

IEEE Xi' an Section Report

PART A - SECTION SUMMARY

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

- Section Executive Committee Member List
 Chair: Jiandong Li, Xidian University
 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

The society chapters of Xi'an section have been very active during this year. We organized more than 59 technical meetings and lectures in the Xi'an region of China.

- Section Highlights
- Major Events (International, National)
 - 1, Successfully Organized IEEE ICSPCC2016 (2016 IEEE International Conference on Signal Processing, Communications and Computing) ;
 - 2, Successfully Organized IEEE International Conference on Acoustic Speech and Signal Processing 2016 — Workshop on Sensor Array and Communications
 - 3, Successfully Organized the Meeting of 2016 Summary and New Year's Celebration for Xi'an Section
- Major Chapter Activities
 - 1, Successfully Organized APPEEC2016: 2016 IEEE PES Asia Pacific Power and Energy Engineering Conference ;
 - 2, Successfully Organized IEEE CMD2016: International Conference on Condition and Monitoring Diagnosis ;
 - 3, Successfully Organized IEEE WODES 2016: IEEE International Workshop on Discrete Event Systems

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

- Summary
 In 2016, the total receipts of XI' AN SECTION is about \$25930.21 . It includes the balance of 2015 about \$13795.42 , the financial assistance of Northwestern Polytechnical University is about \$3088.24, the section rebate is about \$8404.25 , the Angel Funding from EMC Society-Xi' an Section EMC Chapter is \$600.00, the interest is about \$42.30 .
 The total 2016 expenses of Xi' an Section is about \$15900.53. The expenditure mainly refers to the Xi' an Section annual meeting and academic conference. Such as hall, reception, transportation, the Xi' an Section website management, etc.

The balance of 2016 is about \$10029.68 .

- Any other financial activities
 Extra financial support mainly comes from the Northwestern Polytechnical University.

PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

By Oct, 2016, the total amount of active members of IEEE Xi'an Section is 1137, while the number was 1102 for the year 2015 and 903 for the year 2014.

In 2017, we continue our effort to increase membership, especially the student members.

B.2 Chapter Activities

By 2017, there are 12 chapters in Xi' an Section, all of which are active. The chapters are as follows:

1. IEEE Xi' an ED Chapter
2. IEEE Xi' an SP Chapter
3. IEEE Xi' an COM Chapter
4. IEEE Xi' an CIS Chapter
5. IEEE Xi' an MTT Chapter
6. IEEE Xi' an SMC Chapter
7. IEEE Xi' an AP Chapter
8. IEEE Xi' an BT Chapter
9. IEEE Xi' an DEI Chapter
10. IEEE Xi' an EMC Chapter
11. IEEE Xi' an PE Chapter
12. IEEE Xi' an RL Chapter

Signal Processing Society

| No. | Date | Topic |
|-----|------------|--|
| 1. | 08/05/2016 | Held ICSPCC2016, Hong Kong. Co-Sponsor by IEEE Xi'an Section and Hong Kong Section |
| 2. | 03/28/2016 | Held IEEE ICASSP WSAC 2016:IEEE International Conference on Acoustic Speech and Signal Processing 2016 |

Communication Society

| No. | Date | Topic |
|-----|------------|--|
| 1. | 12/22/2016 | 110 distinguished academics made technique lectures, including over 10 IEEE Fellows |
| 2. | 01/08/2016 | Zhi Tian, George Mason University, "Compressive Covariance Sensing Beyond Sparsity" |
| 3. | 03/18/2016 | Prof. Stephen McLaughlin, Heriot-Watt University, UK, "Evolution Towards the Ultimate Convergence of All Networks" . |
| 4. | 06/18/2016 | Prof. Y. Thomas Hou , "Achieving Optimal Performance for Programmable Wireless Networks" . |
| 5. | 09/09/2016 | Prof. Ning Cai, "Classical Quantum Arbitrarily Varying Channel When the Jammer Knows Input Codeword" . |
| 6. | 07/23/2016 | Prof. Satoshi Goto, Waseda University, Japan, "Low Electric Power Design for Video Processing" . |
| 7. | 05/06/2016 | the 11th international conference on green, pervasive and cloud computing (GPC2016) |

Electronic Devices Society

| No. | Date. | Topic |
|-----|------------|---|
| 1. | 10/16/2016 | Supported 21th Annual Joint Workshop Between Xidian University, Peking University and Kyungpook National University |
| 2. | 06/03/2016 | Dr.-Ing. Oleg Cojocari, CEO of ACST GmbH, Germany, delivered a distinguished lecture entitled "Film-Diode Process Technology for Millimeter-and THz-Wave Application" |
| 3. | 06/02/2016 | Prof. Jin Zou, a professor shared between School of Mechanical and Mining Engineering (Materials Engineering) and Centre for Microscopy and Microanalysis |
| 4. | 07/11/2016 | Prof. Peng Li, presented a talk on Enabling Distributed On-Chip Voltage Regulation |
| 5. | 07/12/2016 | Prof. Jisheng Han visited EDS Xi' an Chapter and delivered a distinguished lecture entitled "Power-Switching Applications Beyond Silicon" |
| 6. | 01/11/2016 | Prof. Qifa Zhou, a Research Professor at the NIH Resource Center for Medical Ultrasonic Transducer Technology and the Department of Biomedical Engineering |
| 7. | 07/11/2016 | Dr. Guofu Niu presented a talk on Wide Temperature Range Compact |

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| | Modeling of SiGe HBTs |
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Computational Intelligence Society

| No. | Date | Topic |
|-----|------------|--|
| 1. | 05/14/2016 | Class brain intelligence and remote sensing large data interpretation of the international frontier forum and the national space information network major research program advanced seminar |
| 2. | 10/26/2016 | Large data on brain computing and depth learning |
| 3. | 10/21/2016 | Evolutionary computing, and neural networks in the field of IEEE top journals editor special forum |
| 4. | 07/25/2016 | Join IEEE World Congress on Computational Intelligence 2016 (IEEEWCCI2016) |
| 5. | 07/23/2016 | Lectures form Professor Antonio J. Plaza in University of Extremadura |
| 6. | 08/27/2016 | Lectures form Professor Jia Xiuping in University of New South Wales, Australia |

Microwave Theory and Techniques Society

| No. | Date | Topic |
|-----|------------|--|
| 1. | 07/15/2016 | Lecture from Academician Liu Benjian in Massive MIMO Explained and Systematic Antenna Design with Characteristic Modes |
| 2. | 09/08/2016 | Lecture from Professor Lu Rushan in Time domain analysis method in computational electromagnetics |

Systems, Man, and Cybernetics Society

| No. | Date | Topic |
|-----|------------|--|
| 1. | 2016 | Professor Alessandro GIUA, Newly Elevated Fellow! — for contributions to discrete event and hybrid systems |
| 2. | 05/30/2016 | Hold IEEE WODES 2016 (The 13th IEEE International Workshop on Discrete Event Systems) |

Reliability Society

| No. | Date | Topic |
|-----|------------|---|
| 1 | 06/11/2016 | Aviation BIT Optimal Method for Reducing False Alarm Rate Under Flatus Environment, Professor Jiaqi Zhang |
| 2 | 07/27/2016 | Program Control-Flow Integrity Checking Based Soft Error Detection Method for DSP, Professor Wangxu Chai |
| 3 | 10/20/2016 | FPGA Testing Points Optimization Method Based on Important Analysis, Professor Hao Wu |
| 4 | 10/20/2016 | A method for assessing soft error rate based on the resource configuration of netlist-level circuit topology in SRAM-based FPGAs, Professor Xiang Gao |
| 5 | 10/20/2016 | Integrity Checking Based Soft Error Recovery Method for DSP, Professor Yangming Guo |

B.3 Professional and Continuing Education Activities

1, Successfully Organized IEEE ICSPCC2016

The conference-2016 IEEE International Conference on Signal Processing, Communications and Computing (ICSPCC2016) starts from August 5 to August 9, 2016, in the City University of Hongkong. The goal of ICSPCC2016 is to bring together leading engineers, researchers and academics from the world to discuss novel ideas, theories, technologies and applications in the areas of signal processing, communications and computing. It also aims to provide a stimulating forum for scholars, engineers, and students from all over the world to discuss research achievements.

ICSPCC 2016 is cosponsored City University of Hong Kong, IEEE Xi' an Section, Northwestern Polytechnical University, IEEE Hong Kong Section. It is also supported by Xidian University, Xi' an Jiaotong University, Ningbo University, the Chinese University of Hong Kong, The University of Hong

Kong, the Hong Kong Polytechnic University. ICSPCC 2016 is successfully held in Hong Kong. A total of 320 papers had been submitted for review and 168 papers was accepted and included in the Proceedings.

2, Successfully Organized IEEE International Conference on Acoustic Speech and Signal Processing 2016 – Workshop on Sensor Array and Communications

The conference-IEEE International Conference on Acoustic Speech and Signal Processing 2016 – Workshop on Sensor Array and Communications (ICASSP2016-WSAC) starts from 08:30 AM to 05:00 PM, 28 March, 2016, in Xi'an, Shaanxi.

Sponsor: IEEE Signal Processing Society Northwestern Polytechnical University (NPU)

Co-Sponsor: IEEE Xi'an Section, Xidian University

Organizer: IEEE Xi'an Signal Processing Chapter

3, Successfully Organized the Meeting of 2016 Summary and New Year's Celebration for Xi'an Section

In the afternoon of January 14, 2017, IEEE Xi'an Section 2016 annual conference was held in Xi'an Ziction Liberal Hotel.

Invited representative:

Guan Xiaohong: Chair of IEEE Xi'an Section, professor of Xi'an Jiaotong University

Huang Jianguo:

Executive Committee members of IEEE Region 10, Professor of Northwestern Polytechnical University

Chen Jingdong: Vice Chair of IEEE Xi'an Section, Professor of Northwestern Polytechnical University

Chair of The student branches

Chair and representatives of Chapters

More than 70 people attended the meeting.

The meeting was presided over by Prof. Guan Xiaohong, President of Xi'an Section.

B.4 Students Activities

- Total number of Student Branches in the Section
- 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)

By 2017, there are 4 student branches in IEEE Xi'an Section. One new student branch is formed in 2016.

1. IEEE Northwestern Polytechnical University student branch.

- 1) Assist in preparing and hosting ICASSP WSAC 2016
- 2) Assist in preparing and hosting ICSPCC 2016
- 3) Assist in preparing and hosting scholar lectures or join academic exchange activities

2. IEEE Xidian University student branch.

- 1) Assist in holding "Spring of academic" and "Autumn of academic" series academic communications
- 2) Assist in holding "International Workshop on Intelligent Perception and Image Understanding"
- 3) Assist in holding "Intelligent Cup" competition of programming
- 4) Held "Month of IEEE Service" series lectures

3. IEEE Xi'an Jiao Tong University student branch.

Meeting exchange:

- 1) International Top-level Forum on Disruptive Innovation in Information Technology
- 2) Conference of COMADEM 2016
- 3) 2016 IEEE International Instrumentation and Measurement Technology Conference

Scholar lectures:

- 1) Heratch G. Semerjian, Chief Scientist Emeritus
- 2) Jose C. Principe, IEEE/AIMBE Fellow
- 3) Dinesh Manocha, IEEE/AAAS/ACM Fellow
- 4) Nanning Zheng, IEEE Fellow

Member Activities:

- 1) Visit the aircraft engine
- 2) Visit the wind turbine

B.5 Affinity Group Activities

There is currently no affinity group in IEEE Xi'an Section.

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 and WebChat, 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.