

Region 10 Section Report Format

(Please replace above heading with your Section name)

Please use the following format to submit your Section's annual report to Region 10. Please note that the annual reports are used for selecting the outstanding Sections in the region and reports submitted after the announced due date will not be considered for the award. Please do not include more than 3 photographs and preferably put them on additional pages attached to the report (please delete this paragraph in your report).

PART A - SECTION SUMMARY

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

- Section Executive Committee Member List
 - ◇ Dianguo Xu (Section Chair)
 - ◇ Qun Wu (Vice Chair and member of IEEE China Council)
 - ◇ Guohui Yang (Secretary and member of IEEE China Council)
 - ◇ Jiahui FU (membership development)
 - ◇ Fanyi Meng (MTT chapter vice chair)
 - ◇ Guangren Duan (Academic exchange)
 - ◇ Lixian Zhang (Industry contact)
 - ◇ Qi Wang (Life membership)
 - ◇ Bin Zou (Chapter coordinator)
 - ◇ Weixiao Meng (Conference management)
 - ◇ Tao Jiang (Local member activity)
 - ◇ Min Jia (Chair for WIE)
 - ◇ Kuang Zhang (Treasurer, and the Chair for student branch and YP)
 - ◇ Cong Wang (Industry cooperation)
 - ◇ Yingsong Li (Technical activity)
 - ◇ Shuai Han (Humanitarian Technology Activities)
- Section Highlights
 - AFFINITIES**
 - ◇ Harbin Section Affinity Group, WIE(WE00208)
 - ◇ Harbin Section Affinity Group, YP
 - CHAPTERS**
 - ◇ Harbin Section Chapter, COM19(CH10606)
 - ◇ Harbin Section Chapter, CS23(CH10491)
 - ◇ Harbin Section Chapter, GRS29(CH10765)
 - ◇ Harbin Section Chapter, GRS29 CHANGCHUN(CH10789)
 - ◇ Harbin Section Chapter, IE13(CH10672)
 - ◇ Harbin Section Chapter, PE31(CH10817)
 - ◇ Harbin Section Chapter, SP01(CH10734)
 - ◇ Harbin Section Chapter, VT06(CH10795)
 - ◇ Harbin Section Chapter, IA34(CH10918)
 - ◇ Harbin Section Chapter, IM09(CH10926)
 - ◇ Harbin Section Chapter, SEN39(CH10925)
 - ◇ Harbin Section Chapter, SMC28(CH10875)
 - ◇ Harbin Section Chapter, ED15 DALIAN(CH10411)
 - ◇ Harbin Section Chapter, APXX JILIN(CHXXXXXX)
 - ◇ IEEE Harbin Section Chapter changchun Communications Society
 - JOINT CHAPTERS**
 - ◇ Harbin Section Chapter, JOINT CHAPTER, ED15/PHO36(CH10406)
 - ◇ Harbin Section Chapter, JOINT CHAPTER, EMC27/MTT17/AP03(CH10460)
 - STUDENT BRANCHES**
 - ◇ Hit Shenzhen Graduate School (Shenzhen, Cn. Stbc65591a)
 - ◇ Hit-Main Campus, (Harbin, Cn Stb66231b)
 - SECTIONS**
 - ◇ Harbin Section(R00208)

STUDNET BRANCH CHAPTERS

- ✧ Hit Shenzhen Graduate School, Ia34 (Shenzhen, Cn. Sbc65591a)
- ✧ Hit-Main Campus, Im09/Sen39 (Harbin, Cn Sbc66231b)
- ✧ Hit-Main Campus, Grs29 (Harbin, Cn Sbc66231a)
- ✧ Hit-Main Campus, Ia34 (Harbin, Cn Sbc66231)
- ✧ Changchun University of Science and Technology PHO36

- Major Events (International, National)
Sponsored some International conferences

Conference Name	Date
2022 IEEE 2 nd International Conference on Power, Electronics and Computer Applications (ICPECA2022)	January 21-23, 2022
2022 IEEE International Conference on Electrical Engineering, Big Data and Algorithms (EEBDA 2022)	February 25-27, 2022
2022 Asia-Pacific Conference on Image Processing, Electronics and Computers (IPEC 2022)	April 14-16, 2022
2022 IEEE 2 nd International Conference on Electronic Technology, Communication and Information	May 27-29, 2022
2022 IEEE 4 th International Conference on Artificial Intelligence and Computer Applications (ICAICA2022)	June 24-26, 2022
2022 IEEE 4 th International Conference on Power, Intelligent Computing and Systems (ICPICS 2022)	July 29-31, 2022
2022 IEEE 5 th International Conference on Electronic Information and Communication Technology (ICEICT 2022)	August 21-23, 2022
2022 IEEE 10 th International Conference on Computer Science and Network Technology (ICCSNT 2022)	October 22-23, 2022
2022 IEEE 2 nd International Conference on Data Science and Computer Application (ICDSCA 2022)	October 28-30, 2022
2022 IEEE 5 th International Conference on Automation, Electronics and Electrical Engineering (AUTEEE)	November 18-20, 2022
2022 IEEE Conference on Telecommunications, Optics and Computer Science (TOCS2022)	December 11-12, 2022

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- Major Chapter Activities;
 - ✧ Membership Development (May, 2022);
 - ✧ Chapter election (June, 2022);
 - ✧ Organized distinguished lectures (August, 2022):
 - Lecture 1: Feeder Communications for Future Integrated Networks
 - Lecture 2: Electromagnetic Information Theory for MIMO Antenna Design
 - Lecture 3: Microwave Multimode Circuits and Antennas for Wireless Communication System
 - Lecture 4: Space-Air-Ground Integrated Network for 6G
 - Lecture 5: Dynamic Load Modeling Method for Industrial Facilities
 - Lecture 6: Introductory talk on satellite optical communications
 - ✧ A talk on Multiphysics Electromagnetic Modeling in Nonlinear Metasurfaces was given by Ming Fang from Anhui University
 - ✧ Prof. Yanhui Liu from University of Electronic Science and Technology of China was invited to give a report on Title: Efficient Synthesis of Antenna arrays with Wideband Frequency Invariant Beam Patterns
 - ✧ Title: Electrically Small Huygens Antennas and Arrays by Ming-Chun Tang from Chongqing University.
 - ✧ Prof. Xiaoming Chen from Xi'an Jiaotong University was invited to give a lecture on Simultaneous Decoupling and Decorrelation for MIMO Performance Enhancement in Realistic Multipath Environment for Access Point Applications.
 - ✧ Title: Research Advance on Multifunctional Frequency Selective Surface was given by Bian Wu from Xidian University.
 - ✧ Title: Low-rank optimization methods for spectral compressed sensing was given by Zai Yang, Xi'an Jiaotong University.

- Major Student and Affinity Group Activities

Table of Seminars:

Title	Date / Location
5G IoT Networks	April 6, 2022 Tencent meeting ID: 369-303-093
Side Channel Analysis: A New Perspective for Vehicle Intrusion Detection System	April 6, 2022 Tencent meeting ID: 369-303-093
Metaverse Virtual Service Management: Game Theoretic Approaches	July 15, 2022 Tencent meeting ID: 347-157-616
About IEEE - efficient literature research and academic publication	March 28, 2022 Tencent meeting ID: 948-1661-2608
Smart Windows for Building Energy Saving and Indoor Comfort	December 16, 2022 Tencent meeting ID: 390-507-221
The delimitation of outer space and sub-orbital flights	December 7, 2022 Tencent meeting ID: 805-244-013
Multi-agent Modeling of Motorcyclist and Pedestrian Conflicts: Understanding and Simulating Behavior in Mixed Traffic using Machine Learning	December 2, 2022 Tencent meeting ID: 172-885-711
Web of Science and Scientific Research Topic Selection	November 30, 2022 Tencent meeting ID: 567-3927-7826
Enhanced Performance of Power Converters via applying Variable Carrier Phase-Displacement Angle Modulation Methods	October 8, 2022 Tencent meeting ID: 815-341-861
Biochemical mechanisms of NLR signaling in plants	August 23, 2022 Activity Center 214
The puzzle of magnetic field enhanced water oxidation	July 14, 2022 Tencent meeting ID: 417-527-733

- Awards

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

- Summary (as per submitted L50)

Date	Amount	Transaction Description
2022/1/1	15.34	Interest Calculation: 12/1/2021 - 12/31/2021 @ .32%
2022/1/26	-1.69	8371-M889702441-25-JAN-22--1.69-CROSS BORDER TRANS FEE---000000000-Bank Fee-
2022/1/26	-168.82	RONG TONG HAI TANG-BEIJING---Lodging Hotels Motels Resorts
2022/1/28	-1.63	8371-M890117076-27-JAN-22--1.63-CROSS BORDER TRANS FEE---000000000-Bank Fee-
2022/1/28	-162.5	RONG TONG HAI TANG-BEIJING--Lodging Hotels Motels Resorts
2022/1/31	-1.73	8371-M890300037-29-JAN-22--1.73-CROSS BORDER TRANS FEE---000000000-Bank Fee-
2022/1/31	-173.13	RONG TONG HAI TANG-BEIJING--Lodging Hotels Motels Resorts-
2022/2/1	15.32	Interest Calculation: 1/1/2022 - 1/31/2022 @.32
2022/2/14	-115.75	RONG TONG HAI TANG-BEIJING--Lodging Hotels Motels Resorts
2022/2/14	-1.16	8371-M892613202-12-FEB-22--1.16-CROSS BORDER TRANS FEE---000000000-Bank Fee
2022/2/17	-2.22	8371-M893359215-16-FEB-22--2.22-CROSS BORDER TRANS FEE---000000000-Bank Fee
2022/2/17	-222.06	RONG TONG HAI TANG-BEIJING--Lodging Hotels Motels Resorts-
2022/2/22	-0.93	8371-M894121967-21-FEB-22--0.93-CROSS BORDER TRANS FEE---000000000-Bank Fee--
2022/2/22	-92.92	BOAO FORUM FOR ASIA GO-QIANGHAI--Lodging Hotels Motels Resorts-
2022/3/1	13.65	Interest Calculation: 2/1/2022 - 2/28/2022 @.32
2022/4/1	15.56	Interest Calculation: 3/1/2022 - 3/31/2022 @.33

2022/5/1	15.96	Interest Calculation: 4/1/2022 - 4/30/2022 @.35
2022/5/23	7893.6	Harbin Section 2022 IEEE MGA SECTION REBATE
2022/6/1	19.57	Interest Calculation: 5/1/2022 - 5/31/2022 @ .40
2022/7/1	23.91	Interest Calculation: 6/1/2022 - 6/30/2022 @ .46
2022/8/1	30.13	Interest Calculation: 7/1/2022 - 7/31/2022 @ .56
2022/9/1	36.6	Interest Calculation: 8/1/2022 - 8/31/2022 @ .68
2022/10/1	44.25	Interest Calculation: 9/1/2022 - 9/30/2022 @ .85
2022/10/7	-0.21	8371-M930792269-06-OCT-22--0.21-CROSS BORDER TRANS FEE---00000000-Bank Fee----- 0.00
2022/10/7	-20.83	NINGBONINGDONGKAIYUAND-NINGBO-Lodging Hotels Motels Resorts-
2022/11/1	54.95	Interest Calculation: 10/1/2022 - 10/31/2022 @ 1.02
2022/12/1	99.56	Interest Calculation: 11/1/2022 - 11/30/2022 @ 1.91

ART B - ORGANIZATIONAL ACTIVITIES

- Attending meeting on China council ExCom forum(virtul) on May 22,November 26,2022
- Supporting to form chapters and student branches

B.1 Membership Development Activities

- Total number of active members in the past 3 years. More than 1500
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
 - ◇ Invited many scholars, Young Professional professors and Women in Engineering from many university (Dalian Jiaotong University, Northeast University, Harbin Engineering University, Heilongjiang University and Harbin University of Science and Technology, etc) to attend the virtual meetings, the topic of meetings are listed as below:
 1. About IEEE and IEEE policies (September 2022; Hosted by IEEE Harbin Section Secretary Prof. Guohui Yang)
 2. IEEE Scope boundaries (July 2022; Hosted by IEEE Harbin Section Secretary Prof. Guohui Yang)
 3. About IEEE Virtual & Hybrid Events (September 2022; Hosted by IEEE Harbin Section Vice President Prof. Qun Wu)
 4. How to join IEEE (October 2022; Hosted by IEEE Harbin Section Vice President Prof. Qun Wu)
 5. How to write high quality paper (November 2022; Hosted by IEEE Harbin Section Prof. Kuang Zhang)

B.2 Chapter Activities

- Total number of Chapters in the Section
 - ◇ Up to now, the Harbin Section has 15 chapters including the joint chapter.
- Number of Chapters formed in the current year
- Number of active Chapters (Chapters who have reported required number of meetings during the year)
 - ◇ There are 15 chapters are active.
- Summary of Chapter activities (Chapter wise with attachment table/information)
 - ◇ Organized several technical activities
 - ◇ Help to organize the international conference
 - ◇ Organized several lectures and tutorials.
 - ◇ Organized members to serve as review for some conferences and journals
 - ◇ Organized members to serve as editors for some journals
 - ◇ Organized the technical activity title: Dynamic Load Modeling Method for Industrial Facilities
 - ◇ Organized the technical activity title: Introductory talk on satellite optical communications

B.3 Professional and Continuing Education Activities

Summary of continuing Educational activities including conferences, technical activities, training courses, and distinguished lecture programs with attachment table / information

- ◇ Workshop on LaTeX
- ◇ Workshop on Matlab

- ◇ Membership Development Boot Camp
- ◇ Distinguished lecture 1: Long-time integration and applications for drone target radar detection
- ◇ Distinguished lecture 2: Modal-Expansion Analysis and Design of Metasurface-Loaded Body-of-Revolution Antennas
- ◇ Distinguished lecture 3: Key Technologies in Dynamic Optical Satellite Networks
- ◇ Distinguished lecture 4: Intelligent Flexible Conformal Array: Concepts and Applications

B.4 Students Activities

- Total number of Student Branches in the Section 4
- Number of Student Branches formed in the current year 1
- Section level student activities (student congress, paper and other contests, awards etc) :
 - ◇ 4 students excellent paper award
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year) 4
- Summary of Student Branch activities (Student Branch wise with attachment table/information)

Title	Date
IEEE Student Branch organized a seminar on discussion -Decoupling for MIMO antennas	April 2022
How to use Latex to format the conference paper	May 2022
Discussion on avoid the plagiarism problems of paper	May 2022
Organized a tutorial on introduction Matlab	July 2022
Workshop on Academic journal paper writing and journal submission skills	September 2022
Sharing of scientific research learning experience	October 2022
Webinar on LaTeX Skills Training	October 2022
Lecture on to design the oral session PPT and poster	November 2022
Training on to be volunteer in international conference	November 2022
Conducted the contest on Electronic Design Competition	December 2022

B.5 Affinity Group Activities

- Young Professional (YP):
 - ◇ Organized the workshop in school to encourage women and young scholars in engineering
- Women in Engineering (WIE)
 - ◇ Please find B.1 in this file. Some Promotional lectures or virtual meetings about IEEE were held.
- Life Member

B.6 Awards & Recognition Activities

- Award constituted by the Section:
 - ◇ IEEE Harbin Section sponsored or technical supported several international conferences, in some conferences best paper awards, best oral paper awards, best poster awards were constituted.
 - ◇ Electronic design contest was held; the rankings were constituted.
 - ◇ Outstanding Section Membership award.
 - ◇ Outstanding Chapter award

- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year
 - ◇ IEEE Harbin Section team received a Gold award for membership development in 2021.
 - ◇ Prof. Kuang Zhang, the chair for Young Professional Affinity Group, Harbin section won an award from IEEE for notable services and contributions towards the advancement of IEEE and the engineering profession during the 2016-2018.
 - ◇ Prof. Jiahui Fu, won an award for outstanding achievement in member recruitment for the Harbin section during the 2018 membership year, which is recognized by the IEEE member recruitment and recovery committee.

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

- Newsletter (name and number of issues in the year)
- Home Page of the Section (give the URL and how often it is updated):
- Other means of contacts with Section members including social media

B.8 Industry Relations

- Membership growth and retention
- Activities for/with industrial members
 - ◇ CETC Key Laboratory of Data Link Technology
 - ◇ Afford the exhibition opportunities to the industries.

B.9 Humanitarian Technology Activities

- Humanitarian Technology related activities supported by the Section including collaboration with other OUs.
- SIGHT Activities

B.10 Community Activities

- IEEE Social activities (Family day, IEEE day, Engineers Week)"
 - ◇ IEEE Member luncheon was organized (August, 2022)
 - ◇ IEEE Harbin Section Establishment day celebration (September 20, 2022)

PART C - OTHERS

C.1 Special Events

- Please briefly describe the importance of special events and the outcomes achieved
- Funding secured from the IEEE and external sources including sponsorships

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

- Nature of relationship and details of any formal agreement signed
- Details of joint activities
 - ◇ Work with Research Center for Medical and Healthcare Management, Ritsumeikan University, JAPAN to organize the workshop (October, 2022)
 - ◇ Work with Liaoning Province Software Industry School-Enterprise Alliance to organize the seminar (October, 2022)
 - ◇ Work with Heilongjiang Association for Science and Technology to organize a lecture for student branches.
 - ◇ Cooperate with Heilongjiang Electronic Society to organize social practice activities
- Benefit to IEEE members (for example discounts, access to technical information etc.)

- ◇ Invited member as conference peer reviewer.
- ◇ Afford the fee concession when member publish papers on IEEE conference
- ◇ Introduce the opportunities for member to deliver invited speeches and keynote speeches on international conference.
- ◇ Attend the international conference as listeners for free.
- Benefit to Section (for example help in membership development, venue facilities, cost saving etc.)
 - ◇ Help to recruit new member.
 - ◇ Help to organize the activities
 - ◇ Give the lecture to member or student branch
 - ◇ Afford technical support
 - ◇ Serve as volunteer in activities

C3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections:
 - ◇ Worked with Beijing Section and Nanjing Section
 - ◇ Intend to work with Beijing Section in 2023.
- Joint activities with any other Section:
 - ◇ Held an international conference with IEEE Nanjing Section and signed cross endorsement for Beijing Section; afford technical support to other sections;

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

- Support extended for organising technical, educational and professional activities
- Joint activities for membership development
- Support extended for the formation of a Sub-section or transition of a Sub-section into a full Section

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

- ◇ Regular organization of technical activities
- ◇ Establish the new chapters
- ◇ Maintaining active student branches
- ◇ Held virtual international conferences

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

PART D - GOALS AND PLANS

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

D.2 Goals and Future Plans

- ◇ Recruit more membership
- ◇ Organize more technical activities
- ◇ Sponsor international conferences
- ◇ Increasing training to members

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

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

- ✧ Search for Golden/ Silver sponsors to afford the financial sponsorship to conference
- ✧ Organize membership bootcamps