. Thank you my wonderful team and all for doing amazing work for IEEE students.

IEEE Region 10 SYWL congress 2016 is a best opportunity, where volunteers can benefit themselves from keynote speaker sessions and of course network with a variety of people with diverse professional and cultural backgrounds. So join us at IEEE R10 SYWLC 2016 and 50 years celebrations of IEEE Region 10 from 24th to 27th August 2016 at Hotel Lalit Ashok Bangalore, and be a part of history which we all will make together.

Looking forward to see you all!

Mehvish Zahoor
IEEE Region 10 (Asia Pacific) Student Representative (2015-16)



“Great things are done by a series of small things brought together.”

- Vincent Van Gogh

IEEE Region 10 comprises of a diverse group of energetic volunteers spread across the Asia Pacific Region, who are actively striving towards advancing the technology for humanity. For the past 50 years, inspiring generation to generation, IEEE Region 10 has come a long way to the standard it has achieved by today. Every small step put forward by these vibrant group of volunteers has ultimately created a meaningful impact to the region as well as to the entire world.

Celebrating the 50th anniversary of IEEE Region 10 is a very important milestone in the journey and we as IEEE Region 10 Young Professionals Committee, are so excited to welcome all of you to the IEEE Region 10 SYWL Congress 2016.

We are striving to improve the engagement of Young Professional members spread across the Asia Pacific Region in both technical and professional aspects. The new nodes being added to the Region 10 Young Professionals Affinity Groups network at a rapid rate, and significant collaborations with IEEE Operational Units such as IEEE SIGHT, Power & Energy Society, Computer Society, Consumer Electronics Society, Communications Society help us in achieving our targets.

The Region 10 Congress will provide a solid platform for all the like-minded individuals to come together to ponder valuable ideas to influence the strategic direction of the Region 10 Young Professionals. As a budding Young Professional, it will be an immense opportunity for you to get connected with IEEE Young Professionals from the entire region and mingle with industry professionals, which will unveil huge opportunities on your way. Our sessions and tracks are designed in a way which will help you to grow as an individual, a volunteer as well as a professional.

Our volunteers are a major pillar of strength we have in the region. In commemorating the 50th Anniversary of IEEE Region 10, I would like to thank all our volunteers for their excellent dedication and contribution at all times and encourage them to push forward the boundaries of technology for the betterment of humanity. Let's get together to keep building the empire of wisdom, knowledge and opportunities we have been building for the past 50 years!

Nivas Ravichandran
Young Professionals Activities Coordinator
IEEE Region 10 (Asia Pacific)

Young Professionals Track of R10 SYWL Congress 2016

The Young Professional Track of the SYWL Congress is expected to be packed with exciting talks on topics of interest to all. These topics have been selected after conducting a survey to establish the preferences of young professionals for the congress program. The activities are expected not only to be entertaining but also challenging to stimulate minds and facilitate networking among the delegates. Some of the enlightening talks by distinguished speakers will include:

- Managing IEEE & Career by Karen Bartleson, IEEE President-Elect 2016
- Improving Leadership by Professor Howard Michel, IEEE President 2015
- Building India's first Smart Electric Scooter by Mr Tarun Mehta, CEO, Founder of Ather Energy
- IEEE Big Picture - EAB, TAB, HAC, PSBB by Mr Jamie Moesch, IEEE Staff
- Best Practices in Young Professional Groups by Kojiro Nishimiya from IEEE Tokyo Young Professionals, Nipun Manral from IEEE Bangalore Young Professionals and Shahim Baker from IEEE Kerala Young Professionals.
- IEEE R10 Young Professional Activities by Nivas Ravichandran, R10 Young Professionals Coordinator
- Young Professionals in Technical Societies by Jose Moura, IEEE Technical Activities Board
- Keeping IEEE relevant for Young Professionals – A Team Activity: Brainstorming for value adds in IEEE membership, Moderated by Parshva Bavishi and Nivas Ravichandran.



To participants of the R10 Students/Young Professionals/Women in Engineering/Life Member Congress 2016:

I congratulate you for your invitation and selection to participate in the SYWL Congress in Bangalore this year.

Speaking as someone who started my association with the IEEE as a student member, and then advancing to Region 10 and then global committee positions, followed by a staff position, my experience shows that the more you put into supporting meaningful causes and activities with the IEEE, the more you can potentially gain back - in terms of personal and professional development opportunities, international friendships and mentor relationships, frequent flier miles and more eye-opening and door-opening opportunities.

Make the most of the next few days by digesting the experience and expertise shared in the congress sessions, asking the speakers lots of questions and networking with other participants. You never know where the connections may take you!

Helene Fung
R10 GOLD Representative 2008-10
R10 Student Representative 2001-02



To participants of the R10 Students/Young Professionals/Women in Engineering/Life Member Congress 2016:

Congratulations on participating in the Region 10 SYWL Congress. You are all part of a special community in Region 10, IEEE's fastest

growing region.

I highly encourage you to take the opportunity to learn as much as possible about the IEEE, the region and take back the lessons learnt to your respective sections and groups. You should also see this as a unique networking opportunity. Please get to know your fellow colleagues and keep in touch. Speaking from experience, and through the magic of IEEE, you will probably meet again and possibly work together in the future. Do not underestimate the strength of where your networks and friendships can take you.

I would like to take this opportunity to also congratulate the Region 10 Director Ramakrishna Kappagantu and all past and present Region 10 committee and section leaders on making Region 10 a great success.

Timothy Wong
2013/14 IEEE Young Professionals Chairperson – Global Strategy and Operations
2011/12 IEEE GOLD (now Young Professionals) Region 10 Coordinator
Recipient of 2009 GOLD Achievement Award and 2015 MGA Leadership Award

Early Achievements of R10 GOLD

As the 50th Anniversary celebrations of IEEE Region 10 approaches, I look back at the inaugural R10 GOLD award I won in 2006 and my term as R10 GOLD Coordinator (2008-2010) with fond memories. Apart from many enduring international friendships formed, here are some highlights:

- Grew the number of GOLD affinity groups to 22 across Region 10.
- Recognized through gaps in the geographic distribution of GOLD groups and interaction with some R10 section chairs that there was an information gap and language barrier; conceived and carried out a pilot project to develop an information flyer about GOLD in languages other than English (Chinese and Japanese) to bridge the communication gap.
- Recognised that the GOLD groups operate in vastly different environments, and trialed a cluster peer-support approach to facilitate more similar GOLD groups sharing ideas and key success factors.
- Supported many MGA GOLD Committee initiatives at a R10 level including introduction of the Student Transition & Elevation Partnership (STEP) program and development of the GOLD leadership reference manual.



- Successfully lobbied R10 Director, Treasurer and section chairs to support a total of 6 GOLD participants from R10 to attend the inaugural GOLD Summit and Sections Congress in 2008, when the minimum target number of participants is 3 per region.
- Created a “good young people’s list” jointly with all 9 other regional GOLD coordinators during 2008 – 2010 to identify, track and may be even mentor/groom promising young talent among IEEE volunteers for greater involvement in other posts.

Helene Fung
IEEE Senior Strategy and Business Development Manager 2010-14
Recipient of RAB GOLD Achievement Award and the inaugural R10 GOLD Award, 2006

Transition from GOLD to Young Professionals

2016 marks a significant milestone as the IEEE early career professionals program that started life in 1996 as Graduates of the Last Decade (GOLD) turns 20 years old. As the MGA GOLD Chairperson who drove the transition from GOLD to Young Professionals, I explore the journey of transition of the program from GOLD to Young Professionals.

There is no doubt that an organisation such as IEEE needs a group that caters for the needs of Young Professionals. Like many similar organisations, IEEE membership numbers fall off a cliff when students graduate. This is because the ‘club like’ environment and community that IEEE Student Branches provided student members wasn’t there for their graduates. These members needed a new home that would look after their professional needs moving forward.

IEEE GOLD has enjoyed many successes and struggles since its founding in 1996. IEEE Young Professionals, as it stands today is not the product of a single Chairperson or committee, but is a culmination of successive efforts made by each generation of volunteers to improve the program. I would like to acknowledge all past GOLD/Young Professional chairs and committees who worked very hard to make the program a success.

The whole process of change began with the MGA GOLD Committee endorsing a name change in the May 2013 meeting in Toronto. I then presented a motion for a name change from IEEE GOLD to IEEE Young Professionals to the MGA board. After much discussion and deliberation, this motion was approved. The next stage was to decide on how the new Young Professionals membership structure would look. It needed to be more than a simple name or logo change. This was the best opportunity for IEEE to fix the other issues which IEEE GOLD members faced for many years. I spent much of my time between the June and November 2013 board series working with MGA GOLD committee, staff and MGA board members, creating and negotiating new IEEE Young Professionals membership structure. In November 2013, these efforts paid off when the MGA Board approved the new membership structure and criteria.

Many members weren’t aware of IEEE GOLD. The name GOLD resonated more with the word “old” and was not intuitively known to many as the early career professionals group within IEEE. It is also worth noting that the name ‘Young Professionals’ is commonly adopted by other similar organisations to IEEE. Some of the other noteworthy changes include:

- IEEE GOLD wasn’t an actual membership, unlike memberships with IEEE societies, including WIE. It was merely a yes/no flag in the IEEE database that was determined based on your nominated graduation date. IEEE Young Professionals is now an actual membership option that you can add or remove from your IEEE shopping cart when renewing or adjusting your membership. Members are now conscious of having an association with IEEE Young Professionals.
- *New 15 year term.* IEEE Young Professionals member is automatically enabled for 15 years upon graduation. In addition to breaking away from the 10 year tradition that GOLD represented, many members expressed a need for more time than 10 years to properly transition from their studies. For example, affects members who proceed to complete a masters than PhD. These IEEE members found most of their 10 years after their

undergraduate degree spent completing further studies.

- *Opt-in and opt-out option.* It was widely acknowledged that a blanket 10 or 15 year rule will suit most but not all individual circumstances. It provides members with the flexibility to opt-out should they no longer need the Young Professionals program. A number of members outside the 15 year range have expressed a desire to join Young Professionals to offer their support.

We were always working on a tight timeline to ensure the new name and membership structure could be implemented before the new membership year in August 2014 and in time to be officially launched at the 2014 Sections Congress in Amsterdam. I sincerely thank the staff, including Lisa Delventhal, the Young Professionals program manager for the tireless and often thankless efforts in making this happen.

We presented the new Young Professionals program at the 2014 IEEE Sections Congress in Amsterdam. The presentation may be viewed by visiting this link: <https://ieeetv.ieee.org/ieeetv-specials/embracing-young-professionals>

To end it all, we also managed to make the following improvements to the Young Professionals program in 2013 and 2014:

- Launch of the IEEE Young Professionals Youtube channel
- Introduced a monthly global member newsletter for Young Professionals
- Revitalise the IEEE Young Professionals Facebook page and launch a LinkedIn group and Twitter page.
- Moved GOLDRush (Now called IMPACT) from a newsletter format to a live blog online.
- Trialled a Young Professionals showcase at conferences, including a trial at the Norbert Weiner Conference in Boston and the International Solid-State Circuits conference in San Francisco.
- Introduced new Young Professionals promotional marketing materials and flyers.

Looking back, we certainly had a busy and exciting year. I would like to sincerely thank the committee, Vice Chairs, staff, MGA Committee and all the volunteers involved in making the transformation to Young Professionals possible.



Timothy Wong giving a presentation to MGA Board for renaming GOLD to Young Professionals

Timothy Wong
Editor-in-Chief, IEEE GOLDRush (2010-11)
Member, IEEE Publication Services & Products Board (2010-2014)

IEEE WOMEN IN ENGINEERING GLOBAL SUMMIT

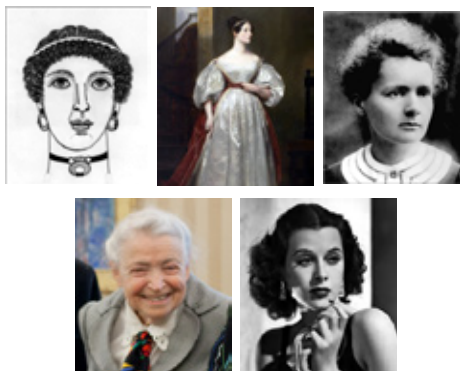
Embracing Engineering and Technology, Breaking Barriers



Two events, WIE Global Summit and R10 WIE Congress hosted at Bangalore by the IEEE Region 10 to mark the start of its 50th Anniversary Celebrations exhibits the commitment of IEEE, the world's largest nonprofit technical organization, to promote women engineers in scientific & technological disciplines in the public and private sectors. The theme: *Embracing*

Engineering and Technology, Breaking Barriers for the Global WIE Summit boldly affirms this commitment.

Women have been contributing to the development of science and technology throughout the ages. Although the very first technical name recorded was male – Imhotep, the architect of the first pyramid, the second – was female, **En Hedu Anna**, a chief astronomer, around 24th century BC. Theano of Crotona, who run the Pitagorian School for over 30 years, contributed significantly to progress of mathematics. Maria Agnesi wrote the first book on both differential and integral calculus. **Ada Lovelace** developed the first algorithm for a mechanical computer, **Maria Sklodowska Curie** pioneered research on radioactivity. **Hedy Lamarr**, an actress, invented and patented spread spectrum communication techniques during WW II on which modern CDMA, Bluetooth and Wi-Fi wireless technologies are based. **Mildred Spiewak Dresselhaus** created basis for New Materials Age with contributions to graphite intercalation compounds, fullerenes, carbon nanotubes, and low-dimensional thermoelectrics. These are just six names, however, as we know, there were many, many other women without whom the Technology and Engineering would have never been the same!



Women now have access to education and career, unlike in the past. However women still form too small part of E&T workforce in most countries, and do not advance through the ranks as fast as their male colleagues. These phenomena are visible in the Asia-Pacific region, with intensity and reasons behind it differing between the countries. We live in a wide range of technical, educational and social surroundings, spreading from the most technologically advanced and rich countries to the poorest in the world. The cultural and traditional status of women is another cause for artificial barriers faced by female engineers in the Asia-Pacific. Hence Mentoring, training in Leadership skills, Innovation, Empowerment and Entrepreneurship are needed to improve the situation. It is also essential to continue efforts to influence traditional views on engineering and women in some societies.

The IEEE Region 10 is lucky to have the biggest number of female members in the world. Our numerous WIE Affinity Groups spread awareness and create a push for change and breaking the “glass ceiling”. Two events, WIE Global Summit and R10 WIE Congress, are aimed to assist professionals and student members through learning from experiences of successful leaders of industry and academia. Both events provide excellent speakers, discussion forums, workshops and networking opportunities for professional development of women engineers at all levels.

The WIE Global Summit has been designed especially for women engineers in mid or senior positions. It aims to provide inspiration, ideas to better balance the career and family life, and to stimulate career lifts through presentations by successful leaders of industry and academia. Distinguished speakers include **H. S. Kunii** (Director of Honda Motors, Japan), **J. Manjula** (first ever woman Director General of Defence Research Development, India), **T. K. Anuradha** (first ever woman Program Director, ISRO Satellite Centre, India), **K. Bartleson** (Past Senior Director of Corporate Programs & Initiatives at Synopsys and IEEE President-Elect), **T. Hashimoto** (Chair of IEEE WIE Committee, Japan) and **M. Veloso** (Professor, Carnegie Mellon University, USA).

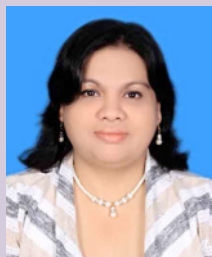


There will be also a special Session with senior male executives of Cisco, Siemens, Wipro and Xerox Research Center presenting how their companies empower, assist in advancement and support female engineers.

The R10 WIE Congress aims to create a great learning experience to future female leaders in the world of science and engineering. With activities including keynote presentations, panel discussions and cultural activities it will provide an international forum for younger professionals and student members. Also it will generate opportunities to analyze and take advantage of successful engineers' experiences and to foster new friendships across the fabric of the IEEE Region 10.

Welcome to Bangalore WIE Global Summit and R10 WIE Congress!

Janina Mazierska
IEEE WIE Global Summit Chair 2016
IEEE Region 10 Director 2007-08



It is a great honor to deliver this message for the 2016 IEEE R10 SYWL Congress that will be organized in Bangalore, Silicon Valley of India. This congress is remarkable since it is planned to celebrate the beginning of R10 50 years anniversary. I am humbled

to serve as R10 Women in Engineering (WIE) coordinator, design activities for the benefit of WIE members in R10. For WIE, the congress is more significant since it is followed by a day long IEEE WIE global summit at Bangalore on 24th August, which is a pre celebration event of the R10 50 years anniversary celebration program to be held on 24th evening.

This year, R10 WIE has received an enormous response from diversified regions of R10 for WIE support fund competitions, which will be implemented in Region 10. It is a wonderful opportunity for all, including female student (WIE) members to share views on the WIE support funded projects, to represent their potential through participation in different events, to meet with winners of R10 WIE awards to be presented on Awards night. This year's congress is exciting for R10 WIE members since Karen Bartleson, 2016 IEEE President-elect has graciously accepted the invitation to deliver a talk during the congress as a role model for WIE. There will be a scope to receive training from expert and inspirational WIE leaders for enhancing engineering and technical knowledge, to know opportunities for entrepreneurship and innovation, to embrace humanitarian technology and industrial activities, to know about R10 WIE new initiatives programs (WIENIPs) and to inform the gathering the possible plans for R10 50 Years celebration programs to be organized in Section WIE AGs and Student Branch WIE AGs across R10 in coming months beyond August.

R10 WIE committee conducts regular, special activities, and provides mentoring for 35 Section WIE AGs and 295+ Student Branch WIE AGs in R10. I express my sincere gratitude to all WIE members and WIE committees for their effort in making R10 WIE initiatives, including the WIE sessions in congress meaningful by active participation. This will help to maintain the reputation of R10 WIE as the most vibrant one around the globe. On behalf of IEEE R10 WIE committee, I thank all the organizing sections and wish this congress a grand success.

Dr. Celia Shahnaz
Women In Engineering Activities Chair
IEEE Region 10 (Asia-Pacific)



The opening words of the Region 10 WIE community's vision statement have a special resonance for me: "Our vision is to create leaders for the future of IEEE." This is something our international WIE efforts have been doing for many years now, and something the WIE leadership in Region 10 has particularly excelled in. I fully expect this year's event will carry that tradition forward. Most importantly, I expect this year's WIE session of the Region 10 Congress to build upon the excellence of years past, and drive continued success and growth for WIE, both in Region 10 and internationally.

Karen Bartleson
2016 IEEE President-Elect
Sr. Director, Corporate Programs and Initiatives,
Synopsys

Dawn and Rise of R10 WIE: An Inspiring Story

IEEE Women in Engineering leads the world in supporting women empowerment and women engagement. With a membership of over 15,000 and with more than 600 affinity groups from 70 countries, this twenty two year old society is truly a giantess reaching out her hands to encompass the women. R10 Women in Engineering serves the largest chunk of this community - nearly 50% of the members come from Region 10. It is time for us to know its glorious history and plan a path towards its illustrious future.

Region 10 first became a member of WIE when Kerala formed an affinity group in 2002 and within three years grew to 15 and within five years the strength was 33 averaging six groups a year. In 2006 the first R10 WIE coordinator, Miki Haseyama from Japan, was appointed. Angkew Tuptim, Thailand followed in 2007 as R10 WIE coordinator.

In 2008 R10 Women in Engineering marked a milestone. Organising the world's first Women in Engineering Congress, it paved the way for the triumphant rise of R10 WIE in popularity and membership. Every alternate year this congress was organized along with Student, Young Professionals Congress. From this year it is to be organized every year.

Ramalatha Marimuthu (R10 WIE coordinator of 2008 -2010) recalls "I founded the Madras Women in Engineering in 2006 and within a year it was awarded



Dear Colleagues,

I take great pleasure in welcoming you all to this momentous occasion of R10 Student/Young Professionals/WIE/Life Member Congress 2016. This is a special occasion marking 50 years of selfless volunteering, teamwork, technical aspiration and a desire to serve humanity which is IEEE Region 10. This is the time to recall our rich history and plan our illustrious future. Our Region is the largest one with most vibrant members, which is proven by the fact that this is the only region with operations centre and IEEE Offices to conduct IEEE business. I have been involved in Regional activities from 2008 onwards and it has been a place for learning and growing for me.

Though we win hands down in membership growth, activities and new initiatives, right now the primary goal for IEEE in our region is to act as a catalyst to bridge the gap between industry and academia which will reflect on the member retention and member satisfaction. There is a mushrooming growth of field players who claim to do this but as far as I can see IEEE is the only entity working on this as a service and not as a business. This congress is one such activity where students can meet young professionals and senior members from industry and network. I am sure this congress will inspire, enrich and educate the young students and professionals paving the way for them to construct a sustainable future.

I wish the congress a great success and the participants a great learning.

Ramalatha Marimuthu
Professor, Kumaraguru College of Technology
Chair, SSIT Chapters
Chair, IEEE WIE Special Events Committee

‘Honourable Mention for the Affinity Group of the Year Award’ from Global WIE for its humanitarian activities. When I proposed the congress, my only aim was to propagate the success story to the world and to encourage the other WIE AGs to do the same since social outreach is a perfect way to win students.” The project Sangamam –Appropriate technology transfer to the rural areas brought the attention of the world to Region 10. The Sections Congress 2008 in Canada had a humanitarian activities session where Sangamam Project was one of the case studies.

Introducing WIE awards like “Inspiring Engineer of the year award” in 2009 was also a hallmark of Region 10 WIE which brought visibility to the volunteers. This has now been introduced in global WIE committee awards from 2014 as Inspiring Member and Student Member Awards. In 2015 the



My heartiest congratulations for WIE sessions of R10 SYWL congress 2016.

R10 is the most emerging and active region within IEEE. Especially the activities of R10 WIE are highly evaluated within IEEE. This is only achieved due the wonderful work of R10 WIE members like you. In this situation, it is very important for us, women engineers, to build network and cooperate with each other for opening up of our career, and contribution to the society. I am fully convinced that through R10, WIE members strengthen their bonds. We will be able to collaborate together through R10 WIE activities.

Once again I would like to convey my heartfelt congratulations on the success of this great event.

Takako Hashimoto, Ph.D.
Chair, IEEE Women In Engineering (2015-16)
Professor, Chiba University of Commerce
Director, Insitute of Economic Research
Visiting Researcher, UCLA (2015)

award was given to Celia Shahnaz, the current R10 WIE coordinator and the student award went to Kiran Abbas, again from R10. This year also the awards have been won by Ramalatha Marimuthu and Hiba Latifee from R10.

Another novel initiative which was started by Region 10 WIE in 2009 and which has now been replicated successfully across other regions is introduction of Women in Engineering Track in the Technical Flagship conferences of Region 10 like TENCON and TENSYP. Over the years some of the other IEEE conferences have started to include this unique feature.

IEEE Women in Engineering International Leadership Conference organized by Women in Engineering Committee is recognized as one of the most popular



First R10 WIE Congress, 2008



WIE Leadership Summit, Chennai

conferences for Women. This was introduced in 2014 and was a great success. It was decided to conduct it in California every year to sustain and grow. Ramalatha Marimuthu argued that every region should be given a chance to organize it and introduced the idea of WIE Leadership Summit. She was appointed the Summit subcommittee Chair and in 2015 a scaled down model of the conference, the first Women in Engineering Leadership Summit was conducted in Chennai, India. The summit was recognized as a great success and is to be formally introduced all over the world in 2017 by the international WIE committee.

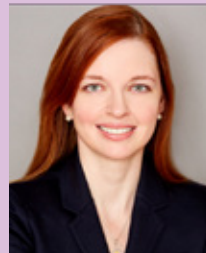
All these above activities have ensured that R10 WIE has gone from strength to strength. From 2007 onwards, every year Region 10 WIE has been on the Awards dashboard at least winning two or three awards through its affinity groups and members. The membership used to be equal to that of Regions 8 and 9, statistically being two thirds or half of the total membership of Regions 1- 6 (2,568 of R10 To 4040 of R1-6 in 2007). In 2008 it leveled off and in 2009, the membership curve and growth rate of AG started to rise for R10.

Takako Hashimoto who took over in 2011 increased the popularity of Women in Engineering in Region 10 through her PROGRESS Project. Supavadee Aramvith WIE coordinator 2015 and current WIE Coordinator Celia Shahnaz are instrumental for 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, marking the strength against that of the world as 46.4%. This makes Region 10 WIE leading the world in membership and affinity groups.

This phenomenal success is the collective effort of everyone involved and the great support from Region 10 Directors Janina Mazierska, Yong Jin Park, Lawrence Wong, Toshio Fukuda and Ramakrishna Kappagantu. There has always been a soft corner for WIE among these stalwarts and this also was helped when Ramalatha Marimuthu became the WIE International Committee Chair for the years 2011 and 2012. The coordination among the International Committee and R10 WIE continues with the current WIE Committee Chair, Takako Hashimoto (2015 -2016). The WIE Committee Chairs used to be only from Regions 1-6 from 1994. Recently every alternate Chair of the committee is from Region 10 which shows the recognition by the world.

Ramalatha Marimuthu



Congratulations to R10 WIE for the designing WIE Sessions of Region 10 SYWL congress organized on the 50 years anniversary of R10. Your vibrance and dynamic growth is an inspiration and model for all of the IEEE. Your dedication and interest to Advancing Technology for Humanity has lit a spark – I can't wait to see what you will accomplish in your next 50 years!

Laura Edelson
Chair, IEEE Humanitarian Activities Committee (HAC), 2015-16



Sangamam Project - Bringing electricity and Smokeless chulha to Rural India

Record of the R10 WIE Award Winners

The Region 10 WIE awards were launched in 2008 with two R10 WIE Affinity Group of the year award, one for Section WIE Affinity Group and the other for Student Branch WIE Affinity Group. R10 WIE strongly supports and encourages WIE activities conducted by WIE Affinity Groups in the region. This award aims to recognize distinguished WIE Section Affinity Group and WIE Student Branch Affinity Group of the Year.

The winners of the Section WIE AG are:

- **2008:**WIE AG, Japan Council
- **2010:**WIE AG, IEEE Hyderabad Section
- **2011:**WIE AG, IEEE Delhi Section
- **2012:**WIE AG, IEEE Madras Section
- **2013:**WIE AG, IEEE Kerala Section
- **2015:**WIE AG, IEEE Lahore Section

The winners of the Student Branch WIE AG are:

- **2009:**SIT, IEEE Bangalore Section
- **2011:**Institute of Technology, Nirma University, IEEE Gujarat Section
- **2012:**IEEE WIE CIIT, IEEE Lahore Section
- **2013:**Netaji Subhash Institute of Technology, IEEE Delhi Section
- **2015:**IEEE WIE UVCE, IEEE Bangalore Section

In 2009 R10 WIE launched another awards named the IEEE R10 WIE Most Inspiring Engineer of the Year Award. In 2011 a slight change in the award's name was made to be known as the IEEE R10 WIE Most Inspiring Engineer Award. The recipients of the awards have been:

- **2009:**Dr Sunita Chauhan, IEEE Singapore Section
- **2011:**Professor Riri Fitri Sari and Ms. Agnes Irwanti, IEEE Indonesia Section

In 2012 the IEEE R10 WIE Most Inspiring Engineer of the Year Award was renamed again to become the IEEE R10 WIE Volunteer Award. The winners of this award have been:

- 2012** Ms. Mehvish Zahoor, IEEE Lahore Section
Ms. Rabia Khalid, IEEE Karachi Section
Dr. Guo Huaqun IEEE Singapore Section

In 2013 the award was split into two categories:

1. IEEE R10 WIE Professional Volunteer Award and
2. IEEE R10 WIE Student Volunteer Award. The recipients of these two awards have been:

In Professionals category:

- **2013:**Dr. Celia Shahnaz, IEEE Bangladesh Section
- **2014:**Ms. Sarada Jayakrishnan, IEEE Kerala Section
- **2015:**Ms. Maryam Saeed, IEEE Islamabad Section and Ms. Sania Arshad, IEEE Lahore Section

In Student category:

- **2013:**Ms. Rabail Raza, Pakistan WIE Forum
- **2014:**Ms. Rajlaxmi Chouhan IEEE Kharagpur Section
- **2015:**Ms. Hiba Ovais Latifee IEEE Karachi Section



I was fortunate to be named as the chair for the WIE affinity group by the IEEE Kerala Section committee in 2003 when the first WIE group of R10 was formed in Kerala. WIE group could do a lot of reach out activities for Engineering college students along with IEEE GOLD in Kerala. WIE group was given complete support by the Kerala Section and as the first chair of R10, I was nominated as a member of International WIE Committee in 2004. The presence in WIE Committee has helped in getting visibility to the activities of the R10 sections and all WIE groups. WIE took up the prestigious STAR program of IEEE and provided support to various schools in setting up Science labs.

WIE group has been doing many connect programs all through its operations under the leadership and guidance of the IEEE Kerala Section during these years. WIE of R10 has been instrumental in connecting the WIE groups across the region and across each country. WIE R10 group is successfully marching ahead 'Empowering Women' as the tag line goes.

Jyotji Ramaswami

Chair, First Section WIE AG in R10 - IEEE Kerala Section, 2002



Being an IEEE student volunteer was one of the most value adding experiences I had during my college days. Access to IEEE publications and workshops conducted by student groups helped in sharpening my technical skills. Working for WIE as part of first student affinity group of WIE in R10 had given me a chance to work for programmes that introduced girls from nearby schools about technology disciplines and career opportunities in the same area. As R10 IEEE is celebrating 50th anniversary wishing all IEEE members success in working towards fulfilling IEEE mission to foster innovation and excellence, for the benefit of humanity.

Er. Seenu Chrispin

Chair of the first WIE SB AG in R10 - Chengannur College of Engineering, IEEE Kerala Section, 2003



It is unbelievable that, right now we are entering the 50th year of IEEE activities as a Region Committee in Asia Pacific (R10), and are going on for a well planned work schedule that will be meaningful to the society at large. R10 as the geographical region - having the

largest member strength - has also a contingent of forerunners numbering 1500 plus, busy in IEEE activities in yester years. As the outer crust of IEEE, these senior citizens have been loyal to the organization for 30 or more years, while excelling in their chosen technical activity domains, radiating warmth of knowledge to the younger waves of new members and assisting the respective governments in the utilization of modern technologies for economic development of their regions.

IEEE has therefore, been very thoughtful in creating a separate cadre of members as Life Members and in helping them to congregate as frequently as they can and continue to be active professionally. In the early years of formation of Affinity Groups for Life Members (LMAG), the activities were limited – teams having technical visits, occasional lectures, and mentoring of younger IEEE – ians, catalyzing student branch, ‘Graduate Of the Last Decade’ and ‘Women In Engineering’ activities, mostly in the local Sections. In R10, only 7 such LMAGS could be formed during the last 15 years, since 2000, the first was in South Wales section and the second was in Bombay section, even though another 26 more could be formed.. Yet, there are vibrant activities by Life Members who are not attached to any LMAG as well.

The real turning point in the Life Member activity space, I would expect, would be when life members of IEEE having rich experience in the profession for over three decades, with in-depth knowledge about science and technology and their impact on the society, start interacting with the governments and the communities around them, and put their expertise for the common good – showcasing the technological base of the world’s largest professional society – i.e., IEEE. Sections should be able to utilize their leadership skills in training the newly joining members and volunteers to grow up as influential professionals in the fast changing, technology driven world of ours in the 21st century.

The R10 SYWL Congress and Life Member Track deliberations in it will hopefully discuss and adopt such highly visible programs for the future. Also, prove that these retired professionals are yet not tired to do good things for the humanity.

Prof. V. K. Damodaran
Coordinator, R10 Life Member Activities 2016

Activities of LMAGs

Kerala Section

Shastra Vismaya & Bottom of the Pyramid

A unique initiative of Kerala Section. For elevating the minds of socially disadvantaged school children. To mesmerise and attract them toward study of science and technology.

In several countries in IEEE Region 10, fifty per cent of children in primary schools – why, globally as well - do not come from homes which have access to electricity. Many live in remote villages too. No wonder that you can’t even have remote access and enthuse them to take up studies related to science and technology topics that will ensure them better jobs when they later look for gainful employment. There are also a large number of children in every region, who are socially disadvantaged and forced to live in government or other charitable shelter homes. For them, basic arithmetic and a bit of language and civics complete the sphere of their expectations at local knowledge hubs. Things are very different at the bottom of the Pyramid!



Shastra Vismaya at Agali, Kerala

Focusing primarily on such children of age group 10 to 15, IEEE Kerala Section visualised an imaginative and innovative educational intervention under the title ‘*Shastra Vismaya*’ (meaning ‘Magic of Science’) in collaboration with the Department of Social Justice, Govt. of Kerala, for inculcating interest among them towards science and technology. The program was conceived and implemented by the Women in Engineering (WIE) affinity group since 2015, guided by the Section’s Life Member Affinity Group with the active involvement of the Young Professionals and SIGHT Affinity groups. Volunteers from many IEEE student branches also enthusiastically joined the team in turns.

Every district in the State has one or more such shelter homes and their inmates are generally less exposed to the rest of the society. These students – boys and girls - in the age group just below 15 years, born and brought up in surroundings not so conducive for developing a scientific temper, generally lack confidence and

mostly are not motivated enough to take up studies in science, engineering or other similar topics, even if they are intelligent. The IEEE Kerala's strategy therefore was to get them for a day of interaction through precisely brief lectures and instructions, but with ample hands-on exercises similar to the ones in TryEngineering.org in smaller groups, with a view to elevating the minds of participating children, and take them to a level of heightened inquisitiveness leading to confidence in their own abilities. These are one day interactions, with IEEE team, those from the Social Justice institutions and the 40-50 boys and girls eating together, singing and dancing together, with umpteen questions from them answered to their satisfaction, and leaving them fully energised in the evening back to their shelters. Four such camps have already been conducted.

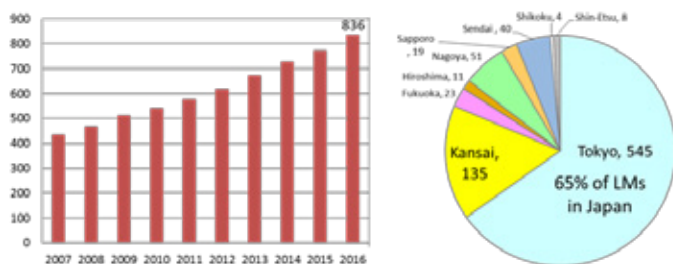
The transformation to the mindset of the participants can be summed up from the words of one such Warden to the WIE volunteers: "We found it difficult to collect the children in the morning for this workshop and that is why we could not arrive in time. Neither they, nor us had any idea that this will be such an enjoyable self-learning exercise. And alas, at the end of the day now, they don't want to go home; every student is demanding repetition of this event, either monthly or quarterly." Some children assured the IEEE volunteers that they will demonstrate what they learned to their friends who stayed back without attending this.

Thus, the initiative has turned out to be a highly replicable one in IEEE's journey to serve the society and inculcate interest in them to look at engineering and technology as their useful companion.

Prepared with inputs from Prof. V. K. Damodaran and A. G. Hareendralal of Kerala LMAG; Prof. Sunitha Beevi, Sarada Jayakrishnan, Prof. Mini Ulanat and Parvathi Maya Thampi of WIE; Ranjit R. Nair, Jithin Krishnan, Vijay S. Paul, Shahim Baker, Shahul Hameed and Bibin Parukoor Thomas of YPs; M. C. Jayakrishnan of SIGHT and Dr. Suresh K. Nair, Chair of Kerala Section

Life Member Activities in Japan

The IEEE Japan Council has currently about 836 life members and two Life Member Affinity Groups (LMAG) under the IEEE Tokyo Section and IEEE Kansai Section. The Life Members in Japan have grown steadily as shown in the bar-diagram below. The distribution of Life Members in different Sections is depicted in the pie-diagram.

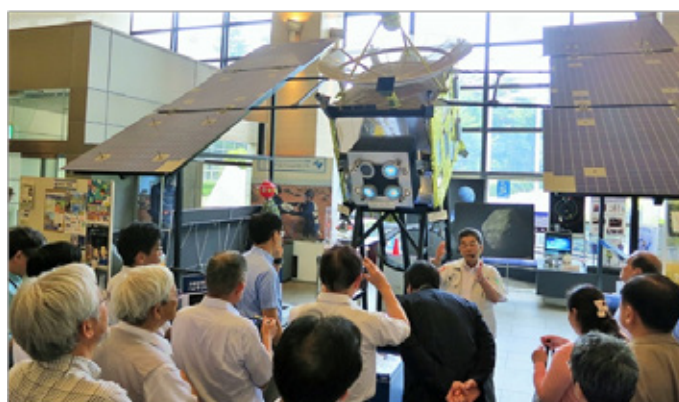


Growth of LMs in Japan and their distribution across Sections under IEEE Japan Council

Activities of LMAG Tokyo

The events organised by LMAG-Tokyo are quite comprehensive in nature and include technical tours, lectures and social get-together meetings. The regular activities of LMAG Tokyo are:

- General Assembly in March every year – It is held in conjunction with the general assembly of the IEEE Tokyo Section.
- Lecture Meetings and technical tours several times a year.
- An Exchange Meeting among LMAG-Tokyo, Young Professionals, Student Branches and WIE once a year to share ideas and pass knowledge to younger members.
- The Tokyo Section LMAG maintains a webpage (LM Tokyo) for members' and public information and publishes a Newsletter three times a year in Japanese and English which is also made available online at: <http://ieee-jp.org/section/tokyo/en/about/lmag/newsletter.html>



Tokyo Section LMAG conducting a technical tour of ISAS-JAXA in July 2016

Last year in October, one such regular event was held at the University of Electro-Communications, Chofu-city, Tokyo. It included a tour to the historical communications museum, two lectures related to radio wave and 5th generation mobile radio and a get-together meeting. In July this year the LMAG Tokyo organised a similar event at the Institute of Space and Astronautical Sciences (ISAS) of Japan Space Agency JAXA at Sagami-hara-city, Kanagawa. The program included the tours to ISAS Exhibition Hall, satellite assembly and testing plant, space rockets, and two lectures on AKATSUKI the Venus probing satellite and HAYABUSA2 the small planet probing satellite, followed by a get-together meeting.

Another important and regular event of LMAG-Tokyo is the exchange meeting with the LMAG, YPs and Student Branches in Tokyo Section, and WIE in Japan Council. The event provides an excellent platform for



Participants of the Exchange Meeting of LMAG, YPs, WIE and Students on Sept 2015 at Tokyo

all young and senior members to interact for exchange of ideas and plans and learn from each other.

Activities of LMAG Kansai

The LMAG Kansai promotes IEEE objectives by conducting interesting on-site activities for its member. The notable activities are:

- On-Site technical meetings with site tours as well as technical lectures two or three times a year.
- Newsletters twice a year.
- Officers Meetings three or four times a year for administrative and planning purposes.

The major activities of LMAG Kansai conducted frequently are the on-site technical meetings and visits to various sites outside university campuses. Most of LMAG-Kansai's meetings are held at such sites as the old temples, the highest building, the most advanced airport, the ultra-high-speed computer laboratory, and the IEEE milestone facility in Kansai area. LMAG Kansai has recently made its LMAG original pin badge for the purpose of promoting its activities much more vigorously. The members are expected to feel proudly their identity of IEEE Life Member by wearing the pin badge on their suits.



Kansai LMAG members on a site visit to a radar facility

Ms. Nagatsuka
Office of IEEE Japan Council

Bombay Section

The formation of IEEE Bombay Section Life Member Affinity Group (LMAG) was initiated around 2003, and it was formally established in October 2004 with 24 life members and Section's support. It was the second LMAG in Region 10. Although the LMAG was formally established in 2004, the life members were always active in the Section and had started to organise their own activities few years earlier, and that generated the momentum for the affinity group. The inaugural function of LMAG was organised at Hotel Taj in 2005 as a Sunday lunch meeting. It was attended by 18 enthusiastic life members and Bombay Section Executive committee members with



Volunteers of Bombay Section LMAG

their spouses. At this promising opening event it was suggested to organise one or two similar events every year as Sunday lunch meetings with spouses and a lecture on a popular topics by dignitaries. The LMAG has successfully met this commitment as shown below in list of talks since 2011.

As most of the life members are more than 70 years in age and leading a retired life, the LMAG events provide a unique opportunity not only for members to get together but also to mingle with Section's ExCom members in a friendly atmosphere and enlighten them with their knowledge and experience. The LMAG of Bombay Section regularly invites life members from neighbouring IEEE Sections like Pune, Nagpur, Nashik, and Amravati to attend their functions and maintain links with old friends and meet new ones.

Some prominent activities of Bombay LMAG are:

- "Modern Technology in Rail Operations: Is Indian Railways keeping pace?" by Mr. Rajeev Sharma, Chief Signal & Telecom Engineer (March 2011)
- "Nano Technology & Nano Materials from Healthcare to Environment" by Associate Professor Dr Ipsita Banerjee (December 2011)
- "Evolution of Merchant Navy in India" by Capt. S. P. Shastry, Master Mariner and "Benefits of Yoga to young and old" by Mrs. Leela Shastry (September 2012)
- "Meeting with LMAG members" a planning meeting for 2013 (November 2012)
- "Wind Energy & Technologies" by Mr. Amit Patel (June 2013)
- Meeting of members to discuss administrative matters (October 2013)
- "Future trends of Fibre Optics and its impact on human Life" by Mr. Hitesh Mehta (March 2014)
- "Senior Members Connect - Blue LED" by Dr. Arnab Bhattacharya, TIFR (November 2014)
- "Rain Water Harvesting in rural and urban areas" by Mr. Janak Daftari (March 2015)
- Special meeting of LMAG Execom - Administrative (September 2015)
- Meeting with Dr. L. Kazmerki, IEEE LF, visiting from USA (February 2016)
- Meeting with Prof. J. B. Cruz, IEEE LF, Immediate Past Chair of IEEE LMC (March 2016)



Life members assisting Senior Member Review Panel in March 2016 at Mumbai

Hosts for R10 SYWL Congress 2016

IEEE Bangalore Section

The Host

On 15th of December, 1971 Mr. H. B. Shaw received the letter from Emily Sirjane, Manager, Membership services informing the approval of the petition to establish Bangalore Subsection of the India Section on 14 Dec 1971. Mr PN Hiriyanaiyah, founder secretary/treasurer of Bangalore Section recounting its establishment said that the IEEE Bangalore Subsection which covered the complete state of Mysore, had been established at the instance of the then India Section and under the initiative of two senior members, Mr L Subramanyam of Bombay Section and Dr H. V. Gopalakrishnan. On foreseeing the requirement of a dynamic person with a professional attitude to take up as the Chairperson Mr Ravi L. Kirloskar was approached and on accepting to be the founder chairman he significantly contributed to its growth. The other officers of the Section were Dr H. V. Gopalakrishna, Vice Chair and Mr. PN Hiriyanaiyah, Secretary/Treasurer. The number of members as on 31 Dec 1976 was 313 consisting of 240 higher grade members and 73 students. The India Section, finding the growth phenomenal asked the Bangalore Subsection to host the Annual Convention and Exhibition (ACE) during 1975.



The distinguished guests at the 1975 Annual Convention & Exhibition of India Section held at Bangalore

The Subsection became a full Section on 13 July 1976. During the early periods, there were several visits by IEEE Presidents from the headquarters. Mr Guarrera, Mr Dillard were the early IEEE Presidents who visited the Section during 1970's. Dr Charles Alexander, IEEE president visited during April 1977. Technical Activities Board Colloquium team comprising of Dr Michael S Adler and a team of 6 visited the Bangalore Section during 1999.

The IEEE Bangalore Section from the very beginning has shown outstanding enthusiasm to conduct technical and professional activities. A major event of the Section was the International Conference titled "International Conference



Dr APJ Abdul Kalam at the inaugural of the ICCSP Conference 2000 at Bangalore



IEEE President Mr Guarrera visiting the Bangalore Subsection

on Computers, Systems and Signal Processing" that was organized jointly with the Indian Institute of Science in December 1984, to commemorate both the IEEE Centennial and the Platinum Jubilee of the Indian Institute of Sciences, Bangalore. A subsequent International conference on Communications, Control and Signal Processing, held in July 2000, was inaugurated by Dr APJ Abdul Kalam, Principal Scientific Advisor to Government of India. Plenary talks were given by Prof. T Kailath and Dr Narayan Hingorani. The Annual Symposium, titled "Symposium on Intelligent Systems", was launched in 1991. Later, under a renewed name, The Symposium in 2000 on 'Telecom and Internet technologies for the Net Economy' featured two plenary talks by Prof. VU Reddy and Dr Uday Shukla. The main objective was to encourage young researchers and students.

The technical lectures on a range of topics have been a frequent activity and the talks as a part of the IEEE Distinguished Lecturer Series have been very successful. Some of the prominent speakers include Dr Paulraj, Dr Sreedhar Mitta and Prof. SS Iyengar.

The Section played a major role in the starting of Proficiency, an evening course program run by the Centre of Continuing Education of the Indian Institute of Science (IISc) with the help of a group of professional organizations in Bangalore. In 1990, an IEEE task group headed by Prof. NJ Rao, IISc critically evaluated the under graduate programme in Electrical and Electronic engineering curricula and prepared a resource document which became a catalyst for revamping the curricula.

The Bangalore Section encouraged students to become members by providing incentives. The Student Branch at the Indian Institute of Science was started in 1981. Subsequently, Student Branches were formed in all parts of the state. The Student Branch at the Karnataka Regional Engineering College, Surathkal was started in 1988. The Sri Jaychamarajendra College of Engineering Branch in Mysore was formed in 1992. Branches have been formed at RV College of engineering and at Ghousia College of Engineering in Channapatna. A new branch at the National Institute of Engineering, Mysore started functioning from 2000. Some of the Professors who guided the student branches were Prof. MH Dhananjaya (SJCE), Prof. DB Fakruddin (KREC) and Prof. Kumara Sharma (MIT).

IEEE Bangladesh Section

The Co-host

IEEE Bangladesh Section (BDS) was formed on 20 th November 1993. Prof. Shahidul Islam Khan from BUET was the protagonist of that initiative and he is the Founding Section Chair. In 2001, IEEE BDS first technically co-sponsored a conference, namely ICECE organized by the Dept of EEE, BUET. Later in 2002, ICEE and in 2008, ICCIT were technically co-sponsored. In the pace of time, number of conferences has been increased and in 2015-16, fifteen conferences were technically co-sponsored. In 2001, BDS got an office space in the Dept of EEE, BUET and initiated payment by local currency for the membership renewal through the Section. Starting with 56 members in 1993, the membership has been growing steadily, and it reached the landmark of 500 in 2009 and 1000 in 2014. A radical change in Section membership and activities was noticed in 2015, when Prof. Fattah took the responsibility as Section Chair. The membership grew to 1693 and is now more than 1900. IEEE-BDS was awarded '2015 Outstanding Section Membership Recruitment Performance'. There are now 25 Student Branches and 10 of them were launched since 2015. One of the main reasons of this sudden growth was successful organization of IEEE Region 10 Meet 2015 for the first time in Bangladesh. During the event several volunteers were actively involved and they felt a strong connectivity among themselves. Later, for the first time IEEE-BDS along with its WIE affinity group (AG) organized IEEE WIECON-ECE 2015. This year, Section also launched IEEE ProTalks 2015 and Student Branch Executive Committees Summit 2015.

Currently BDS has four Technical Societies' Chapters: COMSOC, PES, EDS/SSCS, and EMBS, several Student Chapters of different societies, two SIGHT groups (FLASH and CARG), WIE and YP AGs, and 25 Student Branches (seven of them have WIE Student Branch). Some regular events in BDS are: technical seminars/workshops, SYW Congress, industrial tours, IEEE Day celebration, project competitions, outreach programs, humanitarian activities, international robotic challenges, award programs, industrial, educational and professional activities. The WIE affinity group was formed in 2011 and it has been regularly organizing various types of programs throughout the year. During 2015 and 2016, some of Section's dedicated volunteers have been selected in different R10 Committees. In particular, Prof. Celia Shahnaz, one of the most illustrious volunteers for BDS, is selected as IEEE R10 WIE coordinator, making it for the first time a BDS volunteer to become R10 Coordinator. Because of her outstanding performance, she has been awarded most prestigious awards from Region 10 and international WIE. In 2015, YP Affinity Group arranged a large event as the YP Summit. Instead of generalized conferences, Society Chapters have started launching area specific conferences, such as in 2015, COMSOC Chapter organized IEEE ICTP and in 2016, EMBS Chapter helps in organizing MediTec.



A rally for the IEEE 125 Years Celebrations in 2009 at BUET

The Student Branches in BDS are very vibrant and regularly organizing intra and inter-university programs. The Section always sends a good number of student representatives to R10 Congresses, where students have won some notable prizes. Our members have been winning prizes in several IEEE events, such as Myron Zucker Contest, International Future Energy Challenge, International Robotic Challenge, R10 Student Paper Contest, IEEE SP Cup, IEEE Xtreme.

IEEE Delhi Section

The Co-host

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 - Chandigarh and Rajasthan. The growth of membership in Delhi Section has been steady over the last forty years. Currently it has 3288 active Members (excluding Society Associates), consisting of 1 Honorary Member, 7 Life Fellows, 4 Fellows, 26 Life Seniors, 220 Senior Members, 4 Life Members, 807 Members, 22 Associate Members, 464 Graduate Student Members, 1733 Student Members. It has been recognized in the past for the R10 Distinguish Section Award for its technical programs and other activities for the benefits of members.



IEEE Delhi Section millennium medal recipients

The volunteers from Delhi Section have always been actively engaged at all levels of IEEE, from local to international. 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. Mr. Harbans L. Bajaj, FIEEE, served as Delhi Section Chair (1989-90), India Council Chair (1991-93), and Region 10 Director (1997-1998).

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 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 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).

Three Affinity Groups, Women in Engineering (WIE), Young Professionals (YP), and Consultants Network (CN) are quite active in Delhi Section. The Section has got more than hundred Student Branches and Branch-Chapters. Delhi Section sponsors large number of student activities each year and has established awards for recognition and encouragement of student members.

IEEE Hyderabad Section

The Co-host

IEEE was formally introduced into Hyderabad in June 1981, when a group of engineers in Hyderabad decided to form an IEEE Subsection under the IEEE Bombay Section. Within three Hyderabad Subsection was elevated to a full Section on 14 May 1984, the centenary year of IEEE. The IEEE Hyderabad Section is one of the most active sections of the IEEE in India and over the years has grown into large Section. It has made tremendous efforts in formation of Society Chapters, Affinity Groups and Student Branches. The Hyderabad Section has nine Technical Society Chapters: a Joint Chapters of PES/IAS/PELS, CS, a Joint Chapter of MTT/AP/EMC, Joint Chapter of COM/SP, Joint Chapter of CAS/EDS, CIS, Photonics, TMS, and a Education Society Chapter. These Chapters along with Section support have organized a number of national and international Conferences. The first short course by the Section was on "Secure Communications" from 13 to 22 December 1984, which drew over 100 attendees. The Section conducted 32 continuing education programs in the first two decades of its formation. IEEE Hyderabad Section has supported the formation of two Subsections in the region of Guntur, and Vizag and currently has two Affinity Groups, one of WIE and the other of Young Professionals. The Section has more than 125 Student Branches.

The Hyderabad Section has been very active right from its inception as a Subsection because of a unique set of volunteers of merit and dedication. Ten of these volunteers have been recognised by R10 with the Outstanding Volunteer Award from 1996 – 2015.

A milestone for Hyderabad Section was the establishment of an annual Faraday Memorial Lecture (FML) in 1991, the 200th birth anniversary year of Michael Faraday.



Subsequently Section established two more annual lectures, the JC Bose Memorial Lecture, and Graham Bell Memorial Lecture. All three Memorial Lectures are now the annual flagship events of the Section. Section Student Congress and All India Student Project Contest are flagship events for students.

IEEE Hyderabad Section celebrated 125 years of IEEE and 25 Years of the Section on 26th July 2009 and it was attended by the then IEEE President Professor Moshe Kam. As part of the celebration a technical program with five lectures in advanced technologies was organized.

B.M. Birla Science Centre is a major facility in Hyderabad (India) area where pre-university students are exposed to hands-on experiments in science and engineering. IEEE Hyderabad Section, in association with the IEEE Educational Activities and Region 10, initiated a program in 2010 to upgrade the hands-on exhibits at the Birla Science Centre, and added several IEEE Exhibits including working exhibits of Sir C V Raman and J C Bose experiments. On January 23rd, 2011 in a grand inauguration Prof. Moshe Kam declared the IEEE Exhibits opened for public after ceremonial ribbon cutting.

IEEE Pune Section

The Co-host

IEEE Pune Section was established on June 26, 2010 with terrestrial boundaries confined to Pune Metropolitan City. Prior to that it was a subsection of IEEE Bombay Section since June 20, 2003. At present, the Pune Section has more than 300 professional members and over 1100 other members, including student members. There are 21 IEEE Student Branches in different Engineering Colleges in and around Pune City.



Felicitation of Padma Shri Dr. Vijay Bhatkar, IEEE Fellow at the Section AGM in January 2015

Pune, one of the largest urban agglomerations of India, is located in western Indian State of Maharashtra. Pune hosts several universities and well-known institutions, and research organizations. The city also houses large number of industries in the field of Information and Communication Technology (ICT), automobile, electrical, electronics, foundries and other engineering industries. More than one hundred thousand skilled engineering professionals are working in and around the city. The strength of students studying in various disciplines in the city exceeds two hundred thousand. IEEE Pune Section has six Technical Society Chapters, namely, Computer Society Chapter, Communication Society Chapter, PES and IA society Chapter, Signal Processing Society Chapter, Measurement and Instrumentation Society Chapter. IEEE Pune Section has a WIE Affinity Group and a Young Professionals Affinity Group. All Chapters and affinity groups regularly organise technical conferences, seminars, IEEE Distinguished Lectures, site visits and social activities for the benefit of its members. In 2013 the

IEEE Pune Section was recognised by R10 for its technical and professional activities and overall performance and given the Distinguished Section Award for the medium Section category. IEEE Pune Section volunteers have also been recognised for their valuable contributions by various R10 and IEEE MGA awards. Dr. Vijay Bhatkar IEEE Fellow, received the Padma Bhushan Award from the Government of India for his services to build the National Param Supercomputing Facility (NPSF). The IEEE Student Branch-PICT got second rank for the India Council Outstanding Student Branch Award for 2015.

The IEEE Pune Section interfaces with the industries and academia through various technical and humanitarian activities and organizes various events throughout the year. These events are designed to help professional members as well as student's community for polishing their skills for training and career development. The Section and its Student Branches endeavor to contribute to the advancement of the knowledge through activities that facilitate technical and professional information exchanges and stimulate technological innovations. Meetings of the Section officers, interactions with the Student Branch Counselors and representatives are held on regular basis to discuss the ideas and plans for activities. Pune Section encourages the volunteers by sponsoring them to participate in various IEEE events and represent the Section. There is Section's travel and activity funding available to each Society Chapter, Affinity Group as well as Student Branch to participate in IEEE events such Student Congress or conduct technical activities.

Outstanding Section Volunteer Award and the Largest Student Branch Award. Section started an annual award Prof. G.K. Dubey Memorial Award in the name of Section founding Chair for recognition of exemplary services to the IEEE UP Section. Section volunteers have also received various R10 and other IEEE awards including the 2013 IEEE EAB meritorious achievement award in continuing education. One of the Student Branches has been awarded the Darrel Chong Student Activity award in 2014 in the Gold category. The Section meetings are held at various locations to increase the vibrancy which has resulted in its membership growth. New webpage of the Section (www.ieeeup.org) has been created with participation of students through a competition.



IEEE Uttar Pradesh Section entered its 25th year in May 2016

IEEE Uttar Pradesh Section

The Co-host

The Uttar Pradesh Section is located in north of India and covers geographical boundaries of Uttar Pradesh province, Uttarakhand and Nepal. The Section was initially established as Kanpur Subsection under the India Section in early 1970s and became a full Section on 11 May 1992 under the new name of Uttar Pradesh Section. Late Professor Gopal K Dubey was the founder Chair of the newly formed IEEE Uttar Pradesh (UP) Section.

The UP Section over the years has grown into a large Section with membership around 1812 as of August 2016. In last three years it has established new Technical Societies Chapters, taking the total number of Chapters to nine, Student Branches, new Student Branch Chapters, and WIE, SIGHT and Young Professionals affinity groups. Currently UP Section has two Subsections, one at Roorkee and the other in Nepal. The Nepal Subsection was opened in 2015 and Roorkee Subsection has been recently revived.

The IEEE Uttar Pradesh Section is one of the most active Sections in India. It organizes numerous technical as well as educational and professional events each year including DL visits for expert talks. It regularly hosts various Technical Society presidents, IEEE President and other distinguished academicians. In 2014 the Section launched a conference named UPCON. The IEEE UP Section has technically sponsored a large number of conferences and many conferences have been financially supported. The UP Section will be hosting the R10 Humanitarian Technology Conference 2016 at Agra, the city of Taj Mahal.

To recognise volunteers' contribution and encourage members, UP Section has also establish an awards program. Some of the awards established by the Section are: the Outstanding Branch Counselor/ Chapter Advisor Award, Best Student Branch/ Branch Chapter Award,

Editors



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I started out as a volunteer for PICT IEEE Student Branch (PISB) in 2014 and have never looked back since. Being an editor for PICT IEEE Newsletter Group (P.I.N.G.) brought me the wonderful opportunity to work for the Newsletter-Special Supplement, broadening the scope of my work and helping me network with the IEEE fraternity outside my college, thereby also helping me understand my potentials. I always hope to continue my association with IEEE.

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I first became involved with IEEE as the Junior Editor of P.I.N.G. (PICT IEEE Newsletter Group), a bi-annual technical Newsletter of PISB (PICT IEEE Student Branch). My IEEE journey has been exciting ever since. The opportunity to become a part of the Editorial team of this Special Supplement was indeed an honour which has provided me with an invaluable experience that has carved indelible mark in moulding a broader horizon for me.



Designers



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I have always loved sketching and painting. When I heard about PICT IEEE Student Branch's (PISB) activities, I saw an opportunity to learn something new and experiment. Over the last couple of years, I learnt graphic design and realized I could make a career out of it. I endeavor to lend and evolve my skills as an effective designer to IEEE, while it achieves it's academic and organizational goals.

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I have been a part of IEEE for merely 2 years and since then have had an exuberant experience. Being the member of the Design Team in the PICT IEEE Student Branch has given me the great opportunity to be working for this project and hence broaden my horizons. I hope to continue this journey in IEEE for years to come and grow in the multiple facets it has to offer me.

