



IEEE Seoul Section

Annual Report 2016



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PART A - SECTION SUMMARY

A.1 Executive Summary

The IEEE Seoul Section had a fruitful year in 2016 with the following activities:

- The Seoul Section could achieve an outstanding member recruitment and retention performance with Gold award in 2016. Compared to 2015, the section obtained 8% increase in total active members, mostly in graduate members. The section is going to prepare both retention program for graduating members and recruit program for undergraduate students.
- The student activity in Seoul Section can be highlighted by the Student Paper Contest 2016 held in Dec. 3, 2016 in Korea Aerospace University in which 42 papers were presented and evaluated for prizes.
- IEEE/IEIE Joint Outstanding Young Engineer Award 2016 was given to Professor Sunghoon Kwon of Seoul national University for his outstanding contributions to bio-MEMS and nano-engineering research and development at the IEIE Summer Conference in June 22-24, 2016.
- IEEE Seoul Section had 4 professional seminars by the experts in emerging areas of electrical engineering.
- In 2016, the most active chapter was Circuits and Systems Society Chapter (CAS04) led by Prof. Myung Hoon Sunwoo, Ajou University. The chapter had more than 20 technical or professional meetings during 2016.
- The section had four executive committee meetings (March, May, August and October).
- The General Assembly of IEEE Seoul Section held in Dec. 3, 2016 approved the financial report and new section chair, Professor Jong Chang Yi of Hongik University, for 2017.
- The 41th HMPC 2016 Dinner Meeting was held on December 30th with 77 participants at Westin Chosun Hotel to recruit non-IEEE members and to promote members to higher grades. The event proceeded for two hours with award ceremony, special lectures and music entertainment along with dinner, followed by informal gatherings.

A.2 Financial Report

The IEEE Seoul Section's financial condition has continued to maintain a good balance in the year of 2016. The year 2016 started with 31,140,710 Won at the beginning and closed with net increase of 27,219,413 Won. The R10 rebate was successfully secured with the generous supports from IEEE. Most of the expenditure was allocated for social events or workshops including HMPC event. The Section's 2016 financial report has been approved by the general assembly of IEEE Seoul Section in Dec. 3, 2016. All the details of transactions are described and reported through the IEEE NetSuite reporting.

1. Income

Item	Amount (Won)
IEEE Support	21,332,794
Contribution	6,600,100
Interest	23,999
Total	27,956,893

2. Expenditure

Item	Amount (Won)
Meetings and Social Events	19,149,650
Student Activities	7,515,840
Chapter Support	4,186,700
Other Management & General Expenses	1,026,000
Total	31,878,190

3. Total Net Worth

Item	Amount (Won)	
Balance beginning of the year 2016	31,140,710	A
Total Income of the year 2016	27,956,893	B
Total Expenditure of the year 2016	31,878,190	C
Total Net Increases	-3,921,297	B-C
Balance end of the year 2016	27,219,413	A+B-C

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Programs

Compared to 2015, the section obtained 8% increase in total active members, mostly in graduate members in 2016. An aggressive membership development program will be pursued.

Year	Member	Honorary Member	Life Fellow	Fellow	Life Member	Life Senior	Senior Member	Associate	Student	Total
2015	1632	1	4	29	5	3	288	88	955	3005
2016	1588	1	8	25	8	7	298	89	1240	3264

Seoul Section is going to establish a membership development program in 4 ways.

- a. To develop a recruit program for undergraduate students.
- b. To develop a maintaining program for graduate students.
- c. To develop a membership recruit program for industry
- d. To develop a membership elevation program for member-to-senior member

The undergraduate program will be focused on seeding prospective student group circles interested in IEEE in universities in the section.

In this year, 4 members were elevated to the Fellow member grade:

- Prof. Kiyong Choi of SNU for contribution to low-power, real-time and reconfigurable systems SOC.
- Prof. Soonhoi Ha of SNU for contributions to hardware/software code design.
- Prof. Deog-Kyoon Jeong of SNU for development of digital video interface and high definition multimedia interface standards.
- Prof. Sang Bin Lee of Korea University for contributions to off-line testing and on-line condition monitoring for AC electric machines.

B.2 Chapter Activities

In IEEE Seoul Section, 26 chapters are in active operation as shown in the following table.

Chapter	Full Name	Chair
AES10	Aerospace and Electronic Systems Society	Young Kil Kwag, Korea Aerospace Univ.
AP03	Antennas and Propagation Society	Jae Hoon Choi, Hanyang Univ.
BT02	Broadcast Technology Society	Byungwoo Jeon, Sungkyoonkwan Univ.
C16	Computer Society	Chang Sung Jeong, Korea Univ.

CAS04	Circuits and Systems Society	Myung Hoon Sunwoo, Ajou Univ.
CE08	Consumer Electronics Society	Kang-Sun Choi, Koreatech
CEDA44	Council on Electronic Design Automation	Soonhoi Ha, Seoul National Univ.
CIS011	Computational Intelligence Society	Byoung-Tak Zhang, Seoul National Univ.
COM19	Communications Society	Sunghyun Choi, Seoul National Univ.
CS23	Control Systems Society	Poo Gyeon Park, Postech Univ.
E25	Education Society	Vacant
ED15	IEEE Electron Devices Society	Yong Taek Hong, Seoul National Univ.
GRS29	Geoscience & Remote Sensing Society	Hoonyol Lee, Kangwon Univ.
IT12	Information Theory Society	Hong-Yeop Song, Yonsei Univ.
ITS38	Intelligent Transportation Systems Society	Kyongsu Yi, Seoul National Univ.
MAG33	Magnetics Society	Jongil Hong, Yonsei Univ.
MTT17	Microwave Theory and Techniques Society	Jae-Sung Rieh, Korea Univ.
NANO42	Nano Technology Society	Jo-Won Lee, Hanyang Univ.
NPS05	Nuclear and Plasma Science Society	Yong Choi, Sogang Univ.
PEL35	Power Electronics Society	Bo Hyung Cho, Seoul National Univ.
PHO36	Photonics Society	Young-Wan Choi, Chung-Ang Univ.
RA24	Robotics & Automation Society	Frank Park, Seoul National Univ.
SMC28	Systems, Man, and Cybernetics Society	Seong Whan Lee, Korea Univ.
SP01	Signal Processing Society	Gibak, Kim, Soongsil Univ.
SSC37	Solid-State Circuits Society	Yong Moon, Soongsil Univ.
VT06	Vehicular Technology Society	Jun Heo, Korea Univ..

Seoul Section also has a joint chapter CIS011 for the Computational Intelligence Society with Seoul, Daejeon, Daegu and Changwon Section, chaired by Prof. Byoung-Tak Zhang of Seoul National University. The section also has the Counsel on Electronic Design Automation (CEDA44), very actively operated by the chair, Professor Soonhoi Ha, Seoul National University.

In 2016, the most active chapter was Circuits and Systems Society Chapter (CAS04) led by Prof. Myung Hoon Sunwoo, Ajou University. The chapter had more than 20 technical or professional meetings.

Activity reports for other chapter are available in L31 meeting report in www.ieee.org.

B.3 Professional and Continuing Education Activities

B.3.1 Professional Seminars

IEEE Seoul Section had 4 Executive Committee Meetings, General Assembly and HMPC Dinner Meeting with the following professional seminars by the experts in electrical engineering and related areas.

- “Research Perspectives in Wireless Telecommunications”, by Prof. Inkyu Lee, Korea University.
- “Intelligence and Control for Robots”, by Prof. Il Hong Suh, Hanyang University
- “Future of Drone Applications”, by Prof. Wookyung Lee, Korea Aerospace University.
- “Creativity, Design and National Competency”, by President Younggul Kwon, Kaywon University of Art and Design.

B.3.2 Professional Activity

Seoul Section established history committee chaired by Prof. Dae-Gwon Jeong to update technology and service history of Korea, and to investigate prospective milestone technologies. This task will enforce the life member activities.

B.4 Students Activities

B.4.1 Student Branches

IEEE Seoul Section has 14 student branches in 2016. Each student branch consists of graduate students ranging from about 20 to 50. Each student branch was operated independently under the supervision of the student branch counselor of the section. The following are student branches of Seoul Section:

Organizational Unit Name	Position Description	First Name	Last Name	Email Address
Ajou Univ.	Counselor	Ikmo	Park	ipark@ajou.ac.kr

Catholic Univ. of Korea	Chair	Sang-Hyun	Cho	csngreat@catholic.ac.kr
	Counselor	Hang-Bong	Kang	hbkgang@catholic.ac.kr
Chung-Ang University	Counselor	Jong-Soo	Choi	jschoi@cau.ac.kr
Dankook University	Chair	Jin	Park	pjk9466@nate.com
	Counselor	CheonWon	Choi	cchoi@dku.edu
Ewha Woman's University	Counselor	Meejeong	Lee	lmj@ewha.ac.kr
Gwangju Inst of Science & Technology	Chair	Sungsoo	Choi	sschoi@keri.re.kr
	Counselor	Jaewook	Kang	jwkgang@soundl.ly
Hongik University	Chair	Jonghyuk	Lee	aaiiwitf@gmail.com
	Counselor	Yongjun	Park	yj99.park@gmail.com
Korea Univ	Counselor	Chang-Sung	Jeong	csjeong@korea.ac.kr
Kyungsoong University	Chair	Grace	Lukman	grace.firsta@gmail.com
Seoul Natl Univ	Counselor	Jong	Park	parkjk@snu.ac.kr
Sogang University	Chair	Sungho	Kim	samkim@sogang.ac.kr
	Counselor	Jin Ho	Chang	jhchang@sogang.ac.kr
Soongsil Univ	Counselor	Young Han	Kim	younghak@ssu.ac.kr
Sung Kyun Kwan Univ	Counselor	Joong Kyu	Kim	jkkim@skku.edu
Yonsei Univ	Counselor	Chulhee	Lee	chulhee@yonsei.ac.kr

B.4.2 Student Paper Contest

The Student Paper Contest 2016 for graduate student paper competition was held at the Lecture Building, Korea Aerospace University on Dec. 03, 2016. Total 42 papers were presented and evaluated in 4 areas with 4 sessions: 11 papers in Resource Utilization for Communications and Computing area and 11 papers in Coding, Communications and Data Processing, 10 papers in Image Processing and Software Technologies, 10 papers in Electronic Devices and Systems. 1 Grand Prize, 4 Gold Prizes, 8 Silver Prizes and 28 Bronze Prizes were awarded.

The committee members and the recipients of the 2016 Student Paper Contest Prizes were as follows:

- Organizing Committee
 - General Chair: Prof. Dae-Gwon Jeong, KAU
 - Organizing Chair: Prof. Yoonhee Kim (Sookmyung Women's U.)
 - Technical Program Committee: Cheon Won Choi (Chair, Dankook U.), Gilsoo Jang (Korea Univ.), Yoonhee Kim (Sookmyung Women's U.), Jung Hee Han (KAU), Myeong-Jin Lee (KAU), Myunghun Shin (KAU), Jaehwan Lee (KAU), Kyeon Hur (Yonsei Univ.), Hyeonsang Eom (SNU), Jongsun Kim (Hongik Univ.), Gibak Kim (Soongsil Univ.), Young-Hoon Park (Sookmyung Women's Univ.)
- Grand Prize Award:

- Implementation of Dynamic and Static Partial Gravity Algorithm using Three-Dimensional Clinostat, Nhayoung Hong (SNU)
- 4 Gold Prize Awards:
 - Achievable Throughput of 2-Channel Sensing Secondary Users in RF-Powered Cognitive Radios, Shanai Wu (Soongsil U.)
 - Resource Allocation Scheme for Spectral Efficiency Enhancement of OFDMA WLAN System, Moonmoon Mohanty (Ajou U.)
 - Analysis of the GPGPU performance for various combinations of workloads executed concurrently, Dongwhan Kim (Seoul National U.)
 - Impedance-Based Stability Analysis to Investigate the Interaction of Grid-Connected VSC-HVDC, Haewon Seo (Yonsei U.)
- 8 Silver Prize and 28 Bronze Awards

The Seoul Section also encouraged the participants to enroll the 2017 membership within a period for financial support of membership fee, and could help several new members.

B.5 Affinity Group Activities

The WIE affinity group proposed a R10 Support Fund program and awarded \$250. The workshop, held in June 22-23 in Jeju, entitled to “Towards Smarter Future Industry by SW” was a timely technical seminar to boost women Revolution in technical and scientific fields to encounter a Fourth Industrial Revolution. It was successively carried out as a joint workshop with the Women Committee of KICS and the Center for Women in Science, Engineering and Technology, and the Korea Federation of Women’s Science and Technology Association.

PART C - OTHERS

C.1 Special Events

The 41st HMPC 2016 Dinner Meeting was held on December 30th at Westin Chosun Hotel, Seoul with 77 participants, to promote members to higher grades. The event consisted of award ceremony honoring 11 members for their outstanding service to Seoul Section, followed by celebration for 4 newly elevated IEEE Fellows in Seoul Section.

Then a special technical talk was presented by the President Younggul Kwon, Kaywon University of Art and Design, with the title of “Creativity, Design and National Competency.”

The HMPC Meeting was also highlighted by a classical mini-concert of vocal, violin and brass band along with dinner, followed by one-minute talks by most participants and informal gatherings. HMPC was established 41 years ago for the purpose of providing attention to the electrical and electronics engineers who have been unnoticed and rendering wider publicity to their distinguished service to Korea. The HMPC 2016 has been an important meeting in the light of its purpose!

C.2 Relationship with National Societies

The IEEE Seoul Section has close relationships with Korean technical societies such as the Institute of Electronics and Information Engineers (IEIE), the Korean Institute of Communications and Information Sciences (KICS), the Korean Institute of Electrical Engineers (KIEE), Korean Institute of Electromagnetic Engineering and Science (KIEES), The Korean Institute of Information Scientists and Engineers (KIISE), and The Korean Society of Broadcast and Media Engineers (KOSBE). The IEEE Seoul Section provides technical supports to these societies.

IEEE/IEIE Joint Outstanding Young Engineer Award 2016 was given to Professor Sunghoon Kwon of Seoul national University for his outstanding contributions to bio-MEMS and nano-engineering research and development. The award ceremony was held in the IEIE 2016 Summer Conference at Jeju during June 22-24.

The Seoul Section on behalf of IEEE had an MOU signing ceremony with IEIE to understand and co-operate each other in August 31 in Seoul. Followings are the participants of IEEE BoD representatives: Bruce P. Kraemer (President of IEEE-SA), Ramakrishna Kappagantu (IEEE Region 10 Director), James M. Conrad (IEEE Region 3 Director), Peter Alan Eckstein (President of IEEE-USA), Jose M.F. Moura (Vice President of IEEE Technical Activities), Ning Hua (Senior Director of Asia Global Business Development, IEEE), Meng Zhao (Standard Program manager, IEEE China office), Kukjin Chun (IEEE Region 10, Director-Elect), Kishik PARK(Member of IEEE-SA BOG).

PART D - GOALS AND PLANS

D.1 Implementation Plans

All section officers, chapter chairs, and student branch advisors will ask to join membership to the attendee of the conferences, workshops, and seminars. Chapter chairs will be encouraged to hold seminars and workshops with proper activity reports. Seoul Section will also support international conferences.

D.2 Goals and future plans

The IEEE Seoul Section will hold the spirit of the IEEE and align section objectives to the working plans of R10. The section has several active plans for the year of 2017 and 2018. Some of work items are listed below.

- Organize TENCON 2018 to adhere to IEEE Mission & Vision through the proposed themes - Intelligence Outbreaking: IT Outreach (Oct. 28-31, 2018, Jeju, Korea)
- Encourage academia-industry cooperation by Metropolitan Area Workshop
- Increase retention rate by promoting new industry memberships
- Promote student branch activities such as Student Paper Contest, IEEE Day and IEEE Undergraduate Student Idea Contest
- Promote membership elevation to higher memberships
- Support technical activities for chapters in Seoul Section
- Strengthen member service for all section members through website by providing appropriate contents without visiting IEEE main-page
- Enhance membership and fellowship through the annual higher membership promotion committee(HMPC) activities
- Invite volunteer officers to the updated applications and manuals for membership development and conference organizations through the officer workshops
- Publish section newsletter to communicate with other members in the section.
- Collaborate more closely with other academic societies of Korea including IEIE (IEEK), KICS, KISS, KIEES, KIISE, KOSBE and OSK
- Support and encourage members to participate in Region 10 activities as well as HQ activities