



# Tainan Section

Annual Report 2012

Prepared by Ce-Kuen Shieh

Ce-Kuen Shieh  
Chair, IEEE Tainan Section  
Tainan, Taiwan  
2013/2/8

# **PART A - SECTION SUMMARY**

## **A.1 Executive Summary**

### A.1.1 2012 Section Executive Committee Member List

Chair: Prof. Ce-Kuen Shieh/ National Cheng Kung University  
Email: [shieh@ee.ncku.edu.tw](mailto:shieh@ee.ncku.edu.tw)

Vice Chair (Deputy): Prof. Chung-Hsien Wu/ National Cheng Kung University  
Email: [chwu@csie.ncku.edu.tw](mailto:chwu@csie.ncku.edu.tw)

Vice Chair (Technical Activities): Prof. Mi-Ching Tsai/ National Cheng Kung University  
Email: [mctsai@mail.ncku.edu.tw](mailto:mctsai@mail.ncku.edu.tw)

Vice Chair (Conferences): Prof. Chua-Chin Wang/ National Sun Yat-sen University  
Email: [cwang@ee.nsysu.edu.tw](mailto:cwang@ee.nsysu.edu.tw)

Vice Chair (Industry): Prof. Jeng-Shyang Pan/ National Kaohsiung University of Applied Sciences  
Email: [jspan@cc.kuas.edu.tw](mailto:jspan@cc.kuas.edu.tw)

Secretary: Prof. Vincent Shin-Mu Tseng/ National Cheng Kung University  
Email: [tsengsm@mail.ncku.edu.tw](mailto:tsengsm@mail.ncku.edu.tw)

Treasurer: Prof. Tsorng-Juu Liang/ National Cheng Kung University  
Email: [tjliang@mail.ncku.edu.tw](mailto:tjliang@mail.ncku.edu.tw)

Membership Development: Prof. Tzung-Pei Hong/ National University of Kaohsiung  
Email: [tphong@nuk.edu.tw](mailto:tphong@nuk.edu.tw)

Membership Development: Prof. Ren-Hung Hwang/ National Chung Cheng University  
Email: [rhhwang@cs.ccu.edu.tw](mailto:rhhwang@cs.ccu.edu.tw)

Membership Development: Prof. Chung-Ho Chen/ National Cheng Kung University  
Email: [chchen@mail.ncku.edu.tw](mailto:chchen@mail.ncku.edu.tw)

Professional Activities: Prof. Chung-Ming Huang/ National Cheng Kung University  
Email: [huangcm@locust.csie.ncku.edu.tw](mailto:huangcm@locust.csie.ncku.edu.tw)

Professional Activities: Prof. Kuo-Sheng Cheng/ National Cheng Kung University  
Email: [kscheng@mail.ncku.edu.tw](mailto:kscheng@mail.ncku.edu.tw)

Student Activities: Prof. Szu-Lin Su/ National Cheng Kung University  
Email: [ssl@ee.ncku.edu.tw](mailto:ssl@ee.ncku.edu.tw)

Student Activities: Prof. Shen-Fu Hsiao/ National Sun Yat-Sen University  
Email: [sfhsiao@cse.nsysu.edu.tw](mailto:sfhsiao@cse.nsysu.edu.tw)

Educational Activities: Prof. Yueh-Min Huang/ National Cheng Kung University  
Email: [huang@mail.ncku.edu.tw](mailto:huang@mail.ncku.edu.tw)

Educational Activities: Prof. Sheng-Tzong Cheng/ National Cheng Kung University  
Email: [stevecheng168@gmail.com](mailto:stevecheng168@gmail.com)

Newsletter Editor: Prof. Hui-Tang Lin/ National Cheng Kung University  
Email: [htlin@mail.ncku.edu.tw](mailto:htlin@mail.ncku.edu.tw)

Awards & Recognition Committee Co-Chair: Prof. Jar-Ferr Yang/ National Cheng Kung University  
Email: [jfyang@ee.ncku.edu.tw](mailto:jfyang@ee.ncku.edu.tw)

Awards & Recognition Committee Co-Chair: Prof. Kuen-Jong Lee/ National Cheng Kung University  
Email: [kjlee@ee.ncku.edu.tw](mailto:kjlee@ee.ncku.edu.tw)

#### A.1.2 Section Highlights

The year of 2012 was a very prosperous year to the Tainan Section. There were 3 administrative meetings, 1 professional activity, 4 technical activities, and 2 nontechnical activities being held during the year. First highlight was the arrival of Prof. Kenneth Smith, University of Toronto. This exceptionally exciting event attracted over 200 students to attend even raining on that day. Students were also very enthusiastically staying in line for a signature of Prof. Smith on their textbooks after the talk. Prof. Chung-Ho Chen, Chair of CASS Tainan Chapter, made this activity very successful as the main co-sponsor.

Second highlight was the visiting of Prof. Maciej J. Ogorzalek in Tainan, Taiwan. During the stay in Tainan, Prof. Maciej J. Ogorzalek gave our student members a technical talk and also had a lecture at National Sun Yat-Sen University in Kaohsiung. As former IEEE CASS President, Prof. Ogorzalek also shared his IEEE and international experience to our section members.

Finally, the most amazing event was the arrival of 4 IEEE Fellows: Thanos Stouraitis (University of Patras), Wouter Serdijn (Delft University of Technology), Eby Friedman (University of Rochester), and Prof. Gianluca Setti (University of Ferrara). They came to National Cheng Kung University to share their IEEE experience and encourage students to join IEEE and CASS Society as a student member. It attracted the attention of more than 170 students and 15 professors to attend. There was also question time for students and professors. After the talk, Tainan Section held a pizza lunch party for students. It was pleased to see students were enjoyable.

#### A.1.3 Major Events

Tainan Section held a workshop on membership development as requested from R10 on May 4, 2012. Section officers discussed how to promote IEEE membership and section supports to our student members. Chapter chairs were very supportive on this matter. In the end of 2012, we have 7.5% growth rate on membership. Section continuously made all meetings and activities go smoothly and helped chapter hold workshops. Work included promotions, financial reports, and financial supports to chapter if possible.

During the year, we still made efforts on modifying the regulations of "Award Applications" which is designed to recognize outstanding performances of young members and experienced professionals. There are 5 different awards for section members and we hope to have an award with regards to industry in the future. There was no "Best Ph.D. Thesis Award" given this year. In 2012 annual meeting, all award recipients were awarded a certificate in front of section members. For student membership, we continued the reimbursement for students who join IEEE at their first time. And another reimbursement for students joining IEEE conferences abroad was still providing. There were 2 student members qualified for the reimbursement in 2012. In December, Tainan Section co-sponsored the 2012 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS 2012), December 2 - 5, 2012, in Kaohsiung, Taiwan.

Particularly, Tainan Section had 2 newly formed affinity groups: Women in Engineering (WIE) and Graduates of the Last Decade (GOLD) on July 6, 2012 and July 12, 2012 separately. Affinity Group Chairs, Prof. Shu-Mei Guo (WIE) and Prof. Ing-Chao Lin (GOLD), worked hard to recruit new members for their groups and also to hold as many activities as possible in the beginning year.

#### A.1.4 Major Chapter Activities

The CASS Tainan Chapter held the "Meet with Prof. Kenneth Smith" on April 30. Prof. Chung-Ho Chen, 2012 Chair of CASS Tainan Chapter, worked hard to apply support from IEEE CASS Society (IEEE CASS Outreach Activity) and made this activity very successful. Prof. Smith is not only very enthusiastic at his professionals but also humorous when he talked to students.

#### A.1.5 Awards

This year was the third year for the award applications with 5 different ones in the Tainan Section. We received many applications from our members and many of them are very outstanding. It was really hard for committee members to review and choose the limited number of award recipients. Finally, the name lists of award recipients came out as follows:

- Best GOLD Member Award
  1. Prof. Chin-Lung Yang, *“in recognition of outstanding accomplishments and contributions in microwave technologies for biomedical applications in his first 10-year career.”*
  2. Prof. You-Chiun Wang, *“in recognition of outstanding accomplishments and contributions in wireless sensor networking and wireless network performance improvements in his first 10-year career.”*
- Best Ph.D. Thesis Award
  1. (No Award Given)
- Best Master Thesis Award
  1. Mr. Chun-Lin Liu, *“in recognition of excellent researches in discrete orthogonal transforms and their application in high dimension signal processing in his MS studies.”*
- Outstanding Technical Achievement Award
  1. Prof. Jyh-Horng Chou, *“in recognition of excellent technical achievements and outstanding contributions in advanced evolutionary computation and genetic algorithm.”*
  2. Prof. Shoou-Jinn Chang, *“in recognition of excellent technical achievements and outstanding contributions in high efficient light emitting diodes and advanced optical devices.”*
- Best Service Award
  1. Prof. Hua-Ming Chen, *“in appreciation of valued services in society, chapter, and editorial leadership, and technical contributions in antenna technologies.”*

## A.2 Financial Report

The Tainan Section supported all programs including chapter activities in 2012. To encourage student activities, we also provide students limited amounts for travel grants and membership. The receipt of the Section is TWD 652,645 and the expense is TWD 713,351. Thus the final balance is TWD 2,475,787 on December 31, 2012.

# PART B - ORGANIZATIONAL ACTIVITIES

## B.1 Membership Development Activities

B.1.1 Total number of active members in the past 3 years:

Grade	2010	% Change	2011	% Change	2012
Fellow	16	-	16	-	16
Life	2	↑ 50%	3	-	3
Senior Member	77	↑ 11.7%	86	↑ 1.2%	87
Member	533	↑ 0.9%	538	↑ 4.1%	560
Associate Member	30	↑ 13.3%	34	↑ 14.7%	39
Graduate/Student	240	↓ 17.5%	198	↑ 19.2%	236
TOTAL	898	↓ 2.6%	875	↑ 7.5%	941

B.1.2 Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members

To increase the value of membership and recruit new members, the Tainan Section has provided several services. First, we have clearly defined the progress of joining IEEE for students and provided

newly joined student members reimbursements for their membership dues. Second, the award applications constituted by the Tainan Section, were designed to encourage member participation and recognize members' hard work in IEEE-designated fields. Third, we have established the GOLD and WIE affinity groups in the middle of 2012, which will make members more connective and attract more non-members to join IEEE. In 2012, we also held a workshop on membership development as requested from R10 on May 4, 2012. Section officers discussed how to promote IEEE membership and section supports to our student members. Chapter chairs were very supportive on this matter. Thanks to all supportive officers and chapter chairs, in the end of 2012, we have 1.2% growth in senior member, 4.1% growth in member, 14.7% growth in associate member, 19.2% growth in graduate/student, and resultant 7.5% growth in total membership. Compared with last year, the growth rate is much inspiring and promising.

## **B.2 Chapter Activities**

### **B.2.1 Total number of Chapters and Affinity Groups in the Section**

Currently there are 15 Chapters, 2 Joint Chapters, and 2 newly formed Affinity Groups in the Tainan Section. The details of 2012 chapters and affinity groups are in the following:

1. Chapter Name: Antennas and Propagation Society Tainan Chapter  
Chapter Chair: Prof. Wen-Shan Chen
2. Chapter Name: Broadcast Technology Society Tainan Chapter  
Chapter Chair: Prof. Chih-Peng Li
3. Chapter Name: Circuits and Systems Society Tainan Chapter  
Chapter Chair: Prof. Chung-Ho Chen
4. Chapter Name: Communication Society Tainan Chapter  
Chapter Chair: Prof. Mao-Ching Chiu
5. Chapter Name: Computational Intelligence Society Tainan Chapter  
Chapter Chair: Prof. Tzung-Pei Hong
6. Chapter Name: Computer Society Tainan Chapter  
Chapter Chair: Prof. Chu-Sing Yang
7. Chapter Name: Electron Devices Society Tainan Chapter  
Chapter Chair: Prof. Wen-Kuan Yeh
8. Chapter Name: Engineering in Medicine and Biology Society Tainan Chapter  
Chapter Chair: Prof. Kuo-Sheng Cheng
9. Chapter Name: Information Theory Society Tainan Chapter  
Chapter Chair: Prof. Trieu-Kien Truong
10. Chapter Name: Magnetics Society Taipei & Tainan Joint Chapter  
Chapter Chair: Prof. Mi-Ching Tsai
11. Chapter Name: Microwave Theory and Techniques Society Tainan Chapter  
Chapter Chair: Prof. Sheng-Fuh Chang
12. Chapter Name: Nanotechnology Council Tainan Chapter  
Chapter Chair: Prof. Yu-Cheng Lin
13. Chapter Name: Reliability Society Taipei & Tainan Joint Chapter  
Chapter Chair: Prof. Shiuh-Pyng Shieh
14. Chapter Name: Signal Processing Society Tainan Chapter  
Chapter Chair: Prof. Jeng-Shyang Pan
15. Chapter Name: Solid State Circuits Society Tainan Chapter  
Chapter Chair: Prof. Soon-Jyh Chang

16. Chapter Name: Systems, Man & Cybernetics Society Tainan Chapter  
Chapter Chair: Prof. Kao-Shing Hwang
17. Chapter Name: Vehicular Technology Society Tainan Chapter  
Chapter Chair: Prof. Yueh-Min Huang
18. Affinity Group Name: Women in Engineering (WIE)  
Affinity Group Chair: Prof. Shu-Mei Guo
19. Affinity Group Name: Graduates of the Last Decade (GOLD)  
Affinity Group Chair: Prof. Ing-Chao Lin

## B.2.2 Chapter Activities

### 1. Antennas and Propagation Society Tainan Chapter - 24 meetings

- Date: Jan. 19, 2012  
Title: ANSYS 3D EM simulation tool training course  
Speaker Name: Prof. Jack Wu  
Affiliation: ANSYS
- Date: Mar. 7, 2012  
Title: Design and Applications of RF Active Devices  
Speaker Name: Prof. Derck Chang  
Affiliation: Glocomm Tech. Co. Ltd
- Date: Mar. 14, 2012  
Title: Design And Applications of RF Passive Devices  
Speaker Name: Dr. Derck Chang  
Affiliation: Glocomm Tech. Co. Ltd
- Date: Mar. 21, 2012  
Title: GPS Receiver Circuits  
Speaker Name: Dr. Derck Chang  
Affiliation: Glocomm Tech. Co. Ltd
- Date: March 28, 2012  
Title: Bluetooth Module circuits  
Speaker Name: Dr. Derck Chang  
Affiliation: Glocomm Tech. Co. Ltd
- Date: March 28, 2012  
Title: LTCC and Rf devices  
Speaker Name: Dr. Yuan-Chih Lin  
Affiliation: Metal Industries Research & Development Centre (MIRDC)
- Date: Apr. 11, 2012  
Title: Trend and development of cellular phone antennas  
Speaker Name: Dr. C. H. Chang  
Affiliation: Acer Corp.
- Date: Apr. 18, 2012  
Title: RFID circuits  
Speaker Name: Dr. Derck Chang  
Affiliation: Glocomm Tech. Co. Ltd
- Date: Apr. 25, 2012  
Title: Circuits and applications of Mobile phones  
Speaker Name: Dr. Derck Chang  
Affiliation: Glocomm Tech. Co. Ltd
- Date: May 2, 2012

Title: Chip Antenna In R-Chip Process For Low Cost  
Speaker Name: Dr. Yuan-Chih Lin  
Affiliation: Metal Industries Research & Development Centre (MIRDC)

- Date: May 11, 2012  
Title: Introduction to RF system and applications  
Speaker Name: Dr. Jian-Wu Lee  
Affiliation: Industrial Technology Research Institute (ITRI)
- Date: May 16, 2012  
Title: Patent Concept And Case Study Sharing  
Speaker Name: Dr. Yuan-Chih Lin  
Affiliation: Metal Industries Research & Development Centre (MIRDC)
- Date: May 19, 2012  
Title: Evolution of antenna tech. of smart phone devices  
Speaker Name: Dr. Chih-Hua Chang  
Affiliation: ACER Inc.
- Date: May 19, 2012  
Title: Antenna designs in MTK  
Speaker Name: Dr. Wei-Yu Chen  
Affiliation: Media Tek Inc.
- Date: May 19, 2012  
Title: Practice and Design of antenna on smart phones  
Speaker Name: Mr. Yu-Chan Yang  
Affiliation: HTC Corp.
- Date: May 21, 2012  
Title: Introduction to Bio-info. detecting and radar  
Speaker Name: Dr. Je-Kuan Jau  
Affiliation: ITRI
- Date: May 25, 2012  
Title: RF amplifier for applications  
Speaker Name: Dr. Ping-Hsun Wu  
Affiliation: ITRI
- Date: May 29, 2012  
Title: Measurement of Far-field radiation pattern for Microwave antennas  
Speaker Name: Mr. Ike Lin  
Affiliation: Wavepro Corp.
- Date: Sept. 8, 2012  
Title: Antenna design of Laptop/table computer with full metal cover  
Speaker Name: Dr. Saou-Wen Su  
Affiliation: Asustek Computer Inc.
- Date: Sept. 8, 2012  
Title: Antenna application and challenge for tablets  
Speaker Name: Dr. Liang-Che Chou  
Affiliation: Compal Electronics Inc.
- Date: Sept. 8, 2012  
Title: Developments and challenges of antenna technology: industry view  
Speaker Name: Dr. Chun-I Lin  
Affiliation: Quanta Computer Inc.
- Date: Sept. 8, 2012  
Title: Challenges of mobile antenna: MTK' s view  
Speaker Name: Dr. Ting-Wei Kang  
Affiliation: Media Tek Inc.

- Date: Oct. 10, 2012  
Title: Workshop on Microwave antenna measurement  
Speaker Name: Mr. Ike Lin  
Affiliation: Wavepro Corp
- Date: Nov. 6, 2012  
Title: Practices on Microwave antenna measurement  
Speaker Name: Mr. Ike Lin  
Affiliation: Wavepro Corp

## 2. Broadcast Technology Society Tainan Chapter – 3 meetings

- Date: Nov. 26, 2012  
Title: In view of the growing problem of world-wide energy crisis, what solutions the scientists and engineers can offer?  
Attendance: IEEE Members 30, Guests 120
- Date: Sep. 28, 2012  
Title: Cognitive Radio Networks: Design Challenges and New Opportunities  
Attendance: IEEE Members 15, Guests 35
- Date: July. 16, 2012  
Title: Interference-Aware Networking for Digital Convergence in Future Broadband Wireless Networks  
Attendance: IEEE Members 10, Guests 70

## 3. Circuits and Systems Society Tainan Chapter – 5 meetings

- Date: Feb. 23 , 2012  
Title: Emerging Business Issues, Trends, and Technologies in Mobile Computing  
Speaker Name: Dr. Wei-Fen Lin  
Attendance: IEEE Members 10, Guests 30
- Date: April 27, 2012  
Title: Automotive Smart Power IC Design  
Speaker Name: Prof. Bernhard Wicht  
Affiliation: Reutlingen University, Germany  
Attendance: IEEE Members 10, Guests 30
- Date: April 30, 2012  
Title: 2012 IEEE CASS Outreach Program  
Speaker Name: Prof. K. C. Smith  
Affiliation: Toronto University  
Attendance: IEEE Members 50, Guests 250
- Date: Aug. 8, 2012  
Title: IEEE CASS member annual meeting  
Speaker Name: *Prof. Chung-Ho Chen*  
Affiliation: EE, NCKU  
Attendance: IEEE Members 40, Guests 10
- Date: Dec. 4, 2012  
Title: IEEE CASS/SSCS Chapter Pizza Party Talk  
Attendance: 150

## 4. Communication Society Tainan Chapter – 5 meetings

- Date: Mar. 9, 2012  
Title: VLSI Signal Processing for Biomedical Applications  
Speaker Name: Prof. Chia-Hsiang Yang  
Affiliation: National Chiao Tung University  
Attendance: IEEE Members 6, Guests 110



- Date: June 1, 2012  
Title: Parallel Dynamic Voltage and Frequency Scaling for Stream Decoding using a Multicore Embedded System Android  
Speaker Name: Prof. Yueh-Min Huang  
Affiliation: National Cheng Kung University  
Attendance: IEEE Members 10, Guests 110
- Date: June 15, 2012  
Title: Spectrum Leasing Game for the Cognitive Radio Network With Primary System Using Adaptive Modulation Scheme  
Speaker Name: Prof. Chih-Wen Chang  
Affiliation: National Cheng Kung University  
Attendance: IEEE Members 9, Guests 110
- Date: Oct. 9, 2012  
Title: Researches on Security Protection of Wireless Local Area Networks (WLAN)  
Speaker Name: Prof. James T. Yu  
Affiliation: DePaul University  
Attendance: IEEE Members 10, Guests 110
- Date: Oct. 19, 2012  
Title: Spatial & Temporal Data Compression in WSNs  
Speaker Name: Prof. You-Chiun Wang  
Affiliation: National Sun Yat-sen University  
Attendance: IEEE Members 6, Guests 110

#### 5. Computational Intelligence Society Tainan Chapter – 4 meetings

- Date: Sep. 14, 2012  
Title: DLP – Self-Learning Control of Nonlinear Systems Based on Iterative Adaptive Dynamic Programming Approach  
Speaker Name: Dr. Derong Liu  
Affiliation : Chinese Academy of Science, China  
Attendance: IEEE Members 20, Guests 50
- Date: May. 14, 2012  
Title: Advancements in Memetic Computation  
Speaker Name: Dr. Yew Soon Ong  
Affiliation: Nanyang Technological University, Singapore  
Attendance: IEEE Members 30, Guests 200
- Date: Sep. 24, 2012  
Title: Multiobjective Optimization and Performance Metrics Ensemble  
Speaker Name: Dr. Gary Yen  
Affiliation: Oklahoma State University, USA  
Attendance: IEEE Members 30, Guests 200
- Date: Sep. 26, 2012  
Title: (Tutorial) Evolutionary Algorithms from Multi-objective to Many-objective Optimization  
Speaker Name: Dr. Gary Yen  
Affiliation: Oklahoma State University, USA  
Attendance: IEEE Members 30, Guests 80

#### 6. Computer Society Tainan Chapter – 2 meetings

- Date: Nov. 7.2012  
Title: Discussion on Computer Network  
Speaker Name: Dr. Alexander PELOV  
Affiliation: Lecturer and Researcher in Computer Science
- Date: Nov. 16.2012  
Title: Distributed Mobility Management: Motivations, Requirements, Approaches, Comparison, and Challenge

Speaker Name: Prof. Jong-Hyouk Lee  
Affiliation: TELECOM Bretagne, France

- Date: Nov. 16.2012  
Title: Integration of Android smart devices and system  
Speaker Name: Dr. W.-Y. Liang  
Affiliation: Chief Technology Officer, AndroLead Technology Co., Ltd.

7. Electron Devices Society Tainan Chapter – 2 meetings

- Date: Nov. 19, 2012  
Title: The experience of Studying and Living in USA  
Speaker Name: Dr. Jiann-shiun Yuan  
Affiliation: University of Center Florida  
Attendance: IEEE Members 10, Guests 30
- Date: Nov. 20, 2012  
Title: RF Circuit Reliability and Variability  
Speaker Name: Dr. Jiann-shiun Yuan  
Affiliation: University of Center Florida  
Attendance: IEEE Members 15, Guests 14

8. Engineering in Medicine and Biology Society Tainan Chapter– 3 meetings

- Date: Sep. 29, 2012  
Title: Introduction to Evolutionary Computation  
Speaker Name: Prof. Hideyuki TAGAGI  
Affiliation: Kyushu University
- Date: Oct. 18.2012  
Title: Challenge of Science and Medicine in Acupuncture  
Speaker Name: Prof. EDWARD S. YANG  
Affiliation: National Central University
- Date: Oct. 25.2012  
Title: Innovation of Gerontechnology  
Speaker Name: Prof. Kuo-Sheng Cheng  
Affiliation: National Cheng Kung University

9. Information Theory Society Tainan Chapter – 2 meetings

- Date: May 30, 2012  
Title: Introduction to Error-Correcting Codes  
Speaker Name: Dr. Pei-Yu Shih  
Affiliation: Chiao Tung University, Taiwan  
Attendance: IEEE Members 5, Guests 42
- Date: Nov. 28, 2012  
Title: CAN Bus  
Speaker Name: Prof. Shi-Hung Chen  
Affiliation: Shu-Te University\_Taiwan  
Attendance: IEEE Members 3, Guests 12

10. Magnetic Society Tainan Chapter – 5 meetings

- Date: Feb. 20, 2012  
Title: MAGFINE Applied to Motor Design and its Applications  
Speaker Name: Dr. Yoshinobu Honkura  
Affiliation: Aichi Steel Corporation  
Attendance: IEEE Members 3, Guests 31
- Date: Mar. 2, 2012  
Title: Design of Machines for Electric Vehicles

Speaker Name: Dr. David Dorrell  
Affiliation: School of Elec, Mech and Mechatronic Systems, University of Technology, Sydney  
Attendance: IEEE Members 8, Guests 20

- Date: May 15, 2012  
Title: Switched Reluctance Motor from Infancy to Present  
Speaker Name: Dr. Takashi Kenjo  
Affiliation: Director Emeritus, NMERL  
Attendance: IEEE Members 7, Guests 27
- Date: June 7, 2012  
Title: 2012 Distinguished Lecture: Soft Magnetic Thin Film Applications at Radio Frequencies  
Speaker Name: Prof. Masahiro Yamaguchi  
Affiliation: Department of Electrical and Communication Engineering, Tohoku University  
Attendance: IEEE Members 5, Guests 23
- Date: Nov. 7, 2012  
Title: Iron Losses in Electric Machines: Prediction and Manufacturing Influences  
Speaker Name: Prof. Andy Knight  
Affiliation: Department of Electrical and Computer Engineering, University of Alberta  
Attendance: IEEE Members 7, Guests 13

11. IEEE Microwave Theory and Techniques Society Tainan Chapter – 5 meetings

- Date: Feb. 16, 2012  
Title: Report on Current Status of APMC2012  
Speaker Name: Prof. Kin-Lu Wong  
Affiliation: National Sun Yat-Sen University  
Attendance: IEEE Members 25, Guests 10
- Date: Feb. 12, 2012  
Title: RF Lab Kit for Wireless Transceiver Training in Academia and Industry  
Speaker Name: MTT Tainan chapter  
Attendance: IEEE Members 20, Guests 90
- Date: June 8, 2012  
Title: Wireless Power Transmission: From Far-Field to Near-Field  
Speaker Name: Prof. Jenshan Lin  
Affiliation: University of Florida  
Attendance: IEEE Members 5, Guests 50
- Date: Dec. 3, 2012  
Title: Power Handling and Temperature Compensation Design for Passive Microwave Devices  
Speaker Name: Dr. Ming Yu  
Affiliation: DML  
Attendance: IEEE Members 10, Guests 40
- Date: Dec. 12, 2012  
Title: Recent Advances in Microwave Planar Filter Technologies  
Speaker Name: Prof. Jia-Sheng Hong  
Affiliation: Heriot-Watt University  
Attendance: IEEE Members 15, Guests 40

12. Nanotechnology Council Tainan Chapter – 2 meetings

- Date: April. 23-26, 2012  
Title: The 18th World Micromachine Summit (MMS 2012)  
Speaker Name: Prof. Ming-Shen Jian  
Attendance: 108
- Date: Oct. 28, 2012  
Title: IEEE SENSORS 2012  
Attendance: 827

13. IEEE Signal Processing Society Tainan Chapter – 4 meetings

- Date: Mar. 5, 2012  
Title: Fuzzy Set Theory and Fuzzy Reasoning  
Speaker Name: Prof. Shyi-Ming Chen IEEE Fellow  
Affiliation: Taiwanese Association of Consumer Electronics
- Date: Apr. 23, 2012  
Title: Brief, Strategy, Innovation of Android  
Speaker Name: Mr. Hsin-Hung Chen  
Affiliation: Hwa-Heng Inc.
- Date: Sept., 26, 2012  
Title: Adaptive Fault-tolerant Tracking Control of 4WS4WD Road Vehicle: A Fully Model-Independent Solution  
Speaker Name: Prof. Yongduan, Song  
Affiliation: Beijing Jiaotong University
- Date: July, 23, 2012  
Title: Multimedia and security: Watermarking, Steganography and Forensics  
Speaker Name: Prof. Frank Shih  
Affiliation: New Jersey Institute of Technology

14. IEEE Solid-State Circuits Society Tainan Chapter – 6 meetings

- Date: Feb. 23, 2012  
Title: Emerging Business Issues, Trends, and Technologies in Mobile Computing  
Speaker Name: Dr. Wei-Fen Lin  
Affiliation: Co-founder and General Manager, Mijotech Inc.  
Attendance: IEEE Members 10, Guests 28
- Date: Apr. 27, 2012  
Title: Automotive IC design  
Speaker Name: Prof. Bernhard Wicht  
Affiliation: Reutlingen University of Applied Sciences, Germany  
Attendance: IEEE Members 8, Guests 23
- Date: Apr. 30, 2012  
Title: Become a Member of IEEE  
Speaker Name: Dr. Kenneth C. Smith  
Affiliation: University of Toronto, Canada  
Attendance: IEEE Members 30, Guests 200
- Date: Aug. 8, 2012  
Title: Annual Meeting  
Speaker Name: Prof. Soon-Jyh Chang  
Affiliation: Duke University  
Attendance: IEEE Members 50
- Date: Sep. 10, 2012  
Title: Design of Modern Equalizers in High-Speed Data Links  
Speaker Name: Prof. Jri Lee  
Affiliation: Department of EE, National Taiwan University, Taiwan  
Attendance: IEEE Members 20, Guests 11
- Date: Sep. 13, 2012  
Title: Low-Power Smart Sensor as the Next Semiconductor Market Driver  
Speaker Name: Prof. Chong-Min Kyung  
Affiliation: Dept. of EE, KAIST, Daejeon, South Korea  
Attendance: IEEE Members 18, Guests 45

15. SMC Society Tainan Chapter – 4 meetings

- Date: Aug. 31, 2012  
Title: Symposium of Cross-Strait on Robotics  
Affiliation: National Sun Yat-sen University
- Date: Sep. 1, 2012  
Title: Workshop on MOS-Strong and MOS-Lite Humanoid Soccer Robot  
Affiliation: National Chung Hsing University
- Date: Sep. 3, 2012  
Title: Forum on Education Program R&D Expertise in Robotics Industry  
Affiliation: National Sun Yat-sen University
- Date: Sep. 4, 2012  
Title: Forum on RTM-based ubiquitous robotics  
Affiliation: National Cheng Kung University

16. Vehicular Technology Society Tainan Chapter – 1 meeting

- Date: Sep. 8, 2012  
Title: DLP Lecture “Cognitive Radio Networks: Design Challenges and New Opportunities”  
Speaker Name: Dr. Ying-Chang Liang  
Affiliation: Institute for Infocomm Research (I2R), Singapore  
Attendance: IEEE Members 12, Guests 40

17. Tainan Section Affinity Group, WIE – 3 meetings

- Date: Oct. 5, 2012  
Title: On Matching Web-scale Entity Graphs  
Speaker Name: Prof. Seung-won Hwang  
Affiliation: Department of Computer Science and Engineering, POSTECH, Korea  
Attendance: IEEE Members 5, Guests 80
- Date: Oct. 5, 2012  
Title: A knowledgebase for text understanding  
Speaker Name: Dr. Haixun Wang  
Affiliation: Senior researcher at Microsoft Research Asia in Beijing, China  
Attendance: IEEE Members 5, Guests 70
- Date: Dec. 7, 2012  
Title: The CMMI process improvement works in China – the observation from a Lead appraiser  
Speaker Name: Prof. Yu-Chang Hu  
Affiliation: C.E.O., Polar Tech Co.; SEI Certified Leader Appraiser for CMMI-DEV/ACQ  
Attendance: IEEE Members 3, Guests 50

18. Tainan Section Affinity Group, GOLD – 3 meetings

- Date: Oct. 18, 2012  
Title: Introduction to RFID Technology and Application  
Speaker Name: Prof. Ming-Shen Jian  
Affiliation: National Formosa University  
Attendance: IEEE Members 15, Guests 30
- Date: Nov. 16, 2012  
Title: Research and Challenges of Cyber Physical System  
Speaker Name: Prof. Chi-Sheng Shih  
Affiliation: Dept. of Computer Science, National Taiwan University  
Attendance: IEEE Members 10, Guests 20
- Date: May 15, 2012  
Title: GOLD Official meeting : Discussion of 2013 Plans

Speaker Name: Prof. Ing-Chao Lin  
Affiliation: Department of Computer Science and Information, NCKU  
Attendance: IEEE Members 5

### **B.3 Professional and Continuing Education Activities**

The Tainan Section held educational activities as follows:

- Date: April 30, 2012  
Title: Meet Prof. Kenneth C. Smith at NCKU  
Speaker Name: Prof. Kenneth C. Smith  
Attendance: IEEE Members 17, Guests 181
- Date: May 9, 2012  
Title: Sink-Connected Barrier Coverage Optimization for Wireless Sensor Networks  
Speaker Name: Prof. Jehn-Ruey Jiang  
Attendance: IEEE Members 3, Guests 14
- Date: May 29, 2012  
Title: Image processing and computational intelligence methods for computer-aided skin cancer Diagnosis.  
Speaker Name: DR. SOREL REISMAN  
Attendance: IEEE Members 8, Guests 36
- Date: Dec. 4, 2012  
Title: IEEE Tainan Section Pizza Party Talk  
Speaker Name: Prof. Eby G. Friedman, Prof. Wouter A. Serdijn, Prof. Gianluca Setti, and Prof. Thanos Stouraitis  
Attendance: IEEE Members 65, Guests 107
- Date: Dec. 7, 2012  
Title: High-Frequency Measurement Methods and Challenges  
Speaker Name: Prof. Mani Soma  
Attendance: IEEE Members 13, Guests 19

### **B.4 Students Activities**

#### **B.4.1 Total number of Student branches in the Section**

Currently, there are two student branches, NCKU and NSYSU branches, in the Tainan Section. The first one (NCKU student branch) was established in 2005 and the other one (NSYSU student branch) was established in 2006. These two student branches were both active and held technical meetings and invited talks in 2012 for their branch members.

#### **B.4.2 Section level student activities (student congress, paper and other contests, awards etc)**

The Tainan Section has designed 2 awards related to theses by graduate students as follows:

- Best Ph.D. Thesis Award
- Best Master Thesis Award

Both of the above awards were created to recognize outstanding performances of student members in the Tainan Section. And all the 2012 award recipients were awarded at annual member meeting in December.

#### **B.4.3 Summary of Student branch activities student branch wise with attachment table / information**

##### **1. National Cheng Kung University(NCKU) Student Branch**

- Date: Mar. 4, 2012  
Location: ATI Hall, 1 Floor, EE Department, NCKU  
Title: Putting phase change memory into practice for memory hierarchy

Attendance: IEEE Student Members and VLSI/CAD Students

- Date: April 6, 2012  
Location: UMC Room, B1 Floor, EE Department, NCKU  
Title: Debunking the 100X GPU vs. CPU Myth: An Evaluation of Throughput Computing on CPU and GPU  
Attendance: IEEE Student Members and VLSI/CAD Students
  - Date: April 27, 2012  
Location: UMC Room, B1 Floor, EE Department, NCKU  
Title: Automotive IC Design  
Attendance: IEEE Student Members and VLSI/CAD Students
  - Date: April 30, 2012  
Location: UMC Room, B1 Floor, EE Department, NCKU  
Title: Meet the Master  
Attendance: IEEE Student Members and VLSI/CAD Students
  - Date: Sep. 13, 2012  
Location: UMC Room, B1 Floor, EE Department, NCKU  
Title: Low-power smart sensor as the next semiconductor market driver  
Attendance: IEEE Student Members and VLSI/CAD Students
2. National Sun Yat-Sen University(NSYSU) Student Branch
- Date: Dec 2-5, 2012  
Location: Splendor Hotel, Kaohsiung, Taiwan  
Title: Support 2012 APCCAS (Asia Pacific Conference on Circuits and Systems)

## **B.5 Awards & Recognition Activities**

Our SP-S Tainan Chapter recieved “2012 Best Chapter Award” from IEEE Signal Processing Society. Because of the hard work by chapter officers: Prof. Jeng-Shyang Pan, Prof. Ding-Horng Chen, Prof. Mong-Fong Horng, and Prof. Tsong-Yi Chen, this award went to the SP-S Tainan Chapter finally. Their dedications to chapter activities were very impressive and worthy to share with other chapters. Congratulations to them.

## **B.6 Communication Activities**

Messages or announcements from the section usually send to section members for their reference via e-mail. Our members and chapter officers also communicate with us on the phone whenever they need if emernency or necessary during office hours. For those not emergency, members often write emails to us for inquiry and will be replied soon. To promote the communication of different society chapters, we’ve designed webpages for each society chapter already formed in the Tainan Section. The interface provides each society chapter more opportunities to communicate with members. The section webpage are updated monthly if there is new information and useful news to members as well at <http://ewh.ieee.org/r10/tainan/>.

# **PART C - OTHERS**

## **C.1 Relationship with National Societies**

To promote the relationship bewteen IEEE and other organizations, Tainan Section helped to sign a Memorandum of Understanding (MOU) with the Taiwan Association for Magnetic Technology (TAMT) covering the period of January 1st, 2013 through December 31st, 2015. The TAMT is an educational and scientific nonprofit roganization for promoting magenetic technology research. Through this cooperation, IEEE and TAMT can exchange and dissemination of technical information, which will be a good chance to benefit members of both institutes.

## **PART D - GOALS AND PLANS**

### **D.1 Continuation of Project/Activity in Progress and Their Implementation Plans**

- In 2013, the Tainan Section will help and organize many activities/conferences such as IEEE International Conference on Orange Technologies (ICOT 2013) during March 12-16, and IEEE International Future Energy Electronics Conference (IFEEEC 2013) during November 3-6. ICOT 2013 is the first conference in the world to deeply concentrate on orange technologies for better human life. The term “Orange technology” was first proposed in 2009 by the conference chair, Prof. Jhing-Fa Wang. IEEE Tainan Section will assist in the preparation for ICOT 2013 and IFEEEC 2013 to promote the exciting events during 2013. Besides these two conferences, Tainan Section will also hold the gathering workshop for NCKU, Xiamen University, and Zhejiang University on January 10-11, 2013. It is planned that Tainan Section members, NCKU students, professors of Xiamen University and Zhejiang University will join in the activity.

### **D.2 Goals and Future Plans**

- To assist IEEE members to form new society chapters in the Tainan Section.
- To provide assistance to members of the Tainan Section in their IEEE career.
- To encourage and assist members joining in IEEE activities and award applications.
- To provide support to Student Branches.
- Dissemination of knowledge in the broader fields of electrical and Electronics Engineering through holding of technical talk, seminar, conference, symposium, workshop, tutorial, etc.
- To have more connections and cooperation with industry.