

IEEE Sendai Section Annual Report 2024

PART A - SECTION SUMMARY

A.1 Executive Summary – (Please follow the format given below)

- Section Executive Committee Member List
 - Section Officers [2024-2025]
 - Chair: Hiroaki Muraoka (Tohoku University)
 - Past Chair: Hirohito Yamada (Tohoku University)
 - Vice Chair: Noriharu Suematsu (Tohoku University)
 - Secretary: Qiaowei Yuan (Tohoku Institute of Technology)
 - Treasurer: Shunsuke Yamaki (Tohoku Institute of Technology)
 - Section Executive Committee Members [2024-2025]
 - Naoki Honma (Iwate University)
 - Shinobu Ishigami (Tohoku Gakuin University)
 - Keitarou Ishiyama (NTT-ME Corporation)
 - Mahmudul Kabir (Akita University)
 - Toshiki Kanamoto (Hirosaki University)
 - Hitoshi Kikuchi (NTT-ME Corporation)
 - Hiroyuki Masayanagi (NEC Platforms, Ltd)
 - Masayuki Nishiguchi (Akita Prefectural University)
 - Katsunori Oyama (Nihon University)
 - Hideyuki Okabe (Advantest Laboratories Co.)
 - Jungpil Shin (The University of Aizu)
 - Katsumi Takano (Yamagata University)
 - Isao Tomita (Tohoku Institute of Technology)
 - Shin Yoshizawa (Tohoku University)
 - Section Standing Committee Chair [2024-2025]
 - Membership Development: Qiaowei Yuan (Tohoku Institute of Technology)
 - Technical Program: Noriharu Suematsu (Tohoku University)
 - Chapter Promotion: Noriharu Suematsu (Tohoku University)
 - Student Activities: Shin Yoshizawa (Tohoku University)
- Section Highlights
 - Dr. Yoichiro Tanaka (Tohoku University) was newly elevated to 2024 Fellow Grade in Sendai Section.
 - Two lecture meetings were organized:
 - New Fellow Lecture Meeting [8th April 2024]
 - Special Lecture Meeting “Towards stable operation of wireless communication in factories” [17th December 2024]
 - 8 members were newly elevated to Senior Member in Sendai Section in 2024.
 - Achieved the highest voting percentage among medium sections in R10 in the 2024 IEEE Annual Election.
 - Tohoku Inst of Tech Student Branch was newly formed in 2024.
 - Co-sponsored “2024 Tohoku-Section Joint Convention of Institute of Electrical and Engineers, Japan (TSJC)” at Akita Prefectural University. [29th - 30th August 2024]
 - The following Administrative Meetings were held.
 - Annual General Meeting
 - 2 Section Board Meetings
 - 5 Administrative Officers Meetings

A.2 Financial Report – (Please follow the format given below)

The Sendai Section's finances are in good condition.

- The financial summary for the 2024 fiscal year is as follows (excluding CB).

(All in JPY)

Income / Expense	Item	Budget	Actual
Income	2.10.0 Meetings & Social Events	-	39,457
	3.30.0 Rec. Sections or Councils	300,000	300,000
	3.45.0 Non-IEEE CB Account Interest	20	157
	3.95.0 Bank Account Transfers (incoming)	845,000	-
	Total of Income	1,145,020	339,614
Expense	4.10.0 Meetings	350,000	306,876
	4.10.0 Section Meeting	130,000	58,950
	4.80.0 Student Activities	100,000	4,000
	4.80.4 Student Awards Expenses	40,000	3,080
	4.85.0 Grants & Awards	100,000	117,330
	5.20.0 Travel Expense	250,000	144,805
	5.50.0 Support to Sections/Chapters	120,000	121,500
	5.52.0 Support-Region (Council)	-	34,328
	5.60.0 Other Management & General Expenses	660,000	9,670
	6.10.0 Postage & Supplies	50,000	7,323
	6.31.0 Student Branch Rebate Disbursement	50,000	38,100
	6.20.0 Other	430,000	-
	Total of Expense	2,280,000	845,962
Balance of year end of 2023		2,147,501	2,147,501
Balance of year end of 2024		1,012,521	1,641,153

- In addition, the Sendai Section has a balance in the Concentration Banking account.

(All in USD)

Income / Expense	Item	Budget	Actual
Income	3.10.0 Rebate from IEEE HQ	6,500.00	6,522.70
	3.31.0 Student Branch Rebate Receipts	-	360.00
	3.34.0 IEEE HQ & Societies	11,000.00	11,025.53
	3.40.0 IEEE CB Account Interest	200.00	462.40
	Total of Income	17,700.00	18,370.63
Expense	5.52.0 Support - Region (Council)	9,350.00	8,933.05
	6.95.0 Bank Account Transfers (outgoing)	6,500.00	-
	Total of Expense	15,850.00	8,933.05
Balance of year end of 2023		6,970.25	7,000.96
Balance of year end of 2024		8,820.25	16,438.54

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- The total number of active members in the past 3 each year is 704 (2022), 695(2023), **718(2024)**.
- The number of memberships by grade in the past 3 each year is as follows.

Grade	Members		
	2022FY	2023FY	2024FY
Fellow	25	25	25
Senior Member	79	76	82
Member	457	455	465
Associate Member	7	8	9
Graduate School Member	121	119	120
Student Member	15	12	17
Total	704	695	718

- The Membership Development Committee nominated and supported members for promotion to Senior Member. 8 members were newly elevated to Senior Member in Sendai Section in 2024.
- Newly elevated to 2024 Fellow Grade in Sendai Section.
 - Yoichiro Tanaka (Tohoku University)
for contributions to perpendicular magnetic recording technology for disk drives

B.2 Chapter Activities

The Chapter Promotion Committee supported Chapters activities in Sendai Section.

- Total number of Chapters in the Section: 4 Chapters
 - **SP01 Sendai Chapter**
Chair: Yukio Iwaya (Tohoku Gakuin University)
 - **COM19 Sendai Chapter held 7 technical meetings.**
Chair: Nei Kato (Tohoku University)
 - **EMC27 Sendai Chapter held 13 technical meetings.**
Chair: Ken Sato (National Institute of Technology, Oyama College)
 - **MAG33 Sendai/Sapporo Joint Sections Chapter held 4 technical meetings.**
Chair: Yasushi Endoh (Tohoku University)
- Number of Chapters formed in the current year: None.
- Number of active Chapters (Chapters who have reported required number of meetings during the year): 3 Chapters.

B.3 Professional and Continuing Education Activities

- The Technical Program Committee organized the following 2 special lecture meetings on section level.
 - **New Fellow Lecture Meeting** [8th April 2024]
The lecture meeting was held by newly elevated Fellow to commemorate his upgrade.
“Innovation Cycle of Perpendicular Magnetic Recording” by Dr. Yoichiro Tanaka (Tohoku University)

(Abstract)

This lecture provides complete overview of innovative research and development process from the invention to hard disk drive realization and social integration of perpendicular magnetic recording technology that was invented by Professor Shunichi Iwasaki and his research team in Research Institute of Electrical Communication, Tohoku University. In addition, contribution of the information storage foundation to digital society as well as future prospect will also be presented.



- Venue: RIEC, Tohoku University
- Hybrid Meeting
- Attendance: 43 (Virtual:25, On-site:18)

○ **Special Lecture Meeting** [17th December 2024]

“Towards stable operation of wireless communication in factories” by Dr. Satoko Itaya (NICT)

(Abstract)

In this presentation, I will introduce the challenges of wireless communication in the fields of manufacturing, logistics, medicine, and infrastructure through the Flexible Society Project (FSPJ), which was launched in 2015 under the initiative of the National Institute of Information and Communications Technology (NICT) to aim for stable use of wireless communication at factory sites through collaboration between various companies across boundaries, and which has since expanded into activities to support the entire society through wireless communication since 2020. In addition, I will also report on a demonstration experiment using 5G/L5G at a manufacturing site in Tohoku conducted in 2024.

- Venue: RIEC, Tohoku University
- Hybrid Meeting
- Attendance: 74 (Virtual:53, On-site:21)

B.4 Students Activities

- 3 Student Branches are active in Sendai Section.
 - Tohoku University Student Branch
 - The University of Aizu Student Branch
 - Tohoku Inst of Tech Student Branch
- Number of Student Branches formed in the current year: 1 Student Branch
 - Tohoku Inst of Tech Student Branch
- Section level student activities
 - Student Session on TSJC (12 papers were presented) [29th - 30th August 2024]
 - Sendai Section Student Awards Ceremony [17th December 2024]
 - 2 students received The Best Paper Prize
 - 1 student received The Encouragement Prize
- Summary of Student Branch activities
 - **Tohoku University Student Branch**
Chair: Kazuma Mashiko
 - **On-Site Class in Mutsu-shi** [8th -9th September 2024]
 - Venue: Tanabu 2nd elementary school, Mustu-shi
 - Join “IEEE IDEA JAM2024” at Future University Hakodate [6th - 8th April 2024]
 - Join “IEEE Student Branch Leadership Training Workshop (SBLTW)” [29th August 2024]
 - Join “Region 10 SYWL Congress” [30th August -1st September 2024]
 - Joint Workshop with Sendai YP [11th November 2024]

- **The University of Aizu Student Branch**

Chair: Md Faizul Ibne Amin

- **The Graduate School Information Fair, at the University of Aizu Interdisciplinary Research Forum 2024** [25th November 2024]

The student poster session is an annual event organized by the IEEE Student Branch of UoA in collaboration with the student recruitment section of the University. It is an integral part of the Graduate School Information Fair. This aims to provide an opportunity for interactive discussions, exchanging research ideas/progress among Graduate School students, laboratories and attracting undergraduate students to pursue their domains of interest in graduate school.

- Join “IEEE Student Branch Leadership Training Workshop (SBLTW)” [29th August 2024]
 - Join “Region 10 SYWL Congress” [30th August -1st September 2024]

- **Tohoku Inst of Tech Student Branch**

Chair: Yunchong TANG

- Tohoku Inst of Tech Student Branch was organized on 7th July 2014.

B.5 Affinity Group Activities

- **Sendai WIE (Sendai Section Women in Engineering Affinity Group)**

- Sendai WIE 7th Anniversary Event “Building a greedy career - Let's talk about my case -” [20th April 2024]

The event consisted of two parts. The first part featured a special talk on research and career: "Four Seasons of Research -enjoy thoroughly-" by Prof. Chao-Nan, Tohoku University.

The second part was WIE special talk session about "parenting", "juggling something for life" and "building career".

- Virtual Meeting (Zoom Webinar)
- Attendance: 24

- Sendai WIE and YP Special Session “The charm of research that female and young researchers can convey” [30th August 2024]

This special session was organized on 2024 Tohoku-Section Joint Convention of Institutes of Electrical and Information Engineers by Sendai WIE and Sendai YP.

The event featured two key sessions. The first included four oral presentations from Japanese universities, tailored for participants with diverse specialties, fostering an enriching exchange of ideas. The second session featured a special talk by Dr. Sawako Nakajima from Akita University titled "Creating the Future with Minority Perspectives in Mind: The World of Welfare Information Engineering." Dr. Nakajima discussed her work in film production for the visually impaired and her initiative, "CHORD xx CODE," a human engineering salon with seven female members. The 23 attendees found the sessions insightful and inspiring, gaining knowledge about advanced research and minority focused innovations.



- Venue: Akita Prefectural University
- Attendance: 23

- Sendai WIE Award 2024 [17th December 2024]

- Venue: RIEC, Tohoku University
- Hybrid Meeting
- Attendance: 28

- 10 times Sendai WIE administrative meetings were held.

- **Sendai LMAG (Sendai Section Life Members Affinity Group)**

- Sendai LMAG Lecture Meeting (2024-1st) [20th March 2024]
 - "Large Language Model and Generative AI" by Prof. Akinori Ito (Graduate School of Engineering, Tohoku University)
 - Venue: RIEC, Tohoku University
 - Hybrid Meeting
 - Attendance: 64
- Sendai LMAG Lecture Meeting (2024-2nd) [25th May 2024]
 - "Toward Building a Resilient Information and Communication Infrastructure" by Dr. Katsumi Iwatsuki (Specially Appointed Professor, International Research Institute of Disaster Science, Tohoku University)
 - Venue: RIEC, Tohoku University
 - Hybrid Meeting
 - Attendance: 34
- Sendai LMAG Lecture Meeting (2024-3rd) [28th September 2024]
 - "Disaster Medical Activity Support System That Enables Flexible Disaster Response by The Japan Medical Association's Disaster Medical Assistance Team (JMAT)" by Dr. Shinji Akitomi (Visiting Professor, International Research Institute of Disaster Science, Tohoku University)
 - Venue: RIEC, Tohoku University
 - Hybrid Meeting
 - Attendance: 28
- Technical tour to "NanoTerasu" [24th November 2024]

NanoTerasu is the world's most advanced large-scale research facility that enables observation of the nanoworld at one billionth of a meter. NanoTerasu uses an accelerator to accelerate electrons to nearly the speed of light, producing X-rays, which are about one billion times brighter than sunlight, and shines them on materials for observation. Through these observations, they are widely used not only in basic science, but also in various industrial fields such as energy, materials, devices, biotechnology, and food. NanoTerasu supports both science and innovation. In this technical tour, the participants received an overview of the NanoTerace and then toured the observation hall.

 - Venue: NanoTerasu
 - Attendance: 11
- Sendai LMAG General Assembly [23rd March 2024]
 - Venue: RIEC, Tohoku University
 - Hybrid Meeting
 - Attendance: 39

- **Sendai YP (Sendai Section Young Professional Affinity Group)**

- Sendai YP 5th Anniversary Event [16th November 2024]

To celebrate the 5th anniversary of the founding of Sendai YP, a review of activities to date was presented and a commemorative lecture delivered by Mr. Koki Hirooka (The University of Aizu) and Dr. Hiroaki Hashida (Tohoku University). Also, the first Student Branch exchange meeting was organized, allowing interaction between the Tohoku University SB and Aizu University SB.

 - Hybrid Meeting
 - Attendance: 13
- Joint Workshop with Sendai YP [11th November 2024]

- Sendai WIE and YP Special Session “The charm of research that female and young researchers can convey” [30th August 2024]
 - Venue: Akita Prefectural University
 - Attendance: 23
- 4 times Committee Meeting for Japan YP Study Lab 2024
- 6 Sendai YP administrative meetings were held.

B.6 Awards & Recognition Activities

- Award constituted by the Section
 - **Sendai Section Student Awards 2024**

The Sendai Section Student Awards were given to the outstanding papers presented in the Student Session. These awards are intended to motivate and encourage students.

 - The Best Paper Prize
 - Jintai Wu (Tohoku Institute of Technology)
 - Shintaro Ito (Tohoku University)
 - The Encouragement Prize
 - Quang Sang Tran (Akita University)
 - **Sendai WIE Awards 2024**

Sendai WIE Awards were given to the excellent papers in WIE Special Session on TSJC. These awards are intended to encourage to female researchers.

 - The Best Paper Prize
 - Tomoko Watanabe (Tohoku University)
 - The Encouragement Prize
 - Nana Miyako (Akita University)
 - **Sendai WIE Outstanding Contribution Awards 2024**
 - Kageyama and Ishizawa laboratory, Akita University

In recognition of your exceptional contribution and dedication in activities of IEEE Sendai WIE Affinity Group



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

- Home Page of the Section
 - Sendai Section
<https://ieee-jp.org/section/sendai/>

- Chapters
 - SP01
<http://www.sps-sendai.org/>
 - EMC27
<http://www.topic.ad.jp/emc-sendai/>
 - COM19
https://webinabox.vtools.ieee.org/wibp_home/index/CH10605
 - MAG33
<http://www.topic.ad.jp/mag-sendai/>
- Affinity Groups
 - Sendai WIE
<https://www.ieee-jp.org/section/sendai/AG/wie/>
 - Sendai LMAG
<https://www.ieee-jp.org/section/sendai/AG/lmag/>
 - Sendai YP
<https://www.ieee-jp.org/section/sendai/AG/yp/>
- Contributed to the Newsletter
 - Sendai WIE: contributed 1 article to the Region10 Newsletter (REGION 10 CONNECT, 2024-Issue5)
- Provided 12 times of information on meetings, seminars, and other events for section members via mailing list.

B.8 Industry Relations

Sendai Section is working towards growing its membership through technical meetings, workshops, and various activities.

B.9 Humanitarian Technology Activities

Sendai Section is preparing the special session for Humanitarian Technology Conference 2025.

B.10 Community Activities

There is nothing worthy of special mention in 2024.

PART C - OTHERS

C.1 Special Events

There is nothing worthy of special mention in 2024.

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

Sendai Section is maintaining a good relationship with Tohoku Section of the following 7 National Societies.

- The Acoustical Society of Japan (ASJ)
- The Institute of Electrical Engineers of Japan (IEEJ)
- The Illuminating Engineering Institute of Japan (IEIJ)
- The Institute of Electronics, Information and Communication Engineers (IEICE)

- The Institute of Electrical Installation Engineers of Japan (IEIEJ)
- Information Processing Society of Japan (IPSJ)
- The Institute of Image Information and Television Engineers of Japan (ITE)

C3. Collaboration with other IEEE Sections

Sendai Section has been continuing to cooperate with other Sections by attending Japan Council ExCom Meeting, R10 Meeting and other opportunities.

C4 Support extended to Sub-sections & Society Chapters within the Section

The Chapter Promotion Committee supported Chapter activities throughout the year.

C5 Best Practices of your Section (which you would like to share with other Sections for the benefits of members)

Motivated by the experience of The East Japan Great Earthquake Disaster, we have been organizing a series of the lecture meetings on “technologies covered by IEEE can contribute to disaster recovery, prevention, safety measures and regional industrial development” since 2011.

C6 Problems anticipated and suggestions for solutions, if any

There is nothing worthy of special mention in 2024.

PART D - GOALS AND PLANS

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

- Technical Lecture Meetings
- Planning Educational Activities
- Activities for students
 - Student Session on TSJC
 - Seminar on Effective English Writing Skills
 - Student Awards 2025
- Assistance for Promotion to Senior Member and Fellow
- Growth of the number of Section members
- Co-sponsoring the 2025 Tohoku-Section Joint Convention of Institute of Electrical and Engineers, Japan (TSJC)
- Support for Chapters Activities
- Support for Affinity Groups Activities
- Support for Student Branches Activities
- Annual General Meeting
- Administrative meetings
 - Section Board Meetings
 - Administrative Officer Meetings

D.2 Goals and Future Plans

- Planning unique activities for the section by standing committees
- Organizing events to improve the skills of members
- Encouraging students
- Promoting the development of Senior Members and Fellows
- Providing continuous support to Chapters, Affinity Groups, and Student Branches.
- Offering educational activities for section members
- Becoming more useful to section members

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

- We will organize activities to contribute to regional industrial development in Tohoku in the future.
- We will update the content of the section website, providing more opportunities for everyone to learn about the activities of Sendai Section.

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

We will continue to provide more beneficial activities for section members while maintaining a strong financial condition.

Sendai Section will continue to enhance its activities in the future!