

IEEE Xi'an Section Report

PART A - SECTION SUMMARY

A.1 Executive Summary

- Section Executive Committee Member List

Chair: Jiandong Li, Xidian University

Standing Vice Chair: Jingdong Chen, Northwestern Polytechnical University

Vice-chair: Jinjun Liu, Xi'an Jiaotong University

Treasurer: He Xiang, Northwestern Polytechnical University

Technical Activities Committee Chair: Prof. ZHOU Xingshe, Northwestern Polytechnical University

Awards & Recognition Committee Chair: Prof. JIAO Licheng, Xidian University

Educational Activities Committee Chair: Prof. GAO Feng, Xi'an Jiaotong University

Membership Development Committee Chair: Prof. GAO Xinbo, Xidian University

Nomination Committee Chair: Jianguo Huang, Northwestern Polytechnical University

Fellow Recommend Committee Chair: Xiaohong Guan, Xi'an Jiaotong University

Strategic Planning Committee Chair: Jiandong Li, Xidian University

Student Activities Committee Chair: Jinjun Liu, Xi'an Jiaotong University

Newsletter Editor Committee Chair: Qunfei Zhang, Northwestern Polytechnical University

Office of IEEE Xi'an Section Director: He Xiang, Northwestern Polytechnical University

Conference Committee Chair: Chengbing He, Northwestern Polytechnical University

- Section Highlights
- Major Events (International, National)
 - Successfully Organized IEEE ICSPCC2018 (2018 IEEE International Conference on Signal Processing, Communications and Computing)
- Major Chapter Activities
- Major Student and Affinity Group Activities
- Awards

A.2 Financial Report

- Summary (as per submitted L50)

In 2018, the total receipts of XI'AN SECTION is about \$12960.82 . It includes the balance of 2017 about \$4397.53 , the section rebate is about \$8128.65, the reliability society award is \$400.00, the interest is about \$34.64 .

The total 2018 expenses of Xi'an Section is about \$11299.41. The expenditure mainly refers to the Xi'an Section academic activities and conferences. Such as hall, reception, transportation, the Xi'an Section website management, etc.

The balance of 2018 is about \$1661.41 .

- Any other financial activities

Extra financial support mainly comes from the Northwestern Polytechnical University.

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years.

By Sep, 10th, 2018, the total amount of active members of IEEE Xi'an Section is 1353, while the number was 1102 for the year 2016 and 1137 for the year 2017. It increases 19% and 16% than the members in 2016 and 2017 respectively.

In 2019, we continue our effort to increase membership, especially the student members.

- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members

B.2 Chapter Activities

- Total number of Chapters in the Section

By 2018, there are 14 chapters in Xi'an Section, all of which are active. The chapters are as follows:

IEEE Xi'an Electronic Device Chapter
 IEEE Xi'an Signal Processing Chapter
 IEEE Xi'an Computer Chapter
 IEEE Xi'an Computational Intelligence Chapter
 IEEE Xi'an Communication Chapter
 IEEE Xi'an Systems, Man, and Cybernetics Chapter
 IEEE Xi'an Microwave Theory and Techniques Chapter
 IEEE Xi'an Reliability Chapter
 IEEE Xi'an Electromagnetic Compatibility Chapter
 IEEE Xi'an Power & Energy Chapter
 IEEE Xi'an Dielectrics and Electrical Insulation Chapter
 IEEE Xi'an Antenna and Propagation Chapter
 IEEE Xi'an Broadcast Technology Chapter
 IEEE Xi'an Geoscience & Remote Sensing Chapter

- Number of Chapters formed in the current year
- Number of active Chapters (Chapters who have reported required number of meetings during the year)
- Summary of Chapter activities (Chapter wise with attachment table/information)

Signal Processing Chapter

No.	Date	Topic
1.	05/21/2018	Prof. José Bermudez from Federal university of Santa catarina, Brazil deliver lecture about "Adaptive Filtering - Theory and Applications"
2.	09/14-16/2018	Held IEEE ICSPCC2018, Qingdao, Shandong.

Systems, Man, and Cybernetics Chapter

No.	Date	Topic
1.	04/17/2018	Prof. Kamel Barkaoui delivered lectures on Basics of Petri nets: semantics, syntax, and analysis techniques and Formal verification: Introduction to Model Checking and Temporal Logic (Linear Temporal Logic and Computation Tree Logic).
2.	04/18/2018-05/12/2018	Prof. Walter Murray Wonham (University of Toronto) delivered a course on Control of Discrete Event systems.
3.	05/10/2018	Prof. Christoforos Hadjicostis (University of Cyprus) delivered a lecture on State estimation and event inference in discrete event systems: applications to detectability, fault, Diagnosis, and Opacity Verification in Nondeterministic Finite Automata.
4.	07/13/2018	Prof. Rong Su (Nanyang Technological University) delivered a course on Discrete event modeling and supervisory control theory.
5.	06/21/2018-08/12/2018	Prof. Lei Feng (KTH) delivered a course on Algebraic Preliminaries of Discrete Event Systems. He also gave a lecture on Discrete Event Control of a Research Concept Vehicle.
6.	07/19/2018	Held a seminar on Discrete Event Systems
7.	09/25/2018	Prof. Tarek Raissi (Cnam) gave a lecture on Set-membership estimation of continuous systems-Application for Fault Tolerant Control.
8.	09/25/2018	Prof. Sébastien Lahaye (University of Angers) gave lectures on Max-plus linear system theory: a system theory tailored for synchronization in discrete event systems and Max-plus automata and discrete event systems.

EMC Chapter

No.	Date	Topic
1.	08/13-14/2018	Held The 2018 International Workshop on Electromagnetic Time Reversal and Applications (ETRA) .
2.	12/15-17/2018	Held A workshop on Electromagnetics .

DEI Chapter

No.	Date	Topic
1.	05/20-23/2018	Held the IEEE 12th International Conference on Properties and Application of Dielectric Materials.

PES Chapter

No.	Date	Topic
1.	03/29-30/2018	Held the National conference on intelligent apparatus.

DEIS Chapter

No.	Date	Topic
1.	12/01/2018	Held the National conference on engineering dielectrics.

RL Chapter

No.	Date	Topic
1.	11/23/2018	Held the 2018 National Software Application Conference.
2.	11/03/2018	Held The 3th National Conference on Formal Methods and Applications.

3.	10/24/2018	Held the Colloquium on reliability techniques of CPS/IoT ---IEEE Reliability Society Xi'an Chapter Technical Activity.
4.	09/15/2018	Held the 16th Annual Conference on Embedded Systems.
5.	08/18/2018	Held the Colloquium on Logic in Engineering Dependable Software.
6.	08/15/2018	Held The International Conference on Sensing, Diagnostics, Prognostics, and Control (SDPC 2018) .
7.	08/07/2018	Held a Lecture on CPS Software Quality.
8.	07/24/2018	Held the 18th QRS conference.
9.	05/27/2018	Held the 2018 Sino-US Research Conference on Quality, Analytics and Innovations.

ED Chapter

No.	Date	Topic
1.	21/11/2018	Prof. Ru Huang, a Distinguished Lecturer of EDS, gave a talk entitled "Emerging Devices for Different Low Power Applications in Post-Moore Era".
2.	23/07/2018	Held a talk with invited Distinguished Lecturer Prof. Jamal Deen from McMaster University.
3.	08/09/2018	Held a Distinguished Lecture (DL) by Prof. Mansun J. Chan from HKUST.
4.	07/05/2018	Prof. Tsu-Jae King Liu gave a lecture entitled "Innovation: Key to the Future of Moore's Law".
5.	27/04/2018	Prof. Kevin J. Chen from HKUST, IEEE Fellow, presented a talk on Recent Development in GaN-on-Si Power Electronics----All-GaN Intergration and MISFET Technology.
6.	02/12/2018	Prof. Fang Jiancheng, Member of Chinese Academy of Sciences, presented a talk on Development and Prospect of Quantum Sensing Technology.
7.	01/09/2018	Dr. Yuhao Zhang from MIT, presented a talk entitled "Nitride Devices: Redefining the Limits of Power Electronics" .
8.	14/05/2018	Prof. Eddy Simoen from Ghent University, presented a talk on defect and reliability issues in high-mobility semiconductor devices on silicon.
9.	19/04/2018	Dr. Zhang Li from Technische Universität München, presented a talk entitled "Advanced Timing for High-Performance Design and Security of Digital Circuits".
10.	09/01/2018	Prof. Wang Yu from Tsinghua University, presented a talk entitled "Edge Computing Oriented Deep Learning Processor".
11.	25/04/2018	Prof. Wu Liang from Shanghai University, presented a talk entitled "Novel Approach to Grow High-Quality and Large-size Freestanding AlN Single Crystals by PVT Method".
12.	26/04/2018	Prof. Hsien-Chin Chiu from Chang Gung University, presented a talk entitled "The Development and Fabrication of GaN on SOI HEMT for 5G Communication Applications".
13.	21/05/2018	Dr. Dai Weimin from VeriSilicon, presented a talk entitled "Opportunities and Challenges of FD-SOI Industry".
14.	22/05/2018	Prof. Hong Minghui from National University of Singapore, presented a talk entitled "Development of Remote-Mode Microsphere Optical Nanoscope".
15.	08/06/2018	Prof. Qiaoqiang Gan from University at Buffalo, the State University of New York, presented a talk on extreme light-matter interaction.
16.	13/06/2018	Dr. Luo Ruzhong from BYD, presented a talk on the way of auto electronic innovation.
17.	22/06/2018	Prof. Peng Li from Texas A&M University, presented a talk entitled "Recurrent Spiking Neural Networks: Models & Hardware Design".
18.	27/06/2018	Prof. Li Chong from University of Glasgow, presented a talk entitled "Bridging the THz gap: from components to metrology and applications".
19.	16/07/2018	Prof. Zhou Shengqiang from HZDR, presented a talk on "Ion implantation + sub-second annealing: a route towards hyperdoped semiconductors".
20.	25/12/2018	Prof. Chai Yang from Hong Kong Polytechnic University, presented a talk entitled "Two-dimensional materials: in-situ growth, Raman spectroscopy and electron device".

21.	26-27/09/2018	Held the Sub Forum of Microelectronics, International Forum for HUASHAN Scholars.
22.	21/12/2018	Held A Workshop on the Flexible Electronics.

COMSOC Chapter

No.	Date	Topic
1.	29/10/2018	Prof.Jalel Ben Othman gave a lecture on Stochastic Tools used to Improve and/or to evaluate MAC layer in Wireless networks; DoS in Vanets an issue or a fatality.
2.	20/07/2018	Prof.Zhu Han gave a lecture on Matching Game and its Application in Wireless Networks.
3.	11/05/2018	Held Communication and information theory workshop CITW2018.
4.	22/10/2018	Held 2018 International Workshop on Advanced Intelligence and Self-Organized Networks.

B.3 Professional and Continuing Education Activities

Successfully Organized IEEE ICSPCC2018 (2018 IEEE International Conference on Signal Processing, Communications and Computing) .

In September 14-16, 2018, we hosted “2018 IEEE International Conference on Signal Processing, Communications and Computing” in xi’an, Shaanxi.

More than two hundreds of specialists and scholar from America, French, Japan, Australia, India, South Korea, etc. attended this conference.

B.4 Students Activities

- Total number of Student Branches in the Section

By 2018, there are 4 student branches in IEEE Xi’an Section. No new student branch is formed in 2018.

1. Xi’an Jiaotong University Student Branch
2. Northwestern Polytechnical University Student Branch
3. Xidian University Student Branch
4. Xi’an Institute of Optics and Precision Mechanics Student Branch

- Number of Student Branches formed in the current year
- 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)
- Summary of Student Branch activities (Student Branch wise with attachment table/information)

B.5 Affinity Group Activities

- Young Professional (YP)
- There is currently no affinity group in IEEE Xi’an Section.
- Women In Engineering (WIE)
- Life Member

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 2015

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)
www.ieeexian.org, updated about every three months.
- Other means of contacts with Section members including social media

IEEE Xi'an Section normally contact with its members directly with Emails, informing them when there is some activities or some important information. We also provide support to students who present papers at international conferences

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

- 1) Perfect IEEE Xi'an Section and establish new chapters.
- 2) Prepare establishing WIE for woman and GOLD for young scientists.
- 3) Develop service of membership and upgrading of member class.
- 4) Prepare assisting and holding for international conference.
- 5) Invite worldwide famous specialists and scholars for academic communication.
- 6) Establish long-term partnership with Hi-Tech enterprises in Xi'an.
- 7) Enhance the work of student branches for communication, training and competition.
- 8) Perfect the website of IEEE Xi'an Section.
- 9) Upload related summaries and reports in time.
- 10) Enhance the relationship with Northwestern Polytechnical University for more support.

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.