

# 2023 IEEE Seoul Section Annual Report

## PART A - SECTION SUMMARY

### A.1 Executive Summary

- **Section Executive Committee Member List**

Position	Name	Affiliation
Chair	Gilsoo Jang	Korea University
Vice-chair	Inkyu Lee	Korea University
Secretary	Kyeon Hur	Yonsei University
Treasurer	Seung-Won Jung	Korea University
Awards and Recognition Committee Chair	Chaewoo Lee	Ajou University
Chapter Coordination Committee Chair	Seong Oun Hwang	Gachon University
Educational Activities Committee Chair	Seongjae Cho	Ewha Womans University
Fellow Candidate Discovery Committee Chair	Inkyu Lee	Korea University
Higher Member Promotion Committee Chair	Jong Chang Lee	Hongik University
History Committee Chair	Dae Gwon Jeong	Korea Aerospace University
Information Management Committee Chair	William Jinho Song	Yonsei University
Membership Development Committee Chair	Oh-Soon Shin	Soongsil University
Nomination Committee Chair	Cheon Won Choi	Dankook University
Professional Activities Committee Chair	Jeong Woo Lee	Chung-Ang University
Strategic Planning Committee Chair	Kukjin Chun	Seoul University
Student Activities Committee Chair	Namyoon Lee	Korea University
Student Branch Coordination Committee Chair	Youngsu Cha	Korea University
Technical Activities Committee Chair	Minhan Yoon	Kwangwoon University
Volunteer Recognition Committee Chair	Chaewoo Lee	Ajou University
Life Member Affinity Group Chair	Dae Gwon Jeong	Korea Aerospace University
Women in Engineering Affinity Group Chair	Sang Mi Lee	IITP
Conference Quality and Management Chair	Hyun Chang Park	Dongguk University
Young Professional Affinity Group Chair	Heewon Seo	Dankook University
Mentor	Jong Chang Lee	Hongik University
Senior Mentor	Kyun Hyon Tchah	Korea University

- **Student Paper Contest held offline at Korea University, December 2, 2023**

The student activities of Seoul Section showcased through 2023 IEEE Seoul Section Student Paper Contest, which took place in person on December 2, 2023. In the contest, 49 papers were presented and evaluated for the selection of prize winners.

- **IEEE Seoul Section Member Recruitment Recognition Award**

The IEEE Seoul Section has significantly increased Section Membership Retention rate and Recruitment compared to last year. To reward the Section Chair for his contribution to promoting IEEE Section membership, the IEEE Seoul Section Member Recruitment and Recovery Committee presented the Recognition Award to the Section Chair.

- **Annual General Meetings**

Seoul Section holds an annual general meeting every year, and in 2023, the meeting took place on December 2.

Time and Place	Agenda
17:00-18:00, December 2, 2023 Korea University	<ul style="list-style-type: none"> <li>• Report of 2023 IEEE Seoul Section Student Paper Contest</li> <li>• Report of activities of Seoul Section in 2023</li> <li>• Report of financial audit of Seoul Section in 2023</li> </ul>

(# attendees: 57)	<ul style="list-style-type: none"> <li>Election of 2023 IEEE Seoul Section Chair</li> </ul>
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- Executive Committee Meetings**

This year Seoul Section held three executive committee meetings in February, May, and July, respectively. The following table summarizes the meeting agenda.

No	When and Where	Agenda
1	18:00-20:00, Mon., Feb. 27, 2023  (# attendees: 18)	<ul style="list-style-type: none"> <li>Report of activities and finance of IEEE Seoul Section in 2022</li> <li>Plans of committees in 2023</li> <li>Introduction to R10 Region Realignment</li> </ul>
2	18:00-20:00, Wed., May. 31, 2023  (# attendees: 16)	<ul style="list-style-type: none"> <li>Report of activities and plans from each committees</li> <li>Brief introduction of elected executives</li> <li>Report plans for hosting TENCON 2025</li> </ul>
3	17:00-18:00, Tue., July. 24, 2023  (# attendees: 17)	<ul style="list-style-type: none"> <li>Reports of activities from each committees</li> <li>Brief introduction for future direction of membership status and region realignment by R10 Director and R10 Advisory committee</li> </ul>

In addition to the major activities above, IEEE Seoul Section carried out the activities as follows.

- The annual general meeting of Seoul Section was held on December 2, 2023, following the 2023 IEEE Seoul Section Student Paper Contest. During this meeting, Prof. Gilsoo Jang at Korea University was nominated to serve as the 2024 IEEE Seoul Section Chair

## A.2 Financial Report

- Income**

Item	Amount (KRW)
IEEE Support	21,763,556
Interests	60,680
Other Incomes	200,000
Total	22,024,236

- Expenditure**

Item	Amount (KRW)
Meetings and Social Events	19,396,550
Student Activities, Chapter Support	4,763,824
Other Management & General Expenses	1,325,400
Total	25,485,774

- Total Net Worth**

Item	Amount (Won)	
Balance beginning of the year	79,363,674	A
Total Income of the year 2018.05	22,024,236	B
Total Expenditure of the year	25,485,774	C
Total Net Increases	-3,461,538	B-C
Balance end of the year	75,902,136	A+B-C

## **PART B - ORGANIZATIONAL ACTIVITIES**

### **B.1 Membership Development Activities**

- Seoul Section experienced substantial growth in membership, with a remarkable increase of 470 members compared to the previous year, 2022.
- Total number of active members in the past 3 years.

Grade Year	Total	Mem	Sr.M	FM	HM	LF	LM	LS	AM	GSM	St.M	Other
2023	5057	2067	423	43	1	18	29	20	133	1805	518	-
2022	4043	1823	392	46	1	15	25	18	77	1335	310	-
2011	3890	1649	367	44	1	14	24	17	68	1385	321	-

- Seoul Section will enhance the membership development through the following four strategies:
  - Implementing a program for recruiting undergraduate and graduate students
  - Establishing a program for recruiting persons in industry
  - Creating a program for elevating member grades of existing members
  - Acknowledging and appreciating members for their voluntary services
- 
- Two new fellows in Seoul Section were announced.
  - Byoung Kuk Lee (Sungkyunkwan University)  
for contributions to battery chargers for electric vehicles
  - Hoongseon Hong (Incheon National University)  
for contributions to resource management in wireless networks

## B.2 Chapter Activities

- Total Chapter Summary in the Seoul Section

Technical Chapters	Code	Chair
Aerospace and Electronic Systems Society	AES10	Young Kil Kwag
Antennas and Propagation Society	AP03	Hosung Choo
Broadcast Technology Society	BT02	Byeung Woo Jeon
Computer Society	C16	Eenjun Hwang
Circuits and Systems Society	CAS04	Jinwook Burm
Communications Society	COM19	Byonghyo Shim
Control Systems Society	CS23	Poo Gyeon Park
Electron Devices Society	ED15	Woo Young Choi
Geoscience and Remote Sensing Society	GRS29	Sang-Wan Kim
Information Theory Society	IT12	Kwang Soon Kim
Microwave Theory and Techniques Society	MTT17	Moon Que Lee
Nuclear and Plasma Sciences Society	NPS05	Seungryong Cho
Power & Energy Society	PE31	Sung Kwan Joo
Photonics Society	PHO36	Ju Han Lee
Robotics and Automation Society	RA24	Songhwa Oh
Sensors Council	SEN39	Seong Oun Hwang
Signal Processing Society	SP01	Myung Jin Bae
Solid-State Circuits Society	SSC37	Jongsun Kim
Vehicular Technology Society	VT06	Seung-Hoon Hwang

- Chapter Statistics

Total Chapter	New Chapter	Active Chapter
19	0	3

• Chapter Activities

Chppter	Title	Date	Place	Detail
C16	SEMINAR: RECENT TREND OF SOUND EVENT DETECTION SYSTEMS	17-Apr-23	Korea University	Seminar on 1. Sound Event Detection (SED) Systems 2. Audio Data Augmentation Methods 3. SED Models
C16	SEMINAR: APPLICATIONS OF RECENT DEEP GENERATIVE MODELS	18-Sep-23	Korea University	Seminar on 1. Generative Adversarial Networks (GAN) 2. Diffusion Models
ED15	ISSCC-IEDM JOINT REVIEW WORKSHOP	4-May-23	Seoul	Debriefing workshop of ISSCC and IEDM
ED15	INTELLIGENT SEMICONDUCTOR DEVICES ON-LINE WORKSHOP	18-Sep-23	Online	Intelligent semiconductor devices Workshop. The focuses are on nanomaterials and nanotechnology devices, nonvolatile memory device for synaptic function, and nanoelectromechanical memory switches for monolithic 3-D integrated circuit.
MTT17	2023 MICROWAVE AND MMWAVE WORKSHOP	31-Mar-23	The-K Hotel	Trends of the state of the art of microwave and mmWave technologies on the GaAs semiconductor technologies and IC designs.
CAS04	IEEE CASS SAPPORO WORKSHOP ON CIRCUITS AND SYSTEMS, INVITED TALKS	30-July ~ 01-Aug-23	Sapporo, Hokkaido, Japan	Forum for the exchange of the latest results related to circuits and systems and to enhance and/or develop various levels of cooperation. Papers describing original works in all aspects of circuits and systems are invited.
VT06	VTS R10 CHAPTER CHAIRS TRAINING - HONG KONG OCTOBER 2023	9-Oct-23	Tung Chung, Hong Kong	VTS R10 Chapter Chairs training adjacent to VTC2023- Fall in Hong Kong
CS23	WINTER WORKSHOP ON CONTROL THEORIES AND APPLICATIONS	23~24- Feb-23	Andaz Seoul Gangnam Hotel, Seoul	Cyclic Vehicle Platoons, Blended Dynamics Theorem, Adaptive Cruise Control, Fractional Differential Equations, Dynamic Autonomous Vehicles, Connected Electrified Vehicles, and so on. Presentation and Discussion on Control Theories, Robotics, Intelligent Vehicles, and so on.
SEN39	THE BIG PICTURE OF FHE STACK	22-Sep-23	Online	An overview of the start-of-the-art development in FHE software stack is delivered. The talk also discusses various aspects of FHE stack that are crucial for future adoption, including hardware acceleration, fair benchmarking, transpiler and the limitations.
SEN39	TAB-SAPP: A TRUST-AWARE BLOCKCHAIN- BASED SEAMLESS AUTHENTICATION FOR MASSIVE IOT- ENABLED INDUSTRIAL APPLICATIONS	17-Nov-23	Online	Article presents a trust-aware blockchain-based seamless authentication with privacy-preserving (TAB- SAPP) to resolve critical things, such as privacy, security, and packet delivery ratio.

### B.3 Professional and Continuing Education Activities

- N/A

## B.4 Students Activities

- **Universal Codestars 2023 held offline at Hongik University**  
Universal Codestars 2023 is an Elementary/Middle/High School Students Education and Contest about programming. Students in Hongik University Student Branch hosted such event on 1st of July to 24th of September.
- **Student Paper Contest held offline at Korea University**  
The student activity of Seoul Section can be highlighted by the 2023 Student Paper Contest, which was held online on December 2, 2023. A total of 49 papers were presented and evaluated for the selection of prize winners. Winners of Awards are the following:
  - Grand Prize:  
Hwaseok Shin (Korea Univ.), A 28-Gb/s Single-Ended PAM-4 Transceiver with Active-Inductor Equalizer and Amplitude-Detection LSB Decoder for Memory Interfaces
  - Gold Prize:  
Woo Kyoung Han (DGIST), End-to-End JPEG Decoding with Texture Adaptive Cosine Transform  
Amisha Rajnikant Bhanushali (Sejong Univ.), Haze Removal Using Convolutional Neural Network
  - Silver Prize:  
Myungjun Son (Korea Univ.), Revisiting Batch Normalization in Quantization of Super-Resolution Networks  
Sohyun Kim (Korea Univ.), Soft Crawling Robot using Electrohydraulic Actuator  
Min-seung Ko (Yonsei Univ.), Parameter Identification of WECC Composite Load Model via Interdependency-based Grouping

## B.5 Affinity Group Activities

- Young Professional (YP)  
Participated IEEE Young Professionals Inter-Regional Chairs Meetup - R10 CLAP (3 Dec. 2023)  
Participated IEEE YP Leaders' Monthly Open Meeting
- Life Members (YM)  
The year 2023 is the moment that the COVID pandemic faded away, and offline meeting was made possible. The LMAG Seoul participated the 2nd R10 LMAG Meet via zoom and held 2 LMAG Seoul meetings including joint meetings with Daejeon section. The joint LMAG Meeting of Seoul & Daejeon Sections was hosted by the Head of the School of EE, KAIST, Daejeon city. More future collaboration was encouraged. Details on the meetings are as follows.

Date	Place	Agenda
11-July-23	Online	1. Roll call and welcome addresses 2. Follow up points from first LMAG meet on 26-02-2023 3. New Items 4. Articles for R10 & LM newsletters 5. MGA is looking for 2024 various Committee Members positions 6. LMAG Activities Status 7. LM Conference by MGA-LMC 8. Next LMAG meet 9. 2024 MGA Life member Committee Chair
28-Apr-23	Faculty Club, Seoul National University	1. Registration and Roll Call 2. Luncheon 3. Opening and Welcome Addresses 4. Status and Future Plan for LMAG Seoul 2023 5. Culture Lecture
05-Oct-23	EE Faculty Meeting room, KAIST, Daejeon	1. Registration and Roll Call 2. Welcome Addresses 3. EE Department Presentation, Professor Joonhyuk Kang 4. LAB Tour 1: Urban Robotics Lab, Professor Hyun Myung 5. Luncheon 6. Joint LMAG Meeting 7. Technical Presentation,

## **B.6 Awards & Recognition Activities**

- **IEEE Seoul Section Member Recruitment Recognition Award**  
The IEEE Seoul Section has significantly increased Section Membership Retention rate and Recruitment compared to last year. To reward the Section Chair, Professor Gilsoo Jang for his contribution to promoting IEEE Section membership, the IEEE Seoul Section Member Recruitment and Recovery Committee presented the Recognition Award to the Section Chair.
- IEEE Seoul Section nominated Dr. Sung Wook Park, who served as the Chairman of SK Hynix, and currently resides in Seoul to 2024 IEEE Honorary Membership. He was recommended and approved at the IEEE Board of Directors November meeting.
- Professor Deog-Kyoon Jeong received the IEEE Solid-State Circuits Award, initiated in 1987, in recognition of his contribution "for leadership in the technology development for Digital Video Interface (DVI) and High-Definition Multimedia Interface (HDMI)."

## **B.7 Communication Activities (Newsletter, Home Page, E-mail etc.)**

- **IEEE Seoul Section Homepage (<https://site.ieee.org/seoul/>)**  
IEEE Seoul Section is currently operating its website and regularly updates events such as the Student Paper Contest, announcing them through periodic updates.
- **IEEE Seoul Section Facebook Page(<https://www.facebook.com/ieee.seoul/>)**  
IEEE Seoul Section also run its Facebook page.

## **B.8 Industry Relations**

- N/A

## **B.9 Humanitarian Technology Activities**

- N/A

## **B.10 Community Activities**

- N/A

## **PART C - OTHERS**

### **C.1 Special Events**

- N/A

### **C.2 Relationship with National and International Societies and Non-Government Organizations (NGO)**

- N/A

### **C3. Collaboration with other IEEE Sections**

- IEEE Seoul Section is currently in communication with the temporarily suspended Tokyo Section to revive outstanding student exchange activities that were halted due to COVID-19. Starting next year, the Section aims to provide excellent opportunities to students who have achieved outstanding results in the Student Paper Contest.

#### **C.4 Support extended to Sub-sections & Society Chapters within the Section**

- N/A

#### **C.5 Best Practices of your Section (which you would like to share with other Sections for the benefits of members)**

- N/A

#### **C.6 Problems anticipated and suggestions for solutions, if any**

- N/A

### **PART D - GOALS AND PLANS**

#### **D.1 Continuation of project/activity in progress and their implementation plans**

- **Seoul Section has built concrete plans for the year of 2024. A part of the plans are listed below.**
  - Seoul Section will expand the membership by engaging new industry members.
  - Seoul Section will vitalize inactive student branches, encouraging participation in the activities, e.g., IEEE Xtreme.
  - Seoul Section will encourage members to elevate their member grades.
  - Seoul Section will support the technical activities of the chapters of Seoul Section.
  - Seoul Section will improve member services so that all the members are able to attain useful information at the website of Seoul Section.
  - Seoul Section will support the activities of Membership Development Committee, Fellow Candidate Discovery Committee, Volunteer Recognition Committee, and Higher Membership Promotion Committee to increase the membership.
  - Seoul Section will invite volunteers to the workshops that provide updated manuals for membership development and conference organization.
  - Seoul Section will publish newsletters to communicate with the members of Seoul Section.
  - Seoul Section will collaborate more closely with other academic societies in Korea, e.g., IEIE, KICS, KIEE, KIEES, KIISE, KIPE, KIPS, KOSBE, and OSK.
  - Seoul Section will support and encourage members to participate in IEEE Region 10 activities as well as IEEE Headquarter activities.
  - Seoul Section will continue to honor the services of volunteers by recognizing and appreciating them through media, newsletters and meetings. Not only the services of individuals but also the achievements of chapters, student branches, and industries will be disclosed for the recognition of them through plaques, awards, prizes, badges, and certificates.

#### **D.2 Goals and Future Plans**

- N/A

**D.3 Any innovative ideas to make IEEE more creative and value added for sustaining the membership retention and recruitment goals.**

- N/A

**D.4 Business Plan for Sustainable Growth and Financial Stability.**

- N/A





<Seoul Section Annual Meeting on 05-Oct-23>



<Seoul Section Student Paper Contest & Annual General Meeting on 02-Dec-23>