



IEEE Seoul Section

Annual Report 2014



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PART A - SECTION SUMMARY

A.1 Executive Summary

The IEEE Seoul Section had a successful year of 2014 with the following activities:

- Seoul Section achieved a big increase in memberships in 2014, more specifically 26 % increase compared to 2013.
- The student activity in Seoul Section can be highlighted by the Student Paper Contest 2014 held in Seoul National University in which 27 papers were presented and evaluated for prizes.
- IEEE Seoul Section had 4 professional seminars by the experts in emerging areas of electrical engineering.
- The joint chapter with Seoul, Daejeon, Daegu and Changwon Section for the Computational Intelligence Society (CIS011), and the Counsel on Electronic Design Automation (CEDA44) have been very active in their technical activities.
- The section had four executive committee meetings (March, May, August and October)
- The general assembly of IEEE Seoul Section was held in Dec. 6, 2014 and approved the financial report.
- The 39th HMPC 2014 Dinner Meeting was held on December 26st at Westin Chosun Hotel to promote members to higher grades. The event consists of award ceremony, special lectures and music entertainment along with dinner, followed by informal gatherings.
- IEEE/IEEK Joint Outstanding Young Engineer Award was given to Professor Chan-Byoung Chae of Yonsei University for his outstanding achievement in MIMO wireless communications area.

A.2 Financial Report

The IEEE Seoul Section's financial condition turned bad as shown in the following tables. The balance at the beginning of the year 2014 was 17,632,977 won and the balance at the end of the year 2014 was 9,628,709 won even with a big contribution. In fact, as shown in income table, the R10 rebate was not delivered to Seoul Section due to some misunderstanding between R10 and Seoul Section. The Section's 2014 financial report has

been approved by the general assembly of IEEE Seoul Section in Dec. 31, 2014 with the condition of delayed R10 rebate.

1. Income

Item	Amount (won)
R10 Rebate	0
IEEE Support	615,920
Contribution	5,000,000
Interest	11,485
Total	5,627,405

2. Expenditure

Item	Actual
Meetings and Social Events	10,330,210
Student Activities	1,000,000
Chapter Support	616,820
Other Management & General Expenses	1,684,643
Total	13,631,673

3. Total Net Worth

Item	Amount	
Balance beginning of the year 2014	17,632,977	A
Total Income of the year 2014	5,627,405	B
Total Expenditure of the year 2014	13,631,673	C
Total Net Increases	-8,004,268	B-C
Balance end of the year 2014	9,628,709	A+B-C

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Programs

There has been a big increase in memberships in 2014, more specifically 26 % compared to 2013. In 2015, an aggressive membership development program will be pursued.

Year	Member	Honorary Member	Life Fellow	Fellow	Life Member	Life Senior Member	Senior Member	Associate	Affiliate	Student	Total
2013	1598	1	6	24	5	4	239	110	0	826	2813
2014	1637	1	6	27	6	6	258	106	104	1403	3554

B.2 Professional and Continuing Education Activities

B.2.1 Professional Seminars

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

- “Neuroimaging by Magnetic Resonance Imaging”, Professor Jongho Yi, Seoul National University
- “Nanofluidics for Energy, Environment and Sustainability”, Professor Seong Jae Kim, Seoul National University
- “Distributed Antenna Systems, Mobile Repeaters and Backhails”, Dr. Joon Chung, CEO, Solid Inc.
- “Next Generation Green Communication Networks”, Professor Chan-Byoung Chae, Yonsei University

B.3 Students Activities

B.3.1 Student Branches

IEEE Seoul Section has 13 student branches in 2014. Each student branch consists of more than 20 graduate students. Activities of the student branches are planned and executed independently by students. The following are our student branches:

- Aju University
- Catholic University of Korea
- Chung-Ang University
- Dankook University
- Ewha Women’s University
- Hanyang University

- Hongik University
- Korea Aerospace University
- Korea University
- Seoul National University
- Soongsil University
- University of Seoul
- Yonsei University

B.3.2 Student Paper Contest

The Student Paper Contest for graduate student paper competition was held at the Global Engineering Education Center, Seoul National University on Dec. 06, 2014. Total 27 papers were presented and evaluated by 2 presiders for each area in 3 parallel sessions: 9 papers in each of Communication area, in Devices, Circuits & Energy area, and in Computers and Emerging Technology area. The committee members and the recipients of the 2014 Student Paper Contest Prizes were as follows:

- Organizing Committee
 - General Chair: Prof. Byung Kook Park (Seoul National University)
 - Technical Program Committee:
Professors Sung Roh Yoon (Chair, Seoul National Univ.), Cheon Won Choi (Dankook Univ.), Jung Hee Han (Korea Aerospace Univ.), Suhwan Kim (Seoul National Univ.), Gilsoo Jang (Korea Univ.), YoonHee Kim (Sookmyung Wemen's Univ.)
- 3 Gold Prize Awards
 - Wonjae Shin (Seoul National Univ.), "Retrospective Interference Alignment for MIMO Cellular Networks with Delayed Channel Feedback"
 - Jae Woong Shim (The University of Sydney), "The Impact Analysis of Variable Generation on Small Signal Stability"
 - J. Alexander Bae (KAIST), "How to Cope with Motion Artifact in Heart Rate Signal from Bio-Impedance Measurement System"
- 4 Silver Prize Awards
 - Ji Ho Park (Kwangwoon Univ.), "A Positioning Accuracy Improvement Based on Wavelet Transform"
 - Ara Jo (Soongsil Univ.), "Optimal Design of Power System Network for Offshore Wind Farm Considering Cable Connections"

- Minseob Shim (Korea Univ.), “Self-Powered 30 μ W to 10mW Piezoelectric Energy Harvesting System with 9.09ms/V Maximum Power Point Tracking Time”
- Jaehyun Yoo (Seoul National Univ.), “Indoor WIFI localization using time-series semi-supervised learning with balanced optimization”

B.4 Chapter Activities

In IEEE Seoul Section, 22 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	Chul Hee Lee, Yonsei 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
COM19	Communications Society	Inkyu Lee, Korea Univ.
CS23	Control Systems Society	Poo Gyeon Park, Postech Univ.
E25	Education Society	Eui-Sung Kang, Sunchon Univ.
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.
MAG33	Magnetics Society	Young Keun Kim, Korea Univ.
MTT17	Microwave Theory and Techniques Society	Chulhun Seo, Soongsil Univ.
NANO42	Nano Technology Society	Jo-Won Lee, Hanyang Univ.
NPS05	Nuclear and Plasma Science Society	Hee-Joung Kim, Yonsei Univ.
PEL35	Power Electronics Society	Bo Hyung Cho, Seoul National Univ.
RA24	Robotics & Automation Society	Beom Hee Lee, Seoul national Univ.
SMC28	Systems, Man, and Cybernetics Society	Seong Whan Lee, Korea Univ.

SP01	Signal Processing Society	Myung Jin Bae, Soongsil Univ.
SSC37	Solid-State Circuits Society	Shiho Kim, Yonsei Univ.
VT06	Vehicular Technology Society	Yo-An Shin, Soongsil 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.

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

PART C - OTHERS

C.1 Relationship with National Societies

The IEEE Seoul Section has close relationships with Korean technical societies such as the Korean Institute of Communications and Information Sciences (KICS), the Institute of Electronics and Information Engineers (IEIE), 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 Engineers (KOSBE). The IEEE Seoul Section provides technical supports to these societies.

C.2 Special Events

The 39th HMPC 2014 Dinner Meeting was held on December 26th at Westin Chosun Hotel, Seoul with 85 participants, to promote members to higher grades. The event consisted of award ceremony honoring five members for their outstanding service to Seoul Section, followed by celebration for three new IEEE Fellows. Then a special technical talk was presented by Professor Chan-Byoung Chae of Yonsei University, the IEEE/IEIE Joint Young Engineer Award 2014 winner, with the title of "Next Generation Green Communication Networks." 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 39 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 2014 has been an important meeting in the light of its purpose!

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 2015. Some of work items are listed below.

- Encourage academia-industry cooperation by Metropolitan Area Workshop
- Increase retention rate by promoting new industry memberships
- Promote student branch activities such as IEEE Day
- 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
- 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 and KOSBE.