

Region 10 Beijing Section Report

PART A - SECTION SUMMARY

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

- Section Executive Committee Member List

Name	Roll	Email
Ruan Qiuqi	Chair	qqruan@bjtu.edu.cn
Zhou Mengqi	Vice Chair	zhou698@vip.sina.com
An Gaoyun	Secretary/Treasurer	an.gaoyun@gmail.com
Li Hua	Technical Activities Committee Chair	ihua@ict.ac.cn
Zhuo Li	Education Committee Chair	zhuoli@bjut.edu.cn
Hu Yinfu	Membership Development Committee Chair	huyinfu@hotmail.com
Wang Shengjin	Professional Activities Committee Chair	wsgsj@tsinghua.edu.cn
Qiu Xuejun	Humanitarian Technology Activities Committee Chair	xj7628@163.com
Liu Chenglin	Fellows Committee Chair	chenglin.liu@ia.ac.cn
Zhou Mengqi	Conference Committee Chair	zhou698@vip.sina.com
Ni Rongrong	Student Activities Committee Chair	rrni@bjtu.edu.cn
Feng Lishaung	Women in Engineering Committee Chair	fenglishuang@buaa.edu.cn
Feng Jinjun	Industry Committee Chair	fengjj@ieee.org
An Gaoyun	Chapter Coordination Committee Chair	an.gaoyun@gmail.com
An Jianping	Proposal Committee Chair	an@bit.edu.cn
Jia Kebin	Education Accreditation Committee Chair	kebinj@bjut.edu.cn
Liu Yuanan	Awards & Recognition Committee Chair	yuliu@bupt.edu.cn

- Section Highlights

- 1). Development of new members
- 2). Sponsorship of international and national conferences
- 3). Various activities were held by Chapters and Student Branches

- Major Events (International, National)

- 1). Totally 18 international conferences have been sponsored or co-sponsored by Beijing section, they are:
2020 5th IEEE International Conference on Big Data Analytics;
2020 IEEE 4th Information Technology, Networking, Electronic and Automation Control Conference;
2020 IEEE 5th International Conference on Image, Vision and Computing;
2020 IEEE 10th International Conference on Electronics Information and Emergency Communication;
2020 IEEE 6th International Conference on Control Science and Systems Engineering;
2020 International Conference on Sensing, Diagnostics, Prognostics, and Control;
2020 IEEE 3rd International Conference on Computer and Communication Engineering Technology;
2020 IEEE 2nd International Conference on Civil Aviation Safety and Information Technology;
2020 IEEE 11th International Conference on Software Engineering and Service Science;
2020 IEEE International Conference on Applied Superconductivity and Electromagnetic Devices;
2020 IEEE 20th International Conference on Communication Technology;
2020 IEEE 14th International Conference on Anti-counterfeiting, Security, and Identification;
2020 IEEE 15th International Conference on Solid-State and Integrated Circuit Technology;
2020 IEEE International Conference on Information Technology, Big Data and Artificial Intelligence;
2020 IEEE 3rd International Conference of Safe Production and Informatization;
2020 15th IEEE International Conference on Signal Processing;
IEEE 9th Joint International Information Technology and Artificial Intelligence Conference;
2020 IEEE International Conference on Progress in Informatics and Computing;

- Major Chapter Activities

Event Title	Event Date
Metric Learning with Lipschitz Continuous Functions : Beijing Section Chapter,C16	2020/1/9
IAPR/IEEE Winter School on Biometrics 2020 : Beijing Section Chapter,BIO46	2020/1/12
IEEE ACTS 2020 winter : Beijing Section Chapter,SSC37	2020/1/15
IEDM 2019 Report Session : Beijing Section Chapter,ED15	2020/1/22
Annual meeting of the EDS Beijing Chapter : Beijing Section Chapter,ED15	2020/2/3
Kickoff Meeting of Blockchain-based Omnidirectional Pandemic Surveillance : Beijing Section Chapter,CT08	2020/2/27
Expert Meeting of Global Initiative on Blockchain-based Omnidirectional Pandemic Surveillance : Beijing Section Chapter,CT08	2020/4/15
1st Committee Meeting of IEEE Beijing Section Education Society Chapter : Beijing Section Chapter,E25	2020/4/24
Stochastic Production Simulation for Generating Capacity Reliability Evaluation: a Case Study of California : Beijing Section Chapter,PE31- Chongqing	2020/4/26
Kenichi Okada's virtual DL talk hosted by Beijing Chapter : Beijing Section Chapter,SSC37	2020/4/29
Dejan Markovic's virtual DL talk hosted by Beijing Chapter : Beijing Section Chapter,SSC37	2020/5/6
2020 IEEE 3rd International Conference on Electronics Technology (ICET) : Beijing Section Chapter,CEDA44	2020/5/8
Low-Rank Matrix Recovery from Noisy, Quantized, and Erroneous Measurements : Beijing Section Chapter,PE31- Chongqing	2020/5/22
Renewable Energy based Modern Power Systems : Beijing Section Chapter,RL07	2020/5/28
Challenges for Reliability Assessment and Management of Future Power Systems : Beijing Section Chapter,PE31- Chongqing	2020/5/30
Microstructural Imaging of Grains and Micron Size Defects of Metallic Structures Using Quantum Well Hall Effect(QWHE) Sensors : Beijing Section Chapter,PE31- Chongqing	2020/6/10
[Legacy Report] Distributed Variable Sample-size Stochastic Optimization with Fixed Step-sizes : Beijing Section Chapter,CS23	2020/6/11
[Legacy Report] Distributed Algorithms with Finite Data Rates that Solve Linear Equations : Beijing Section Chapter,CS23	2020/6/11
Discussion on Blockchain Technology: Application and Limitation : Beijing Section Chapter,PE31- Chongqing	2020/6/12
Internet of Lighting and 5G : Beijing Section Chapter,BT02	2020/6/12
[Legacy Report] Non-cooperative Differential Games for MAS and Distributed Artificial Intelligence : Beijing Section Chapter,CS23	2020/7/1
the VLSI 2020 Report Session : Beijing Section Chapter,ED15	2020/7/10
Reconfigurable and Conformal Antennas based on Emerging Materials for Personal and Biomedical Applications : Beijing Section Chapter,AP03	2020/7/30
Microgrids Changing the Way of Thinking Energy Systems : Beijing Section Chapter,RL07 - Changsha	2020/8/13
Decoupling technology of multi-array multi-band common aperture antenna based on filter antenna : Beijing Section Chapter,AP03	2020/8/14
Application of Deep Learning in Computational Electromagnetics : Beijing Section Chapter,AP03	2020/8/14
IEEE-SA Standard Development Training : Beijing Section Chapter,PE31	2020/8/20
Capture Green Energy from Oceans Using Control : Beijing Section Chapter,SMC28 - Capital Region	2020/8/31
Mechanical Mechanism Designs of Flapping Wings and Their Aerodynamic Performance : Beijing Section Chapter,SMC28 - Capital Region	2020/9/2
2020 IEEE the 5th International Conference on Intelligent Transportation Engineering (ICITE) : Beijing Section Chapter,VT06	2020/9/11
Dynamic Reliability Evaluation and Life Prediction of Wind Turbine Drive System : Beijing Section Chapter,RL07 - Chongqing	2020/9/12

Enabling New Simulation and Decision Support Tools to Propel Sustainable Power Grids : Beijing Section Chapter,RL07 - Changsha	2020/9/16
Precision Planet - Internet of Things : Beijing Section Chapter,CS23	2020/9/18
Chapter Meeting : Beijing Section Chapter,CAS04	2020/9/18
Preparation meeting of 27th national EMC conference : Beijing Section Chapter,EMC27	2020/9/21
AI: From Artificial Intelligence to Affordable Intelligence : Beijing Section Chapter,C16	2020/9/21
A preliminary research on predictive control of vehicle formation : Beijing Section Chapter,RL07 - Chongqing	2020/9/22
Recent Issues and Solutions Surrounding Japanese Power System : Beijing Section Chapter,RL07	2020/9/26
From Energy to Electrical Power Systems-a Holistic View : Beijing Section Chapter,PE31- Chongqing	2020/9/26
Electromagnetic interference, electromagnetic compatibility, electromagnetic environment effect, and electromagnetic security : Beijing Section Chapter,AP03 - Shenzhen	2020/10/12
Accelerating the 5G era: RF EDA tools and RF solutions : Beijing Section Chapter,AP03/MTT17 - Chongqing	2020/10/15
5G-oriented filter antenna and multi-frequency aperture antenna array for the base station application : Beijing Section Chapter,AP03/MTT17 - Chongqing	2020/10/16
Circuit-Compiler Co-Design for AI Systems : Beijing Section Chapter,CEDA44	2020/10/17
Machine to Machine Communications for Internet of Things : Beijing Section Chapter,COM19	2020/10/19
2020 IEEE CIS Summer School on Adaptive Dynamic Programming and Reinforcement Learning : Beijing Section Chapter,CIS11	2020/10/19
2020 IEEE 5th International Conference on Integrated Circuits and Microsystems (ICICM) : Beijing Section Chapter,CEDA44	2020/10/23
AI for IC and IC for AI: Closed-Loop Perspectives and Recent Results : Beijing Section Chapter,CEDA44	2020/10/27
Superconducting quantum computing : Beijing Section Chapter,AP03	2020/10/28
Characterization of electromagnetic properties of broadband materials : Beijing Section Chapter,AP03	2020/10/30
Some hot topics in current artificial intelligence research and application : Beijing Section Chapter,PE31- Chongqing	2020/10/31
Research and application of computational electromagnetics algorithm : Beijing Section Chapter,AP03	2020/11/4
Electromagnetic reverse time migration imaging and Bloch Floquet periodic boundary technique in fully anisotropic FDTD : Beijing Section Chapter,AP03	2020/11/4
SC-LDPC code design : Beijing Section Chapter,BT02	2020/11/5
2020 China Automation Congress (CAC2020) : Beijing Section Chapter,CIS11 - Chongqing	2020/11/6
Preparation meeting of the 7th International Symposium on Electromagnetic Compatibility : Beijing Section Chapter,EMC27	2020/11/10
Substrate integrated waveguide (SIW) slot leaky wave antenna : Beijing Section Chapter,AP03	2020/11/10
IEEE Reliability Society Chongqing Chapter Academic Conference 2020 : Beijing Section Chapter,RL07 - Chongqing	2020/11/12
IEEE Forum on Future Media Technology : Beijing Section Chapter,CAS04	2020/11/13
OTA measurements in Reverberation chamber : Beijing Section Chapter,AP03 - Shenzhen	2020/11/13
Blockchain and Federated Learning for IoT : Beijing Section Chapter,AP03 - Shenzhen	2020/11/16 16:00
Theory and Applications of Surface Electromagnetics : Beijing Section Chapter,AP03 - Shenzhen	2020/11/17
Graph-theoretic Methods in Computer Vision: Recent Advances : Beijing Section Chapter,SP01/IT12	2020/11/20
2020 International Workshop on Power Information Communication and Network Security : Beijing Section Chapter,PE31	2020/11/27

Achieving Renewable Dominated Power System via Integrated Demand Response : Beijing Section Chapter,PE31- Chongqing	2020/12/4
Consensus and Formation Control of Multiagent Systems : Beijing Section Chapter,CIS11 - Chongqing	2020/12/5
Recursive Least-Squares Estimator-Aided Online Learning for Visual Tracking : Beijing Section Chapter,SP01/IT12	2020/12/7
Inverse Optimal Control for LQR Problems : Beijing Section Chapter,CS23	2020/12/10
Global Convergence of Policy Primal-dual Gradient Methods for Risk-constrained LQRs : Beijing Section Chapter,CS23	2020/12/10
Joint Workshop of IEEE PELS Beijing Student Branch Chapters : Beijing Section Chapter,PEL35	2020/12/12
The Establishment Ceremony of IEEE Beijing Section Education Society Chapter : Beijing Section Chapter,E25	2020/12/12
Seminar: Federated Matrix Factorization: Algorithm Design and Applications : Beijing Section Chapter,VT06	2020/12/12
Advanced Technologies and Applications in Computer Vision : Beijing Section Joint Chapter,SP01/C16	2020/12/12
Advanced Technologies and Applications in Intelligent Perception and Autonomous Control : Beijing Section Joint Chapter,SP01/C16	2020/12/14
Seminar: Symbol-Error Probability Constrained One-Bit Precoding with Sigma-Delta Modulation : Beijing Section Chapter,VT06	2020/12/15
Activity plan of "sand magnetic Innovation Forum" (15th issue) and "seminar of Artificial Intelligence Research Institute of Chongqing University" : Beijing Section Chapter,CIS11 - Chongqing	2020/12/16
Big Data Analytics: Past, Present and Future : Beijing Section Chapter,CIS11 Xiamen	2020/12/17
Singular Algebraic Equations with Empirical Data : Beijing Section Chapter,CS23	2020/12/17
A Holistic View of Modeling Human Perception for AI Era : Beijing Section Chapter,GRS29 - Changsha	2020/12/18
Knowledge Transfer in Evolutionary Optimization : Beijing Section Chapter,CIS11 Xiamen	2020/12/19
Channel Access Management for Cellular IoT Applications : Beijing Section Chapter,VT06	2020/12/19
Ten Challenges in Advancing Machine Learning Technologies towards 6G : Beijing Section Chapter,VT06	2020/12/19
Next Generation Wireless Networks: Holistic Network Virtualization and Edge Intelligence. : Beijing Section Chapter,VT06	2020/12/19
Advisory board meeting : Beijing Section Chapter,CAS04	2020/12/19
Technical cosponsor of the electromagnetic theory and application forum : Beijing Section Chapter,EMC27	2020/12/20
Attention-based Domain Adaptation for Hyperspectral Image Classification : Beijing Section Chapter,GRS29 - Changsha	2020/12/22
Evolution of mmWave mobile phone antennas : Beijing Section Chapter,AP03 - Shenzhen	2020/12/25
Deep Learning Approach to Precoding for Massive MIMO Systems : Beijing Section Chapter,AP03 - Shenzhen	2020/12/27
Highly Resilient Power System Leading the high-quality transformation and development : Beijing Section Chapter,PE31- Chongqing	2020/12/31

- Major Student and Affinity Group Activities

Event Title	Event Date
Online meeting about synchrotron radiation spectroscopy : Tsinghua University,EP21	2020/7/8
IEEE Women in Engineering Beijing Leadership Summit : Beijing Section Affinity Group,WIE	2020/9/18
DSIM A novel simulation platform for power electronics : Tsinghua University,PEL35	2020/9/22
Student-led Conference 鈥檚 China International Youth Conference on Electrical Engineering : Huazhong University of Science & Technology, PEL35	2020/11/2
IEEE PELS HUST SBC Invite Professor Tobias Geyer for Distinguished Lecturer Webinar : Huazhong University of Science & Technology, PEL35	2020/11/2

Talking about the research progress and the trends of data center networks : Beijing Section Affinity Group,YP	2020/11/13
volunteers for IPEMC2020-ECCE Asia : Nanjing University of Aero & Astronautics,PEL35	2020/11/29
Unveiling the potential of Graph Neural Networks : Beijing Section Affinity Group,YP	2020/12/4
Advanced Power Electronics for eGrid: Joint Workshop of IEEE PELS Beijing SBC : Tsinghua University,PEL35	2020/12/12

- Awards

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

- Summary (as per submitted on NetSuite)
Please refer to that submitted in the NetSuite System.
- Any other financial activities

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years.
12278
- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
To propagate IEEE, Beijing Section organized more activity than those in 2020, including 18 international conferences sponsored or co-sponsored by section, 88 technical report organized by chapters and 9 activities organized by Student and Affinity Group.

B.2 Chapter Activities

- Total number of Chapters in the Section
36
- Number of Chapters formed in the current year
3
- Number of active Chapters (Chapters who have reported required number of meetings during the year)
30
- Summary of Chapter activities (Chapter wise with attachment table/information)
As attached above.

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

B.4 Students Activities

- Total number of Student Branches in the Section
14
- Number of Student Branches formed in the current year
0
- Section level student activities (student congress, paper and other contests, awards etc)
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)
6
- Summary of Student Branch activities (Student Branch wise with attachment table/information)
As attached above.

B.5 Affinity Group Activities

- Young Professional (YP)

Event Title	Event Date
Talking about the research progress and the trends of data center networks : Beijing Section Affinity Group,YP	2020/11/13
Unveiling the potential of Graph Neural Networks : Beijing Section Affinity Group,YP	2020/12/4

- Women In Engineering (WIE)

Event Title	Event Date
IEEE Women in Engineering Beijing Leadership Summit : Beijing Section Affinity Group,WIE	2020/9/18

- Life Member (LM)

B.6 Awards & Recognition Activities

- Award constituted by the Section
- Please list all Awards and Recognitions received by the Section, and members in the Section, from R 10 and IEEE HQ during the year

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)
<http://ieee-beijing.org>
- Other means of contacts with Section members including social media

B.8 Industry Relations

- Membership growth and retention
- Activities for/with industrial members

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)”

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
- Benefit to IEEE members (for example discounts, access to technical information etc.)
- Benefit to Section (for example help in membership development, venue facilities, cost saving etc.)

C3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections
- Joint activities with any other Section

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)

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

Our goal is to develop section members smoothly up to 15,000 in the near future and serves our members better by more academic activities, including conferences, workshops, seminars, visit exchanges etc.

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.