



# **IEEE Taipei Section**

# **Annual Report 2014**

**Prepared by**  
**Cheng-Yuan Chang**  
**Secretary (2014/2015/03)**

**Tsu-Tian Lee**  
**Chair (2014/2015/03)**

## Suggested Section Report Format

### PART A - SECTION SUMMARY

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

- Section Executive Committee Member List

##### Section Officer (2014-2015)

###### Chair

Prof. Tsu-Tian Lee (Tamkang University)

Email: tlee@mail.ntut.edu.tw;tlee@mail.tku.edu.tw

###### Vice Chair

Prof. Ying-Yi Hong (Chung Yuan Christian University)

Email: yyhong@dec.ee.cycu.edu.tw

Prof. Shun-Feng Su (National Taiwan University of Science and Technology)

Email: sfsu@mail.ntust.edu.tw

###### Secretary

Prof. Cheng-Yuan Chang (Chung Yuan Christian University)

Email: ccy@cycu.edu.tw

###### Treasurer

Prof. Shyue-Kung Lu (National Taiwan University of Science and Technology)

Email: sklu@ee.ntust.edu.tw

###### Membership Development (Industry)

Prof. Yi-Shuo Huang (Industrial Technology Research Institute)

Email: yishuang@itri.org.tw

###### Membership Development (Academia)

Prof. Fan-Ren Chang (National Taiwan University)

Email: fanren@ntu.edu.tw

###### Student Activities

Prof. Shih-Hsu Huang (Chung Yuan Christian University)

Email: shhuang@cycu.edu.tw

###### Educational Activities

Prof. Ming-Kwei Lee (Chung Yuan Christian University)

Email: mkleee@mail.ee.nsysu.edu.tw

格式化：靠左，縮排：凸出：1 字  
元，左 3.6 字元，第一行：-1 字  
元，行距：1.5 倍行高

### Industrial Activities

Prof. Jin-Shi Yang (Taiwan Power Research Institute)

Email: u356461@taipower.com.tw

### Award and Recognition

Prof. Rong-Jong Wai (Yuan Ze University)

Email: rjwai@saturn.yzu.edu.tw

### Electronic Communication

Prof. Yu-Kuen Lai (Chung Yuan Christian University)

Email: ylai@cycu.edu.tw

- Section Highlights
  - Life fellow were increasing in 2014. All kinds of members are dedicated to be recruited.
  - Sponsor more national and international conferences.
  - Change the Joint Chapter to two individual Chapters (PELS 35 and IES 13).
  - To encourage the intention of member applications, IEEE Taipei Section subsidized students to take part in conferences overseas, and there are 22 students who had been benefited from 22 applications in 2014.
- Major Events (International, National)
  - Sponsor

Category	Meeting	Date
Administrative	Taipei Section 2014 Regular Meeting	2014.03.10
		2014.06.09
		2014.11.14
	Taipei Section 2014 board members meeting	2014.03.10

➤ **Co-sponsor**

<b>Category</b>	<b>Meeting</b>	<b>Date</b>
<b>Technical (Advertisement)</b>	2014 International Conference on Optoelectronics and Microelectronics	2014.01.14~16
	The 2014 International Conference on Intelligent Green Building and Smart Grid (IGBSG)	2014.04.23~25
	2014 Laser Display Conference	2014.06.19~20
	The 11th International Conference on Heterogeneous Networking for Quality, Reliability, Security and Robustness (Qshine 2015)	2015.08.19~20
	The 24th Wireless and Optical Communication Conference (WOCC 2015)	2015.10.23~24

- Major Chapter Activities
  - Encourage members to participate IEEE activities.
  - Sponsor national and International conf. to promote the visibility of IEEE, IEEE Taipei Section and chapters.
  - Change the Joint Chapter to two individual Chapters (PELS 35 and IES 13).

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

- Summary (as per submitted L50)
  - Refer to the NetSuite.
- Any other financial activities
 

The financial status of this Section is comfortable for supporting those planned programs. Some of the chapters have contributed a reasonable percentage of their income to this Section. This allows the Section to maintain the routine functions and to hold more conferences. We also sponsored more student activities than before. The total income of the Section in 2014 was NT\$7,080,686 including NT\$661,348 of 2014 rebate in July 2014. The total expenses was NT\$6,406,733. The final balance at the End of 2014 is NT\$8,701,860. More detail is included in NetSuite.

## PART B - ORGANIZATIONAL ACTIVITIES

### B.1 Membership Development Activities

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

<b>IEEE Grade</b>	<b>2012 Members</b>	<b>2013 Members</b>	<b>2014 Members</b>
Affiliate	90	110	78
Associate	164	77	81
Fellow	<b>100</b>	98	102
Graduate Student	<b>795</b>	627	481
Life Fellow	<b>13</b>	17	18
Life Member	11	9	10
Life Senior	4	3	3
Member	2179	2161	2038
Senior Member	<b>277</b>	296	322
Student	298	292	222
<b>Total</b>	<b>3841</b>	<b>3580</b>	<b>3355</b>

- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
  - IEEE Taipei Section affairs are transferred to next section chairman in March. We start to recruit new members and plan the activity this and next year, including Rendering Awards (Best Paper Award, Outstanding Chapter Award and Outstanding Student Branch Award, etc.)

## B.2 Chapter Activities

- Total number of Chapters in the Section
  1. **Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)**  
**Chapter Chair:** Ruey-Bing Hwang  
**Title and Affiliation:** Professor, Department of Electrical and Computer Engineering, National Chiao Tung University  
**Email:** [raybeam@mail.nctu.edu.tw](mailto:raybeam@mail.nctu.edu.tw)
  2. **Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**  
**Chapter Chair:** Shih-Chia Huang  
**Title and Affiliation:** Associate Professor, Department of Electronic Engineering, National Taipei University of Technology  
**Email:** [schuang@ntut.edu.tw](mailto:schuang@ntut.edu.tw)
  3. **Chapter Name: Computer Society Taipei Chapter (C16)**  
**Chapter Chair:** Der-Tsai Lee  
**Title and Affiliation:** Distinguished Research Fellow, Institute of Information Science, Academia Sinica  
**Email:** [dtlee@iis.sinica.edu.tw](mailto:dtlee@iis.sinica.edu.tw)
  4. **Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**  
**Chapter Chair:** Ke-Horng Chen  
**Title and Affiliation:** Professor, Electrical and Computer Engineering, National Chiao Tung University  
**Email:** [khchen@faculty.nctu.edu.tw](mailto:khchen@faculty.nctu.edu.tw)
  5. **Chapter Name: Consumer Electronics Society Taipei Chapter (CE08)**  
**Chapter Chair:** Wen-Chung Kao  
**Title and Affiliation:** Professor, Department of Applied Electronics Technology, National Taiwan Normal University  
**Email:** [jungkao@ntnu.edu.tw](mailto:jungkao@ntnu.edu.tw)
  6. **Council on Electronic Design Automation Chapter Taipei Chapter (CEDA44)**  
**Chapter Chair:** Ting-Chi Wang  
**Title and Affiliation:** Professor, Department of Computer Science, National Tsing Hua University  
**Email:** [tcwang@cs.nthu.edu.tw](mailto:tcwang@cs.nthu.edu.tw)
  7. **Chapter Name: Computational Intelligence Society Taipei Chapter (CIS11)**  
**Chapter Chair:** Faa-Jeng Lin  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Central University

Email: [linfjee.ncu.edu.tw](mailto:linfjee.ncu.edu.tw)

8. **Chapter Name: Communications Society Taipei Chapter (COM19)**  
**Chapter Chair:** Guu-Chang Yang  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Chung Hsing University  
**Email:** [gcyang@dragon.nchu.edu.tw](mailto:gcyang@dragon.nchu.edu.tw)
  
9. **Chapter Name: Components Packaging, and Manufacturing Technology Society Taipei Chapter (CPMT21)**  
**Chapter Chair:** Shen-Li Fu  
**Title and Affiliation:** President of I-Shou University  
**Email:** [slfu@isu.edu.tw](mailto:slfu@isu.edu.tw)
  
10. **Chapter Name: Control Systems Society Taipei Chapter (CS23)**  
**Chapter Chair:** Kuang-Yow Lian  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taipei University of Technology  
**Email:** [chunlin@dragon.nchu.edu.tw](mailto:chunlin@dragon.nchu.edu.tw)
  
11. **Chapter Name: Education Society Taipei Chapter (E25)**  
**Chapter Chair:** Juing-Huei Su  
**Title and Affiliation:** Dean, Office of Student Affairs, Lunghwa University of Science and Technology  
**Email:** [suhu@mail.lhu.edu.tw](mailto:suhu@mail.lhu.edu.tw)
  
12. **Chapter Name: Electron Devices Society Taipei Chapter (ED15)**  
**Chapter Chair:** Steve Chung  
**Title and Affiliation:** Professor, Electronics Engineering, National Chiao Tung University  
**Email:** [schung@cc.nctu.edu.tw](mailto:schung@cc.nctu.edu.tw)
  
13. **Chapter Name: Engineering in Medicine and Biology Society Taipei Chapter (EMB18)**  
**Chapter Chair:** Jyh-Horng Chen  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taiwan University  
**Email:** [jhchen@ntu.edu.tw](mailto:jhchen@ntu.edu.tw)
  
14. **Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**  
**Chapter Chair:** Tzong-Lin Wu  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taiwan University

Email: [wtl@cc.ee.ntu.edu.tw](mailto:wtl@cc.ee.ntu.edu.tw)

15. **Chapter Name: Geoscience & Remote Sensing Society Taipei Chapter (GRS29)**  
**Chapter Chair:** Yang-Lang Chang  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taipei University of Technology  
**Email:** [ylchang@mail.ntut.edu.tw](mailto:ylchang@mail.ntut.edu.tw)
  
16. **Chapter Name: Industry Applications Society Taipei Chapter (IA34)**  
**Chapter Chair:** Po-tai Cheng  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Tsing Hua University  
**Email:** [ptcheng@ee.nthu.edu.tw](mailto:ptcheng@ee.nthu.edu.tw)
  
17. **Chapter Name: Industrial Electronics Society Taipei Chapter (IE13)**  
**Chapter Chair:** Huang-Jen Chiu  
**Title and Affiliation:** Professor, Department of Electronic and Computer Engineering, National Taiwan University of Science and Technology  
**Email:** [hjchiu@mail.ntust.edu.tw](mailto:hjchiu@mail.ntust.edu.tw)
  
18. **Chapter Name: Power Electronics Society Taipei Chapter (PEL35)**  
**Chapter Chair:** Yaow-Ming Chen  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taiwan University  
**Email:** [ymchen@cc.ee.ntu.edu.tw](mailto:ymchen@cc.ee.ntu.edu.tw)
  
19. **Chapter Name: Instrumentation & Measurement Society (IM09)**  
**Chapter Chair:** Jer-Liang Andrew Yeh  
**Title and Affiliation:** Professor, Department of Power Mechanical Engineering National Tsing Hua University  
**Email:** [jayeh@itrc.narl.org.tw](mailto:jayeh@itrc.narl.org.tw); [jayeh@pme.nthu.edu.tw](mailto:jayeh@pme.nthu.edu.tw)
  
20. **Chapter Name: Information Theory Society Taipei Chapter (IT12)**  
**Chapter Chair:** Hsuan-Jung Su  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taiwan University  
**Email:** [hjsu@cc.ee.ntu.edu.tw](mailto:hjsu@cc.ee.ntu.edu.tw)
  
21. **Chapter Name: Lasers & Electro-Optics Society Taipei Chapter (LEO36)**  
**Chapter Chair:** Hao-Chung Kuo  
**Title and Affiliation:** Professor, Department of Photonics, National Chiao Tung University  
**Email:** [hckuo@faculty.nctu.edu.tw](mailto:hckuo@faculty.nctu.edu.tw)



- 22. Chapter Name: Magnetics Society Taipei Chapter (MAG33)**  
**Chapter Chair:** Chih-Huang Lai  
**Title and Affiliation:** Professor, Department of Materials Science and Engineering,  
National Tsing Hua University  
**Email:** [chlai@mx.nthu.edu.tw](mailto:chlai@mx.nthu.edu.tw)
- 23. Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)**  
**Chapter Chair:** Chin-Chun Meng  
**Title and Affiliation:** Professor, Department of Electrical and Computer Engineering ,  
National Chiao Tung University  
**Email:** [ccmeng@mail.nctu.edu.tw](mailto:ccmeng@mail.nctu.edu.tw)
- 24. Chapter Name: Oceanic Engineering Society Taipei Chapter (OE22)**  
**Chapter Chair:** Forng-Chen Chiu  
**Title and Affiliation:** Professor, Department of Engineering Science and Ocean  
Engineering, NTU and Director, National Center for Ocean Research (Preparatory  
Office), NARL  
**Email:** [fcchiu@ntu.edu.tw](mailto:fcchiu@ntu.edu.tw)
- 25. Chapter Name: Power Engineering Society Taipei Chapter (PE31)**  
**Chapter Chair:** Yang Jun-Zhe  
**Title and Affiliation:** Associate Professor, Department of Electrical Engineering, I-Shou  
University  
**Email:** [jzyang@isu.edu.tw](mailto:jzyang@isu.edu.tw)
- 26. Chapter Name: Product Safety Engineering Society Taipei Chapter (PSE43)**  
**Chapter Chair:** Maxi Tsai  
**Title and Affiliation:** Engineering Manager, Underwriters Laboratories Taiwan Co., Ltd.  
**Email:** [Maxi.Tsai@tw.ul.com](mailto:Maxi.Tsai@tw.ul.com)
- 27. Chapter Name: Robotics & Automation Society Taipei Chapter (RA24)**  
**Chapter Chair:** Chieh-Chih (Bob) Wang  
**Title and Affiliation:** Associate Professor, Department of Computer Science &  
Information Engineering, National Taiwan University  
**Email:** [bobwang@csie.ntu.edu.tw](mailto:bobwang@csie.ntu.edu.tw)
- 28. Chapter Name: Reliability Society Taipei Chapter (RL07)**  
**Chapter Chair:** Shih-pyng Shieh  
**Title and Affiliation:** Professor and Director of National Chiao Tung University  
**Email:** [ssp@cs.nctu.edu.tw](mailto:ssp@cs.nctu.edu.tw)

- 29. Chapter Name: Sensors Council Taipei Chapter (SEN39)**  
**Chapter Chair:** Hsiao-Wen Zan  
**Title and Affiliation:** Professor, Department of Photonics Institute of EO Engineering  
Institute of Display, National Chiao Tung University  
**Email:** [hsiaowen@mail.nctu.edu.tw](mailto:hsiaowen@mail.nctu.edu.tw)
- 30. Chapter Name: Systems, Man & Cybernetics Taipei Chapter (SMC28)**  
**Chapter Chair:** Yo-Ping Huang  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taipei  
University of Technology  
**Email:** [yphuang@ntut.edu.tw](mailto:yphuang@ntut.edu.tw)
- 31. Chapter Name: Systems, Man & Cybernetics Taichung Chapter (SMC28)**  
**Chapter Chair:** Ching-Chih Tsai  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Chung  
Hsing University  
**Email:** [cctsai@nchu.edu.tw](mailto:cctsai@nchu.edu.tw)
- 32. Chapter Name: Signal Processing Society Taipei Chapter (SP01)**  
**Chapter Chair:** Ti-hao Chiang  
**Title and Affiliation:** Professor, Electronics Engineering, National Chiao Tung  
University  
**Email:** [tchiang@mail.nctu.edu.tw](mailto:tchiang@mail.nctu.edu.tw)
- 33. Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)**  
**Chapter Chair:** Tai-Cheng Lee  
**Title and Affiliation:** Professor, Department of Electrical Engineering, National Taiwan  
University  
**Email:** [tlee@cc.ee.ntu.edu.tw](mailto:tlee@cc.ee.ntu.edu.tw)
- 34. Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**  
**Chapter Chair:** Phone Lin  
**Title and Affiliation:** Professor, Computer Science & Information Engineering, National  
Taiwan University  
**Email:** [plin@csie.ntu.edu.tw](mailto:plin@csie.ntu.edu.tw)

- Number of Active Chapters (Chapters who have reported required number of meetings during the year)

1. **Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**

Three meeting reports have been submitted to IEEE. They are listed below.

i. **IEEE BigData 2014 Taipei Satellite Session**

Date: May 28-30, 2014

Location: National Taipei University of Technology, Taipei, Taiwan

Attendance: Member: 20, Guests 80

The IEEE BigData 2014 Taipei Satellite Session focuses on the Big Data Applications and Use Cases. The major topics include but are not limited to: Big Data Architecture, Big Data Modeling, Big Data As A Service, Big Data for Vertical Industries, Big Data Analytics, Big Data Toolkits, Big Data Open Platforms, Economic Analysis, Big Data for Enterprise Transformation, Big Data in Business Performance Management, Big Data for Business Model Innovations and Analytics, Big Data in Enterprise Management Models and Practices, Big Data in Government Management Models and Practices, and Big Data in Smart Planet Solutions. The Taipei Satellite Session will be in the format of 2 days' research paper presentations and panel discussions as well as 1 day's site visits to selected high-tech companies and research projects in big data applications for exploring potential research cooperation in Taipei.

The IEEE BigData 2014 Taipei Satellite Session was held in Taipei, in the north of Taiwan. This city is a vibrant blend of traditional culture and cosmopolitan life. The conference venue is located in the 3rd Lecture Hall, Complex Building, National Taipei University of Technology, near the railway station and business district.

ii. **The Trends of Antenna Technology**

Date: Nov. 19, 2014

Location: National Taipei University of Technology, Taipei, Taiwan

Attendance: Member: 10, Guests 80

Speaker: Dr. Chia-Luan Tang, Chief Technology Officer, Auden Techno Corp.

In recent years, mobile communication requires a handheld mobile device to function on multiple communication systems which has made the multiband mobile antenna increasingly important. In view of the growth of consumer demands for speed and bandwidth, the fourth generation of long-term evolution (LTE) mobile communication technology has been developed. However, the requirement for lower and wider frequency bands has increased the difficulty of antenna design. In this talk, we will introduce the current and future trends of antenna technology which include antenna process technology, compact antenna design, smart antenna development, regulatory requirements and so on.

iii. **Introduction to RF Circuit Design**

Date: Nov. 26, 2014

Location: National Taipei University of Technology, Taipei, Taiwan

Attendance: Member: 10, Guests 80

Speaker: Dr. Bin-Chyi Tseng, Manager, ASUSTEK COMPUTER INC.

With the rapid development of electronic products recent years, data communication system are increasingly demanding high operating frequency, data transmission rate, capacity and complexity. That results the complex print circuit layouts to induce the electromagnetic effect. Problems arising from electromagnetic effects have seriously affected the product quality, the efficiency and the technical performance of the system. The good electronic products, in addition to the product itself superior features, the circuit layout design should take into the consideration the electromagnetic compatibility.

In this talk, we will introduce the development of RF circuit design, describe the current status of the development of electronic products, as well as possible future development direction of mobile communication.

## 2. Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)

Total number of Chapters in the Section: 280

Number of Chapters formed in the current year: 5

Number of Active Chapters

(Chapters who have reported required number of meetings during the year): 5

Summary of Chapter activities chapter wise with attachment table / information:

Date	Chapter Member attendees	External Guests	Activities			
			Administrative	Technical *	Educational	Rank*
Apr. 30, 2014	8	28		Distinguished Lecture by Prof. Huawei Li titled "Exploring approximate computing for PCM lifetime reliability"		3
Mar~May,2014	30	1331	Support National Collegiate IC Design Contest			3
July. 28-29, 2014	16	62		2014 summer school on the smart sensing electronics systems		3
Aug. 6, 2014	60		Annual meeting of IEEE Taipei CAS Chapter			2
Oct. 21, 2014	12	33		Taiwan-Japan Summer Visiting Program		3

**i. 2014/04/30 IEEE CASS Taipei Chapter Invited Talk 1 in National Central University, Zhongli, Taiwan**

- Title: Exploring approximate computing for PCM lifetime reliability
- Speaker: Prof. Huawei Li(State Key Laboratory of Computer Architecture, Institute of Computing Technology, Chinese Academy of Sciences )
- Number of attendees: 36

**Evaluation by Attendees:Excellent**

**Self-Evaluation by the Chapter Officers:Excellent**

This lecture was given by Prof. Li with the topic addressing the state-of-art developments of PCM lifetime reliability. We are satisfied with the technical materials of the lecture and pleased to receive the affirmative responses from the audience.

**ii. 2014/03/21, 4/30-5/2 National Collegiate IC Design Contest,**

- co-sponsored by IEEE CASS Taipei Chapter
- Number of attendees: 1361

**Evaluation by Attendees: Excellent**

Most professors, and their students as well, have considered this contest a flagship one and devote themselves to win the competitions. This is also a contest receives wide spread recognitions from the industry and many top notched contestants are recruited because of their winning records.

**Self-Evaluation by the Chapter Officers: Excellent**

This year, we expect more than 10 prize-winning students from the contest will join the CASS Taipei chapter. We consider this as a very effective way to recruit fine student members and will continue our commitments to this activity in the future.

**iii. 2014/7/28-29 IEEE CASS Taipei Chapter Summer School on the smart sensing electronics systems in National Chiao Tung University, Hsinchu, Taiwan**

- Topic1: Wireless 5G: Why, How and What? And Where Are the Opportunities for Us?  
Speaker: T.Russell Hsing Chair Professor(National Chiao Tung University)
- Topic2: Internet of Things and Wireless Sensor Networks  
Speaker: Jang-Ping Sheu Chair Professor(National Tsing Hua University)
- Topic3: From Smart Camera to Smart Image Sensor Circuits, Architectures and Applications  
Speaker: Fei Qiao Associate Professor(Tsinghua University)
- Topic4: Sensing and Sensor Network for Bridge Structural Health Monitoring  
Speaker: Huazhong Yang Professor(Tsinghua University)

**Evaluation by Attendees: Excellent**

**Self-Evaluation by the Chapter officers: Excellent**

The event successfully attracted 78 participants from different universities in Taiwan, which is higher than the initial expectation. Most participants agreed that such a summer school could provide a valuable opportunity for students, early-stage researchers and young scholar in the CAS society for a jump start in the smart sensing research. This summer school also served as an arena for the new comers to get acquaintance with the established experts and for those researchers to communicate their research results.

**iv. 2014/8/7 IEEE CASS Taipei Chapter annual meeting at Taichung, Taiwan**

- Chair: Prof. Pei-Yun Tsai
- Number of attendees: 60

**Evaluation by Attendees: Very Good**

**Self-Evaluation by the Chapter Officers: Very Good**

The event successfully attracted about 60 members from different universities in Taiwan. Most participants agreed that such an annual meeting could provide a valuable opportunity for members to understand the activities in this chapter and meet with other members in this field.

v. **2014/10/21 IEEE CASS Taipei Chapter Taiwan-Japan Summer Visiting**

**Program in National Central University, Zhongli, Taiwan**

- Interviewer: Prof. Yoshifumi NISHIO (University of Tokushima)
- Synchronizations in Coupled Chaotic Circuits Containing Delay Coupling(Naoto Kageyama , UOT)
- A Low Supply Voltage Synchronous Mirror Delay with Quadrature Phase Output(Yo-Hao Tu , NCU)
- Synchronization Phenomena in Different Sizes of Rings of Coupled Oscillators(Honami Kume , UOT)
- A High-Efficiency Digitally Controlled Current-Mode DC-DC Buck Converter with Wide-Load Regulation(Yang-Chieh Ou, NCU)
- Investigation of Cellular Neural Networks with Updating Template by Using Reinforcement Learning(Kazushige Natsuno , UOT)
- The Study of Robotics(Hao- Gong Chou, NCU)
- Number of attendees:45

**Evaluation by Attendees: Excellent**

**Self-Evaluation by the Chapter Officers: Excellent**

The event successfully attracted 45 participants in Taiwan to interact with 4 visitors from Japan. Students from Japan and Taiwan briefly present their current research and discuss with each other. Most participants agreed that such a visiting program could provide a valuable opportunity for students and young scholar in the CAS society to have some experience on international activities and extend their vision about the research activities in different countries. This visiting program also provides an opportunity for young scholar to establish the connection with the established experts in other country

3. **Chapter Name: Communications Society Taipei Chapter (COM19)**

Five meeting reports have been submitted to IEEE. They are listed below.

- 01/23/2014~01/24/2014  
*2014 Spring Workshop on Information Theory & Communications, Kaohsiung, Taiwan*  
Activity: Seven invited speakers delivered seven speeches  
Attendance: Members 154, Guests 252  
Homepage: <http://www.2014itcom.nknu.edu.tw/>
- 02/18/2014~02/20/2014  
*IEEE ComSoc Distinguish Lecture – by Dr. George Chrisikos*  
Activity: Invited speaker delivered speech  
Attendance: Members8, Guests 50
- 05/27/2014~05/30/2014  
*IEEE ComSoc Distinguish Lecture – by Prof. Nei Kato*  
Activity: Invited speaker delivered speech  
Attendance: Members9, Guests 80
- 08/04/2014~08/08/2014  
*2014 Summer School on Information/Communication Theory and Technologies*  
Activity: Nine lectures on communications theory by nine invited speakers  
Attendance: Members 30, Guests 130  
Homepage:  
<http://140.113.13.93/IEEE/wireless/com/2014SummerSchool/index.html>
- 08/21/2014~08/22/2014  
*2014 Fall Workshop on Information Theory & Communications, Taipei, Taiwan*  
Activity: Seven invited speakers delivered seven speeches  
Attendance: Members 77, Guests 192  
Homepage: <http://itcom14f.csie.ntut.edu.tw/index.php>

4. **Chapter Name: Council on Electronic Design Automation Society Taipei Chapter (CEDA44)**

IEEE CEDA Taipei Chapter supported the following activities in 2014:

● 2 Chapter Meetings

No	Date	Venue
1	August 8, 2014	Fullon Hotel Yammy, Taichung, Taiwan
2	December 6, 2014	Aspire Resort, Taoyuan, Taiwan

● 8 Seminars

No	Title	Speaker	Date	Venue
1	Compiler Optimization for GPU Computing	Prof. Deming Chen, University of Illinois at Urbana-Champaign, USA	March 27, 2014	ED-528, National Chiao Tung University, Hsinchu, Taiwan
2	Improving Gate-level Simulation Accuracy when Unknowns Exist	Dr. Kai-Hui Chang, Avery Design Systems, USA	April 8, 2014	CSEE-447, National Tsing Hua University, Hsinchu, Taiwan
3	Stochastic Simulation, Modeling & Optimization of Complex Systems via Parameterized Model Reduction	Prof. Luca Daniel, Massachusetts Institute of Technology, USA	April 29, 2014	ED-528, National Chiao Tung University, Hsinchu, Taiwan
4	Analog Layout Synthesis –from Concepts to Solutions	Prof. Mark Po-Hung Lin, National Chung Cheng University, Taiwan	May 9, 2014	CSEE-447, National Tsing Hua University, Hsinchu, Taiwan
5	Run-time Performance Adaptation with Field Delay Testing – How can we verify in design time?	Prof. Masanori Hashimoto, Osaka University, Japan	August 11, 2014	EC-345, National Chiao Tung University, Hsinchu, Taiwan
6	Delay Estimation Method for Correlated Net Delay Variations	Prof. Yasuhiro Takashima, University of Kitakyushu, Japan	October 20, 2014	CSEE-224, National Tsing Hua University, Hsinchu, Taiwan
7	VLSI EDA 2.0: Life past Moore as we await the Nano Savior	Dr. Sani Nassif, President of IEEE CEDA, CEO of Radyalis, Texas, USA	November 10, 2014	BL-112, National Taiwan University, Taiwan

8	Learning Embedded System Design with PSoC	Dr. Chen-Huan Chiang, Bell Labs, Alcatel-Lucent, USA	November 14, 2014	Delta-613, National Tsing Hua University, Hsinchu, Taiwan
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● 2 EDA Forums

No	Date	Venue
1	May 2, 2014	ED-528, National Chiao Tung University, Hsinchu, Taiwan
2	October 17, 2014	ED-528, National Chiao Tung University, Hsinchu, Taiwan

● 1 Symposium and 1 Workshop

No	Event	Date	Venue
1	VLSI Design/CAD Symposium	August 5-8, 2014	Fullon Hotel Yammy, Taichung, Taiwan
2	EDA Workshop	December 6-7, 2014	Aspire Resort, Taoyuan, Taiwan

5. **Chapter Name: Education Society Taipei Chapter (E25)**

Two meeting reports have been submitted to IEEE. They are listed below.

i. **Taiwan micromouse and intelligent robot contest**

Date: Jun. 01, 2014

Location: Lunghwa University of Science and Technology

Attendance: Member: 3, Guests 50

-workshop for vocational university and senior high school students

Topic : Experiences in building micromouse and line maze robot

Speaker : Ching-Chia Chang

ii. **Discussions about mobile robot contests and building experiences**

Date: Nov. 22, 2014

Attendance: Member: 1, Guests 10

-A short meeting with participants of 35th All Japan micromouse and robotrace contests for experiences sharing and problem solving techniques in micromouse and robotracers.

Topic : Experiences sharing and problem solving techniques in micro mouse and robotracers

Speaker : Juing-Huei Su



**6. Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**

In 2014, EMC Taipei Chapter held and sponsored four activities as follows:

- i. 2014 Biomedical Electronics EMC Workshop on May 23, 2014;
- ii. Design and Testing of New-Generation Wireless-Communication and Wearable Devices Conference on June 17, 2014;
- iii. 2014 Taiwan EMC Technology and Practice Symposium on Jun. 26-27, 2014;
- iv. New Technologies of Signal Integrity and Electromagnetic Compatibility in Cloud Era Workshop on Aug. 12, 2014.

**7. Chapter Name: Electron Devices Society Taipei Chapter (ED15)**

- 4/28/2014- 4/30/2014  
International Symposium on VLSI-TSA  
Attendance: Members 150, Guests 350  
Activities: 3 keynote talks, 59 contributed paper presentations, one-day short course
- 4/23/2014  
FinFETs and Layered Semiconductor MOSFETs for Future CMOS Applications  
Attendance: Members 25, Guests 35  
Activities: invited talk
- 5/20/2014  
Metal Oxide Resistive Switching Random Access Memory (RRAM) – Modeling, Scaling, and 3D Integration  
Attendance: Members 20, Guests 30  
Activities: invited talk
- 5/23/2014  
Memristor Crossbar Sneak Path Problem: Challenges and Solutions  
Attendance: Members 20, Guests 20  
Activities: invited talk
- 9/6/2014  
e-Manufacturing & Design Collaboration Symposium  
Attendance: Members 20, Guests 130  
Activities: Technical co-sponsorship
- 11/17/2014  
Nanoscale FETs and Other Novel Functional Devices based on the low dimensional structures  
Attendance: Members 20, Guests 80  
Activities: Invited talk
- 12/30/2014  
The Development and Challenges of Nonvolatile Memory with Focus on CBRAM switching Mechanism  
Attendance: Members 25, Guests 70  
Activities: DL talk

8. **Chapter Name: Instrumentation & Measurement Society (IM09)**

One of the merits granted to the chapter members is free or discounted admission to the chapter activities, which are listed below in chronological order.

i. **International Instrumentation and Measurement Technology Conference  
(I<sup>2</sup>MTC, May 12 – 15, Montevideo, Uruguay)**

ii.

Category	Symposium (technical)
Title	Olympus MEMS devices for Microscopy
Speaker	Dr. Hiroshi Miyajima ( <i>Olympus, Tokyo, Japan</i> )
Date	January 6, 2014
Attendance	20

iii.

Category	Symposium (technical)
Title	Nanomanufacturing of multifunctional surfaces
Speaker	Prof. George Barbastathis ( <i>Singapore-MIT Alliance for Research and Technology Centre</i> )
Date	January 16, 2014
Attendance	25

iv.

Category	Symposium (non-technical)
Title	Future Trends – Cognitive Computing Systems Interacting with the Real World
Speaker	Professor Norman C. Tien ( <i>Dean of the Faculty of Engineering / Chair Professor of Microsystems Technology, University of Hong Kong</i> )
Date	February 6, 2014
Attendance	30

v.

Category	Symposium (non-technical)
Title	Publishing a good scientific paper
Speaker	Professor Dr. Subhas Mukhopadhyay ( <i>Massey University, New Zealand / IEEE Fellow</i> )
Date	October 31, 2014
Attendance	20

vi.

Category	Innovation Competition <i>*Annual Featured Activity</i>
Title	6 <sup>th</sup> <i>i</i> -ONE International Instrument Technology Innovation Competition
Place	Hsinchu, Taiwan
Date	November , 2014
	<p>The 6<sup>th</sup> <i>i</i>-ONE International Instrument Technology Innovation Competition was jointly held by the IEEE Instrumentation and Measurement Society Taipei Section Chapter and the Instrument Technology Research Center of Taiwan. This competition awarded the best innovator of ground breaking ideas on instrumentation and measurement technology with the maximum prize of NTD 100,000 (around USD 3335). It was firstly held in year 2009 which registered by nearly 100 participants and grabbed the attention and sponsorship from several world-class companies, such as National Instruments, Agilent Technologies, Isuzu Optics, etc.</p> <p>This innovation competition, perceived by many local students as the channel to boost their academic portfolio, continued to the second year with slight transformation. Concentrated as a competition purely for students, this competition aimed to lighten the importance of innovation from the threshold and advocate instrumentation and measurement from an earlier stage.</p> <p>The committee set upon the 6<sup>th</sup> <i>i</i>-ONE International Instrument Technology Innovation Competition included 20 invited members of former deputy ministers of the biggest funding agency of Taiwan, department heads and professors from universities, and representatives from industries. Three chapter officers jointly served as the committee members.</p> <p>After eight months of preparation, registration, and preliminary competition, 10 proposals from two groups (youth and amateur) were selected to the final competition. Representatives of the selected proposals were required to present their ideas with slides and demonstrate the prototypes, if there's any, to the reviewers and peer contestants.</p> <p>The winners were announced and presented at the award ceremony on Nov. 27. The committee and the chapter this year had honorably invited the President of IEEE, Prof. Reza Zoughi, and the Conference Board Chair, Mr. Max Cortner, to attend the award ceremony and relevant spin-off activities.</p> <p>Prof. Zoughi gave an inspiring speech to all the audience and encouraged the participants to keep on what they are pursuing and believe in themselves that one day they shall become significant models in the field. Prof. Zoughi and Mr. Cortner presented awards to the winners and they all expressed their gratitude to this event for such a spectacular experience of showing their ideas, a chance for them to think more depth (theories) and width (applications) of an interesting idea sprung from nowhere.</p>

vii.

Category	Member Activity (non-technical)
Title	IMS Taipei Section Chapter Annual Meeting
Host	Prof. Reza Zoughi & Mr. Max Cortner( <i>IEEE Instrumentation &amp; Measurement Society</i> )
Date	November 27, 2014
Attendance	20

viii.

Category	Member Activity (non-technical)
Title	2016 I <sup>2</sup> MTC Working Group Meeting
Host	Prof. Reza Zoughi & Mr. Max Cortner( <i>IEEE Instrumentation &amp; Measurement Society</i> )
Date	November 27, 2014
Attendance	10

ix.

Category	Workshop (technical)
Title	NAMIS Workshop
Outline	NEMS meets Bio/molecular engineering; there're plenty of things to do in the middle <i>Prof. Beomjoon Kim (University of Tokyo, Japan)</i>
	III-V compound semiconductor quantum nanodisk optical devices <i>Prof. Akio Higo (Tohoku University, Japan)</i>
	Sensing of Touch <i>Prof. Kei Nakatsuma (Kumamoto University, Japan)</i>
	Sub-1G MEMS Inertial Sensor <i>Prof. Daisuke Yamane (Tokyo Institute of Technology, Japan)</i>
	Utilizing Nanotweezers for Biochemical Experiments <i>Mehmet Cagatay Tarhan (University of Tokyo, Japan)</i>
Date	December 19, 2014
Attendance	60

9. **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**

● Distinguished Lecturers 2014:

Speaker : Prof. Ron Jansen  
 Ø Topic: Silicon Spintronics  
 Ø Time: 3/10-3/13

Speaker : Professor Tim St Pierre  
 Ø Topic: Magnetic Materials in Medicine: Applications in Diagnosis, Management, and Treatment of Disease.  
 Ø Time: 4/13-4/16

Speaker : Professor Hans-Benjamin Braun

∅ Topic: Topological Effects in Nanomagnetism: From Perpendicular Recording to Monopoles

∅ Time: 6/22-6/24

Other Speakers:

Dr. K. Hono

∅ Topic: Materials for ultrahigh density magnetic recording

∅ Time: 10/24

Professor Min-Fu Hsieh

∅ Topic: Electric Motor Technology Research

∅ Time: 12/19

● Other Activities:

2014 IEEE Magnetic Taiwan Chapter Meeting

∅ Time: 6/24

2014 Taiwan Association Magnetic Technology Annual Meeting

∅ Time: 6/24

10. **Chapter Name: Reliability Society Taipei Chapter (RL07)**

Total number of Chapters in the Section

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

● 03/04/2014

The Technical Lecture

Attendance: Members 15, Guests 120

Title: (1) Testing Software Apps and Software Testing Theory

(2) The Tenets of Trust in Internet of Things (IoT)

Speaker: Dr. Jeffrey Voas

● 03/05/2014

The Technical Lecture

Attendance: Members 10, Guests 98

Title: Crypto in Bitcoin

Speaker: Prof. Chun-Ming Chen

● 05/07/2014

The Technical Lecture

Attendance: Members 8, Guests 85

Title: Smart Grid Communication Networks

Speaker: Prof. Hsiao-Hwa Chen

● 05/28/2014

The Technical Lecture

Attendance: Members 7, Guests 86

Title: Device Management: From Communication Devices to M2M Devices

Speaker: Dr. Ming Lai

● 06/04/2014

The Technical Lecture

Attendance: Members 8, Guests 91

Title: A Look at Mobile Computing Trend

Speaker: Dr. Kevin Jou

● 09/23/2014

The Technical Lecture

Attendance: Members 10, Guests 98

Title: Digital Microfluidic Biochips: Towards Hardware/Software Co-Design and Cyberphysical System Integration  
Speaker: Prof. Tsung-Yi Ho

- 09/30/2014  
The Technical Lecture  
Attendance: Members 8, Guests 89  
Title: Recreational Computer Graphics  
Speaker: Prof. Hung-Kuo Chu
- 10/07/2014  
The Technical Lecture  
Attendance: Members 10, Guests 97  
Title: The Internal Steiner Tree Problem: Hardness and Approximations  
Speaker: Prof. Sun-Yuan Hsieh
- 10/08/2014  
The Technical Lecture  
Attendance: Members 8, Guests 90  
Title: The Next Chapter of ICT Research  
Speaker: Dr. Tzi-cker Chiueh
- 10/23/2014  
The Technical Lecture  
Attendance: Members 10, Guests 96  
Title: CROSSING - Cryptography-based security solutions: enabling trust in present and future security environments  
Speaker: Prof. Johannes A. Buchmann
- 11/27/2014  
The Technical Lecture  
Attendance: Members 6, Guests 85  
Title: Andes -- Transforming Heterogeneous Networks for a Sustainable Future  
Speaker: Prof. Tony Q.S. Quek
- 11/28/2014  
The Technical Lecture  
Attendance: Members 9, Guests 89  
Title: Approximation Algorithms for Virtual Backbone in Wireless Sensor Network  
Speaker: Prof. Zhao Zhang
- 12/10/2014  
The Technical Lecture  
Attendance: Members 7, Guests 99  
Title: Lockfree kernels: the Holy Grail of modern systems design?  
Speaker: Prof. Jürg Gutknecht
- 12/18/2014  
The Technical Lecture  
Attendance: Members 9, Guests 102  
Title: Computer Systems Research at the University of North Texas  
Speaker: Prof. Krishna Kavi

11. **Chapter Name: Robotics & Automation Society (RA24)**

RA24:

On 2014/10/15, we invited Prof. Martial Hebert, the Director of the Robotics Institute at Carnegie Mellon University to deliver a talk entitled “Using 3D data for image interpretation and geometric reasoning” at the Research Center for Information Technology Innovation at Academic Sinica. During the break of the talk, we encouraged the participants including research assistants and graduate students to join IEEE and our robotics and automation society.

12. **Chapter Name: Sensors Council Society (SEN39)**

The major activities of the Sensors Council Society, Taipei Chapter in 2014 are as follows.

**IEEE Taipei Section Sensor Council (SEN39) Activity**

- i. In 2014, sensor council in IEEE Taipei Section hold two activities. One is the IEEE sensor council demonstration in the “laboratory show” of Tin-Ka-Pin Optoelectronic Week, held by Department of Photonics, NCTU. In the demonstration on 11<sup>th</sup> April 2014, we introduced sensor works from several different groups in NCTU. Students from Department of Electrical-Engineering showed the sensor circuit design. Students from Institute of Electro-Optical Engineering showed the biosensor based on surface enhanced plasma effect and on photonic crystal devices. Students from Institute of Physics showed the breath analysis by using solid-state sensors. The activities attracted undergraduate students as well as graduate students in NCTU. We also put a poster to promote IEEE Sensor Council and the student member benefit in IEEE Taipei Section. The photo is as follows.
- ii. The other activity is the “1<sup>st</sup> CosiFlex Workshop” on 30<sup>th</sup> Sept. and on 1<sup>st</sup> Oct. 2014 in NCTU. The workshop was formed by Asso. Prof. Thilo Sauter (IEEE Fellow) from Danube University Krems, Prof. Paul C. Chao from NCTU, and Prof. Hsiao-Wen Zan from NCTU. Prof. Sauter’s group members, Dr. Harald Steiner, Dr. Wilfried Hortschitz and Mr. Andreas Kainz from Vienna University of Technology also joined the workshop to give a brief talk to introduce their work on integrated Optical-MEMS vibration sensor. Students in NCTU joined the workshop to learn knowledge about MEMS sensors. Also, NCTU teams (Prof. Paul Chao and Prof. Hsiao-Wen Zan) introduced their work on sensor circuit design and on proximity sensors. The photo with visitors and professors is as follows.

13. **Chapter Name: Signal Processing Society Society Taipei Chapter (SP-01)**

i. **Current chairman report summary**

The Signal Processing society has a few key events in the year 2014

- The Signal Processing Society Taipei Chapter co-sponsored the 2014 IEEE “2014 IEEE SPS summer school on IoT and M2M” summer school on August 26-29 at the National Taiwan University in Taipei.
- The Taipei chapter hosted Signal Processing Society sponsored two MPEG resource sharing programs in May and September, 2014. The goal is to share the most recent development of the MPEG committee standardization efforts by the attending professors from National Chiao Tung University and National Cheng Kung University. The main topics are 3D video coding and High Efficiency video coding, which are the next two major video coding standards.
- The Signal Processing Society Taipei Chapter hosted the 2014 distinguished lecture program by Prof. Mauro Barni on September 30 at the National Tsing-hua University in Hsinchu.

ii. **2014 Detail Activities Report**



## 2.1 Signal Processing summer school on IoT and M2M

The signal processing society sponsored the IEEE “2014 IEEE SPS summer school on IoT and M2M” summer school at Taiwan University in Taipei. The program is held in National Chiao Tung University from August 26th to August 29th, 2014.

There has been a great deal of interest in the machine-to-machine (M2M) systems and Internet-of-Things (IoT) recently. Billions of M2M devices are expected to be connected and a major portion of them are through wireless media. M2M communication is expected to open doors for new types of applications and services that include smart metering, telemetry, surveillance, healthcare, transportation, utilities, and remote maintenance and control.

Smart Machine-to-Machine systems and IoT are the key technologies to enable applications that involved in interacting with a large number of devices. An increasing number of researchers are working to create better technologies for machine-to-machine and IoT systems. Signal processing will play a critical role in the advance of the smart IoT and M2M technologies. Signal processing is essential for ubiquitous information sensing and collection. Advanced signal processing techniques improve M2M communications capability. Distributed signaling processing techniques provide opportunities for scalable IoT solutions. Video signal processing enables multimedia IoT and surveillance. Statistical signaling processing enables information forensic and data analytics to handle the large amount of available information in IoT world. In this summer school, the lecturers will covers various aspects of signal processing M2M systems, and IoT applications.

Session	Lecturer	Title
<b>August 26 (Tuesday), 2014</b>		
13:15 - 13:30		Reception
13:30 - 14:00	<a href="#">Hung-Yu Wei</a>	Opening
14:00 - 17:20	<a href="#">Jianwei Huang</a>	<a href="#">Wireless Network Economics and Games</a>
<b>August 27 (Wednesday), 2014</b>		
09:00 - 12:20	<a href="#">Antonio Iera</a>	<a href="#">Convergence of IoT and Social Networks Issues</a>
13:30 - 16:50	<a href="#">Joseph Teo Chee Ming</a>	<a href="#">Security, Privacy and Trust in IoT and M2M</a>
<b>August 28 (Thursday), 2014</b>		
09:00 - 12:20	<a href="#">Mahmoud Daneshmand</a>	<a href="#">IoT/M2M Big Data Analytics: from Static to Streaming data</a>
13:30 - 16:50	<a href="#">Chee Wei Tan</a>	<a href="#">Optimization and Inference for Cyber Security in Complex Engineered Networks</a>
<b>August 29 (Friday), 2014</b>		
09:00 - 12:20	<a href="#">Anna Scaglione</a>	<a href="#">Sensor Networking and Decentralized Signal Processing for Energy Management</a>
13:30 - 16:50	<a href="#">Yen-Kuang Chen</a> <a href="#">Shao-Yi Chien</a>	<a href="#">Distributed Video Signal Processing for Internet-of-Things</a>

## 2.2 MPEG Resource Sharing Program

The Taipei chapter hosted four Signal Processing Society sponsored MPEG resource sharing program meetings in May and September, 2014. The goal is to share the most recent development of the MPEG committee standardization efforts by the attending professors from National Chiao Tung University and National Cheng Kung University. The main subjects are 3D video coding and High Efficiency video coding, which are the next two major video coding standards.

The main speakers are Professor Hsueh-Ming Hang (National Chiao Tung University), Professor Wen-Hsiao Peng (National Chiao Tung University) and G.-G. Lee (National Cheng Kung University). Professor Peng focuses on the High Efficiency video coding (H.265), which is scheduled to replace H.264 as

the next video coding standard. Professor Hang and Professor Lee focuses on the 3D video coding, which is to become the future standard for 3D TV and other related applications. The resource sharing program meets four times a year with up-to-date information for both academia and industry.

### 2.3 IEEE Distinguished Lecturer Program

The Taipei chapter hosted IEEE Distinguished Lecturer Program on September 30th, 2014.

Speaker: Prof. Mauro Barni

Time: 10:00~11:30

Place: National Tsing-hua University, Room 919.

Talk title: Multimedia Forensics: a game theoretic approach

Abstract: Multimedia forensics (MF) is a new discipline aiming at collecting evidence about the past history of multimedia documents, including the identification of the source of the document, the distinction between computer generated and natural images, the detection of traces left by the application of certain processing tools like resampling or JPEG compression, the modification of the semantic content of the document through cut and paste or copy-move operations. Early works did not consider the presence of an adversary aiming at impeding the forensic analysis; as a result most techniques do not work properly if some simple countermeasures (collectively referred to as anti-forensic techniques) are taken. In an attempt to re-establish the validity of forensic analysis, researchers have started building new tools to detect the traces left by anti-forensic algorithms. It is evident that any attempt to improve the forensic analysis will be accompanied by a dual effort to devise more powerful anti-forensic techniques that leave less and less evidence into the forged documents. While this is an unavoidable and possibly virtuous loop that will finally lead to more powerful forensic and anti-forensic tools, the need to investigate the ultimate limits of forensic analysis clearly exists. It is the goal of this talk to review some recent results that by relying on a bunch of disciplines including game-theory, hypothesis testing and information theory have started laying the basis for a rigorous theory of MF in which the presence of an adversary is explicitly taken into account.

Speaker Bio:

Mauro Barni graduated in electronic engineering at the University of Florence in 1991. He received the PhD in informatics and telecommunications in October 1995. He has carried out his research activity for almost 20 years first at the Department of Electronics and Telecommunication of the University of Florence, then at the Department of Information Engineering of the University of Siena where he works as associate Professor. During the last decade, his activity has focused on digital image processing and information security, with particular reference to the application of image processing techniques to copyright protection and authentication of multimedia (digital watermarking). Lately he has been studying the possibility of processing signals that has been previously encrypted without decrypting them (signal processing in the encrypted domain –s.p.e.d.). He is author/co-author of about 230 papers published in international journals and conference proceedings, and holds three patents in the field of digital watermarking.

#### 14. **Chapter Name: Solid-State Circuits Society Taipei Chapter (SSCS37)**

**The major activities of the Reliability Society, Taipei Chapter in 2014 are as follows.**

- Sustainable Silicon: Energy-Efficient, Self-Aware Microsystems
  - Speaker: Prof. Patrick Chiang(Oregon U)
  - Time: 2013/11/18
  - Place : National Taiwan University
- The Next Wave of Mixed-Signal Interface Electronics
  - Speaker: Prof. Boris Murmann (Stanford U)
  - Time: 2013/12/2

- Place : National Chiao-Tung University
- Low-noise fractional-N frequency synthesizer using reference multiplication and high-resolution time-to-digital converter using time-domain arithmetic circuits
  - Speaker: Prof. SeongHwan Cho (KAIST)
  - Date: 2014/07/24
  - Place: National Taiwan University
  -
- Energy Efficient SAR-Type ADC Design - Trends and Techniques (SSCS Distinguished Lecturer Talk)
  - Speaker: Prof. Seng-Pan U (Ben) (U. of Macau)
  - Date: 2014/07/28
  - Place: National Taiwan University
- An RF Receiver Architecture for Intra-Band Carrier Aggregation/ RF channel selection
  - Speaker: Prof. Behzad Razavi (UCLA)
  - Date: 2014/09/24,25
  - Place: NCTU/National Taiwan University
- Workshop on Advanced VLSI Design Techniques
  - Speaker: Prof. Ikeda Makato (U of Tokyo) and Sugako Otani (Renesas)
  - Date: 2014/11/7
  - Place: National Taiwan University
- Meet with Masters on Solid-State Circuits (IEEE president talk)
  - Speaker: Bill Bidermann, Prof Jan Spiegel, Prof. Ken Smith
  - Date: 2014/11/13 morning
  - Place: National Taiwan University
- 2014 New Trends on Solid-State Circuits
  - Speaker: Prof. Peter Kinget, Prof. Wim Dehaene, Prof. Kenichi Okada
  - Date: 2014/11/13 afternoon
  - Place: National Taiwan University

15. **Chapter Name: Systems, Man, & Cybernetics Society Taipei Chapter (SMC28)**

**The major activities of the Systems, Man, & Cybernetics Society, Taipei Chapter in 2014 are as follows.**

1. SMC Taipei Chapter hosted ICME Int. Conf. on Complex Medical Engineering (CME 2014), Taipei, Taiwan, June 26-29, 2014. Participants: 212
2. SMC Taipei Chapter helped host IEEE Int. Conf. on Systems, Man, and Cybernetics (IEEE SMC2014), San Diego, CA, USA, Oct. 5-8, 2014. Participants: 900
3. SMC Taipei Chapter helped host 2014 Int. Conf. on Fuzzy Theory and its Application, Kaohsiung, Taiwan, Nov. 26-28, 2014. Participants: 130
4. SMC Taipei Chapter helped host The 22nd National Conf. on Fuzzy Theory and its Application, Kaohsiung, Taiwan, Nov. 26-28, 2014. Participants: 130
5. SMC Taipei Chapter organized 2014 IEEE SMC Celebration Lecture Series, Taipei, Taiwan, Apr. 14, 2014. Participants: 100

16. **Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**

During the year of 2014, IEEE VTS Taipei chapter has held and/or sponsored the following activities:

**1. Date 01/03/2014**

Event: *Speech*

Title: *Network Localization and Navigation*  
 Speaker: Prof. Moe Win, MIT, USA  
 Location: National Taiwan University, Taipei, Taiwan  
 Category: Technical  
 (Event information is attached in the end of the report, labeled by ATT 1.)

**2. Date 02/19/2014**

Event: Speech  
 Title: *Traffic Management and Spectrum Aggregation in Mobile Broadband*  
 Speaker: Dr. George Christos, Qualcomm, San Diego, USA  
 Category: Technical  
 Location: National Taiwan University, Taipei, Taiwan  
 (Event information is attached in the end of the report, labeled by ATT2.)

**3. Date 05/29/2014**

Event: Speech  
 Title: *D2D: Research Trend and Future Perspective*  
 Speaker: Prof. Nei Kato, Tohoku University, Sendai, Japan  
 Category: Technical  
 Location: National Taiwan University, Taipei, Taiwan  
 (Event information is attached in the end of the report, labeled by ATT3.)

**4. Date 07/17/2014**

Event: Speech  
 Title: *Control Your Privacy over Content Sharing in Geosocial Networks*  
 Speaker: Prof. Yuguang Mike Fang, University of Florida, USA  
 Category: Technical  
 Location: National Taiwan University, Taipei, Taiwan  
 (Event information is attached in the end of the report, labeled by ATT4.)

**5. Date 07/24/2014**

Event: Speech  
 Title: *Architectural Design for Collaborative Cognitive Radio Networks*  
 Speaker: Prof. Yuguang Mike Fang, University of Florida, USA  
 Category: Technical  
 Location: National Tsing Hua University, Hsinchu, Taiwan  
 (Event information is attached in the end of the report, labeled by ATT5.)

**6. Date 07/25/2014**

Event: Speech  
 Title: *Architectural Design for Collaborative Cognitive Radio Networks*  
 Speaker: Prof. Yuguang Mike Fang, University of Florida, USA  
 Category: Technical  
 Location: National Cheng Kung University, Tainan, Taiwan  
 (Event information is attached in the end of the report, labeled by ATT6.)

**7. Date 08/05/2014**

Event: Speech  
 Title: *ZF Beamforming for MISO Interference Channels without Crosstalk CSI*  
 Speaker: Prof. Kai-Kit Wong, University College London, United Kingdom  
 Category: Technical  
 Location: EC 6011, National Sun Yat-Sen University, Kaohsiung, Taiwan

**8. Date 08/26/2014**

Event: Speech  
 Title: *Relaying and Cognitive Radio for Wireless Communications*  
 Speaker: Prof. Jae Hong Lee, Seoul National University, South Korea  
 Category: Technical  
 Location: National Taiwan University, Taipei, Taiwan  
 (Event information is attached in the end of the report, labeled by ATT7.)

**9. Date 08/28/2014-08/29/2014**

Event: IEEE APWCS (Asia Pacific Wireless Communications Symposium) 2014  
 Category: Technical, International Conferences Co-Sponsored by IEEE VTS Taipei

Location: Ken-Ting YOHO Resort, Ping-Tung, Taiwan  
(Event information is attached in the end of the report, labeled by ATT8.)

**10. Date 10/13/2014**

Event: Speech  
Title: *Polarization Aspects in Wireless Communications*  
Speaker: Prof. Gordon Stuber, Georgia Institute of Technology, USA  
Category: Technical  
Location: National Taiwan University, Taipei, Taiwan  
(Event information is attached in the end of the report, labeled by ATT9.)

**11. Date 10/14/2014**

Event: Speech  
Title: *Polarization Aspects in Wireless Communications*  
Speaker: Prof. Gordon Stuber, Georgia Institute of Technology, USA  
Category: Technical  
Location: National Chiao Tung University, Hsinchu, Taiwan  
(Event information is attached in the end of the report, labeled by ATT10.)

**12. Date 11/12/2014**

Event: Panel Discussion  
Speaker: Prof. Kenneth C. Smith  
Category: Technical  
Location: EC6019, National Sun Yat-Sen University, Kaohsiung, Taiwan

**13. Date 12/25/2014**

Event: Speech  
Title: *Energy-Efficient Wireless Networks*  
Speaker: Prof. Morris Chang, Dept. of ECE, Iowa State University, USA  
Category: Technical  
Location: F6011, National Sun Yat-Sen University, Kaohsiung, Taiwan

**14. Date 1/12/2015**

Event: Speech  
Title: *Relaying and Cognitive Radio for Wireless Communications*  
Speaker: Prof. Jae Hong Lee,  
Department of Electrical and Computer Engineering, Seoul National University, Korea  
Category: Technical  
Location: Dept. of CSIE, National Cheng-Kung University, Tainan, Taiwan  
(Event information is attached in the end of the report, labeled by ATT11.)

#### B.4 Students Activities

- Total number of Student branches in the Section
- 1. **Student Branch Name: IEEE NCTU Student Branch (National Chiao Tung University)**  
Prepared by Bo-Cheng Lai (Student Branch Counselor)  
Student Branch Chair: Bing-Ru Wu  
Student Branch Counselor: Bo-Cheng Lai
- 2. **Student Branch Name: CE Society Student Branch Chapter at NCTU**  
Prepared by Ti-hao Chiang (Student Branch Counselor)  
Student Branch Chair: TBD  
Student Branch Counselor: Ti-hao Chiang
- 3. **Student Branch Name: EDS Society Student Branch Chapter at NCTU**  
Prepared by Tuo-Hung Hou (Student Branch Counselor)  
Student Branch Chair: E Ray Hsieh

Student Branch Counselor: Tuo-Hung Hou

4. **Student Branch Name: IEEE NTU Student Branch (National Taiwan University)**  
Prepared by Zhi-Jing Huang (Student Branch Chair)  
Student Branch Chair: Zhi-Jing Huang  
Student Branch Counselor: Yung-Jen Hsu
5. **Student Branch Name: IEEE NCU Student Branch (National Central University)**  
Prepared by Jen-Hao Chen (Student Branch Chair)  
Student Branch Chair: Wei Lee  
Student Branch Counselor: Jen-Inn Chyi
6. **Student Branch Name: IEEE YZU Student Branch (Yuan-Ze University)**  
Prepared by Tso-Jung Chang (Student Branch Chair)  
Student Branch Chair: Tso-Jung Chang  
Student Branch Counselor: Heng-Tung Hsu
7. **Student Branch Name: SMC Society Student Branch Chapter at YZU**  
Prepared by Ming-Hung Lin (Student Branch Chair)  
Student Branch Chair: Ming-Hung Lin  
Student Branch Counselor: Chih-Min Lin
8. **Student Branch Name: IEEE NTUST Student Branch (National Taiwan University Of Science & Technology)**  
Prepared by Yu-Chuan Chang (Student Branch Chair)  
Student Branch Chair: Yu-Chuan Chang  
Student Branch Counselor: Shyi-Ming Chen
9. **Student Branch Name: SMC Society Student Branch Chapter at NTUST**  
Prepared by Li-Wei Lee (Student Branch Chair)  
Student Branch Chair: Li-Wei Lee  
Student Branch Counselor: Shyi-Ming Chen
10. **Student Branch Name: IEEE NTOU Student Branch (National Taiwan Ocean University)**  
Prepared by Mu-Der Jeng (Student Branch Counselor)  
Student Branch Chair: TBD  
Student Branch Counselor: Mu-Der Jeng
11. **Student Branch Name: IEEE NTHU Student Branch (National Tsing Hua University)**  
Prepared by Shih-Fan Shan (Student Branch Chair)  
Student Branch Chair: Shih-Fan Shan  
Student Branch Counselor: Chih-Cheng Hsieh

**12. Student Branch Name: PELS Society Student Branch Chapter at NTHU**

Prepared by Ching-Ming Lai (Student Branch Chair)  
 Student Branch Chair: Ching-Ming Lai  
 Student Branch Counselor: Po-Tai Cheng

**13. Student Branch Name: EDS Society Student Branch Chapter at NTHU**

Prepared by Li-Chiang Chao (Student Branch Chair)  
 Student Branch Chair: Li-Chiang Chao  
 Student Branch Counselor: Chi-Gang Huang

**14. Student Branch Name: IAS Society Student Branch Chapter at NTHU**

Prepared by Chia-Tse Lee (Student Branch Chair)  
 Student Branch Chair: Chia-Tse Lee  
 Student Branch Counselor: Po-Tai Cheng

**15. Student Branch Name: IEEE NCHU Student Branch (National Chung Hsing University)**

Prepared by Ya-Ling Chang (Student Branch Chair)  
 Student Branch Chair: Ya-Ling Chang  
 Student Branch Counselor: Ching-Chih Tsai

**16. Student Branch Name: SMC Society Student Branch Chapter at NCHU**

Prepared by Ya-Ling Chang (Student Branch Chair)  
 Student Branch Chair: Ya-Ling Chang  
 Student Branch Counselor: Ching-Chih Tsai

**17. Student Branch Name: IEEE NCUE Student Branch(National Changhua University of Education)**

Prepared by De-Jun Deng (Student Branch Counselor)  
 Student Branch Chair: Hui-xin Qin  
 Student Branch Counselor: De-Jun Deng

- Number of Student branches formed in the current year
  - Nil
- Number of Active Student branches (Student branches who have reported required number of meetings during the year)

**1. Student Branch Name: IEEE NCU Student Branch (National Central University)**

**A. Membership Development Activities**

Total number of active members :  
 58 members in the past three years  
 21 active members currently  
 Branch chairperson : WEI LI

**B. Activities held during the year**

Date	Event	Content	Student
2014/3/5	<b>Orientation Party</b>	Introduction of IEEE Student Branch in NCU	All student members
2014/3/26	<b>Student Presentation 1</b>	Audio and Video Signal Processing-Morphing	XUAN-ZHUAN WU
2014/4/2	<b>Student Presentation 2</b>	The indoor Navigation	GUAN-TING CHEN
2014/4/16	<b>Student Presentation 3</b>	3D Chip vs 3D Package	ZHEN-KAI WANG, GUAN-HUA CHEN
2014/5/16	<b>Institution visit</b>	HIWIN TECHNOLOGIES CORP.	All student members
2014/5/30	<b>laboratory visit</b>	MINE Lab, DSR lab, MODE lab	All student members
2014/6/4	<b>Final Party</b>	Giving award to well-performed students	All student members
2014/10/9	<b>Orientation Party</b>	Introduction of IEEE Student Branch in NCU	All student members
2014/10/23	<b>Student Presentation 1</b>	The rise of the crash-proof car	WEI LI , TIAN-HONG ZENG
2014/11/6	<b>Introduction of IEEE Xplore</b>	Introduction of IEEE Xplore	All student members
2014/11/27	<b>Student Presentation 2</b>	Blue LED that changed our lives	ROU-LI WANG, ZI-KUAN LIU
2014/12/18	<b>Student Presentation 3</b>	Introduction of embedded system	JEN-HAO CHEN
2015/1/8	<b>Final Party</b>	Giving award to well-performed students	All student members

**2. Student Branch Name: IEEE YZU Student Branch (Yuan-Ze University)**

Date	2014/6/9			
Event	Communications Department Research Presentation Contest			
Location	Department of Communications Engineering, Yuan Ze University			
Category	Technical	Sub-Category	-	
Speaker	Name	Graduate students		
	Affiliation	Yuan Ze University		
Attendances	IEEE Members	8	Guests	22
Date	2014/7/21			
Event	2014 MIT Student Lecture Series (Robotics Competitions at MIT)			
Location	Yuan Ze University			
Category	Technical	Sub-Category	-	
Speaker	Name	Michael Holachek		
	Affiliation	MIT		
Attendances	IEEE Members	4	Guests	12
Date	2014/7/22			
Event	2014 MIT Student Lecture Series (MIT Capstone Engineering Classes)			
Location	Yuan Ze University			
Category	Technical	Sub-Category	-	
Speaker	Name	Hosea Siu		
	Affiliation	MIT		
Attendances	IEEE Members	5	Guests	10



Date	2014/7/24			
Event	2014 MIT Student Lecture Series (Coding Competitions at MIT)			
Location	Yuan Ze University			
Category	Technical	Sub-Category	-	
Speaker	Name	Michael Holachek		
	Affiliation	MIT		
Attendances	IEEE Members	5	Guests	14

**3. Student Branch Name: EDS Society Student Branch Chapter at NTHU**

Date	2014/08/05			
Event	Power Electronic Device Development Trends – challenges in Application			
Location	Room 215, Delta Building, National Tsing Hua University, Hsinchu, Taiwan			
Category	Professional	Sub-Category	Continuing Education	
Speaker	Name	Dr. Leo, Lorenz		
	Affiliation			
Attendances	IEEE Members	40	Guests	60
Seminar @ NTHU August. 5, 2014 Dr. Leo Lorenz with professors and students				
Seminar @ NTHU August. 5, 2014 Dr. Leo Lorenz with professors and students				

Date	2014/08/06			
Event	Silicon Power Devices: History, Principle and Modeling			
Location	Room 215, Delta Building, National Tsing Hua University, Hsinchu, Taiwan			
Category	Professional	Sub-Category	Continuing Education	
Speaker	Name	Dr. Ichiro Omura		
	Affiliation			
Attendances	IEEE Members	40	Guests	50
Seminar @ NTHU August. 6, 2014 Dr. Ichiro Omura with professors and students				
Seminar @ NTHU August. 6, 2014 Dr. Ichiro Omura with professors and students				

Date	2014/08/12		
Event	WBG High Voltage Power Devices: Basics, Current Status and Future Trends		
Location	Room 103, Delta Building, National Tsing Hua University, Hsinchu, Taiwan		
Category	Professional	Sub-Category	Continuing Education
Speaker	Name	Dr. T. Paul Chow	
	Affiliation		
Attendances	IEEE Members	40	Guests 50
Seminar @ NTHU August. 12, 2014 Dr. T. Paul Chow with professors and students			
Seminar @ NTHU August. 12, 2014 Dr. T. Paul Chow with professors and students			

Date	2014/09/17		
Event	The Past and Future History of Silicon Carbide Power MOSFETs		
Location	Room 919, Delta Building, National Tsing Hua University, Hsinchu, Taiwan		
Category	Professional	Sub-Category	Continuing Education
Speaker	Name	Dr. James A. Cooper Jr	
	Affiliation		
Attendances	IEEE Members	30	Guests 20
Seminar @ NTHU September. 17, 2014 Dr. James Cooper with professors and students			
Seminar @ NTHU September. 17, 2014 Dr. James Cooper with professors and students			

**4. Student Branch Name: IEEE Chung Yuan Christian University Student Branch**

Date	2014/12/01		
Event	Meeting		
Location	Chung Yuan Christian University		
Category	Professional	Sub-Category	Professional Development
Speaker	Name		
	Affiliation		
Attendances	IEEE Members	8	Guests 2

## B.6 Awards & Recognition Activities

- Award constituted by the section  
N/A
- Award(s) received from R10  
N/A
- Award(s) received from IEEE HQ  
N/A

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

- Newsletter (name and number of issues in the year)  
IEEE Taipei Section publishes e-newsletter bimonthly through the section website. Issues published in the year 2014 are listed as follows:

<u>Release Date</u>	<u>E-News URL</u>
2014-01-23	<a href="http://www.ieee.org.tw/newsletter/vol24/epaper_vol24_bar_uni.html">http://www.ieee.org.tw/newsletter/vol24/epaper_vol24_bar_uni.html</a>
2014-04-09	<a href="http://www.ieee.org.tw/newsletter/vol25/epaper_vol25_bar_uni.html">http://www.ieee.org.tw/newsletter/vol25/epaper_vol25_bar_uni.html</a>
2014-06-21	<a href="http://www.ieee.org.tw/newsletter/vol26/epaper_vol26_bar_uni.html">http://www.ieee.org.tw/newsletter/vol26/epaper_vol26_bar_uni.html</a>
2014-08-13	<a href="http://www.ieee.org.tw/newsletter/vol27/epaper_vol27_bar_uni.html">http://www.ieee.org.tw/newsletter/vol27/epaper_vol27_bar_uni.html</a>
2014-09-29	<a href="http://www.ieee.org.tw/newsletter/vol28/epaper_vol28_bar_uni.html">http://www.ieee.org.tw/newsletter/vol28/epaper_vol28_bar_uni.html</a>
2014-12-01	<a href="http://www.ieee.org.tw/newsletter/vol29/epaper_vol29_bar_uni.html">http://www.ieee.org.tw/newsletter/vol29/epaper_vol29_bar_uni.html</a>

- Home Page of the section (give the URL and frequency which it is updated)
  1. IEEE Taipei Section: <http://www.ieee.org.tw/>
  2. IEEE NTU Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=35](http://www.ieee.org.tw/chapters/index.php?web_class=35)
  3. IEEE NTUST Student Branch: <http://studentbranch.csie.ntust.edu.tw/>
  4. IEEE SMC Society Student Branch Chapter at NTUST:  
<http://studentbranch.csie.ntust.edu.tw/smc/>
  5. IEEE NCU Student Branch: <http://ieee.ncu.edu.tw/>
  6. IEEE NTHU Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=44](http://www.ieee.org.tw/chapters/index.php?web_class=44)
  7. IEEE YZU Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=38](http://www.ieee.org.tw/chapters/index.php?web_class=38)
  8. IEEE NCTU Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=36](http://www.ieee.org.tw/chapters/index.php?web_class=36)
  9. IEEE NCHU Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=45](http://www.ieee.org.tw/chapters/index.php?web_class=45)
  10. IEEE NTOU Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=40](http://www.ieee.org.tw/chapters/index.php?web_class=40)
  11. SMC Society Student Branch Chapter at YZU:  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=50](http://www.ieee.org.tw/chapters/index.php?web_class=50)
  12. PELS Society Student Branch Chapter at NTHU:  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=51](http://www.ieee.org.tw/chapters/index.php?web_class=51)
  13. IEEE NCUE Student Branch: [http://www.ieee.org.tw/chapters/index.php?web\\_class=41](http://www.ieee.org.tw/chapters/index.php?web_class=41)
  14. Antennas and Propagation Society (AP03):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=3](http://www.ieee.org.tw/chapters/index.php?web_class=3)

15. Broadcast Technology Society (BT02):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=5](http://www.ieee.org.tw/chapters/index.php?web_class=5)
16. Computer Society (C16): [http://www.ieee.org.tw/chapters/index.php?web\\_class=6](http://www.ieee.org.tw/chapters/index.php?web_class=6)
17. Circuits and Systems Society (CAS04):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=7](http://www.ieee.org.tw/chapters/index.php?web_class=7)
18. Consumer Electronics Society (CE08):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=8](http://www.ieee.org.tw/chapters/index.php?web_class=8)
19. Communications Society (COM19):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=10](http://www.ieee.org.tw/chapters/index.php?web_class=10)
20. Components Packaging, and Manufacturing Technology Society (CPMT21):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=12](http://www.ieee.org.tw/chapters/index.php?web_class=12)
21. Control Systems Society (CS23):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=13](http://www.ieee.org.tw/chapters/index.php?web_class=13)
22. Electron Devices Society (ED15):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=15](http://www.ieee.org.tw/chapters/index.php?web_class=15)
23. Electromagnetic Compatibility Society (EMC27):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=17](http://www.ieee.org.tw/chapters/index.php?web_class=17)
24. Industrial Electronics Society (IE13):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=19](http://www.ieee.org.tw/chapters/index.php?web_class=19)
25. Systems, Man, & Cybernetics Society-Taichung Chapter(SMC28):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=41](http://www.ieee.org.tw/chapters/index.php?web_class=41)
26. Information Theory Society (IT12):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=21](http://www.ieee.org.tw/chapters/index.php?web_class=21)
27. Lasers & Electro-Optics Society (LEO36):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=22](http://www.ieee.org.tw/chapters/index.php?web_class=22)
28. Microwave Theory and Techniques Society (MTT17):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=24](http://www.ieee.org.tw/chapters/index.php?web_class=24)
29. Oceanic Engineering Society (OE22):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=25](http://www.ieee.org.tw/chapters/index.php?web_class=25)
30. Power Electronics Society (PEL35):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=20](http://www.ieee.org.tw/chapters/index.php?web_class=20)
31. Power Engineering Society (PE31):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=26](http://www.ieee.org.tw/chapters/index.php?web_class=26)
32. Robotics & Automation Society (RA24):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=29](http://www.ieee.org.tw/chapters/index.php?web_class=29)
33. Signal Processing Society (SP01):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=31](http://www.ieee.org.tw/chapters/index.php?web_class=31)
34. Solid-State Circuits Society (SSC37):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=32](http://www.ieee.org.tw/chapters/index.php?web_class=32)
35. Vehicular Technology Society (VT06):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=33](http://www.ieee.org.tw/chapters/index.php?web_class=33)
36. Systems, Man & Cybernetics (SMC28):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=30](http://www.ieee.org.tw/chapters/index.php?web_class=30)

37. Computational Intelligence Society (CIS11):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=9](http://www.ieee.org.tw/chapters/index.php?web_class=9)
  38. Geoscience & Remote Sensing Society (GRS29):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=18](http://www.ieee.org.tw/chapters/index.php?web_class=18)
  39. Education Society (E25): [http://www.ieee.org.tw/chapters/index.php?web\\_class=14](http://www.ieee.org.tw/chapters/index.php?web_class=14)
  40. Magnetics Society (MAG33): [http://www.ieee.org.tw/chapters/index.php?web\\_class=23](http://www.ieee.org.tw/chapters/index.php?web_class=23)
  41. Engineering in Medicine and Biology (EMB18):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=16](http://www.ieee.org.tw/chapters/index.php?web_class=16)
  42. Product Safety Engineering (PSE43):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=27](http://www.ieee.org.tw/chapters/index.php?web_class=27)
  43. Reliability Society (RL07): [http://www.ieee.org.tw/chapters/index.php?web\\_class=28](http://www.ieee.org.tw/chapters/index.php?web_class=28)
  44. Instrumentation & Measurement Society (IM09):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=47](http://www.ieee.org.tw/chapters/index.php?web_class=47)
  45. Industry Applications Society (IA34):  
[http://www.ieee.org.tw/chapters/index.php?web\\_class=48](http://www.ieee.org.tw/chapters/index.php?web_class=48)
  46. Sensors Council (SEN39): [http://www.ieee.org.tw/chapters/index.php?web\\_class=54](http://www.ieee.org.tw/chapters/index.php?web_class=54)
- Other means of contacts with section members  
Also, in order to further improve connections among its members, Taipei Section has formed its Facebook page in 2011. The page is located at <https://www.facebook.com/IEEE.Taipei.Section.fans> .

## **B.8 Industry Relations**

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

## **B.9 Humanitarian Technology Activities**

## **B.10 Community Activities**

- IEEE Social activities (Family day, IEEE day, Engineers Week)”

## **PART C - OTHERS**

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

- 2014 International Conference on Optoelectronics and Microelectronics.
- The 2014 International Conference on Intelligent Green Building and Smart Grid (IGBSG)
- 2014 Laser Display Conference.

### **C.2 Special Events**

- Taipei Section issued the E-NEWS: Issue first issue electronic newspaper since May 26 of 2009, adopt bimonthly to take place publication.
- Handles to members and recruits the meeting of proving: Run members to recruit to the academic meeting, research unit, participate. The materials recruiting members and offering the affiliation to handle live are filled in, offer and help outside simply and conveniently, also offer member's consultation service live.

### **C.3 Problems to be Anticipated**

- Because of economic crisis, most industry members has no budget that supported from company to join industry activity. It introduces risk in membership development and billable activity.

### **C.4 Best Practices of your section (which you would like share with other sections for the benefits of members)**

- Support will promote joint activities for the promotion of education and other summer camps, to academic conferences, research units join the promotion, promotion of staff to apply for membership benefits, to set up a booth to provide large-scale academic conference membership and membership services and consulting for the General Assembly of the Council Membership recruitment shows a positive increase in the number of academic and industry members.

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

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

#### ➤ Taipei Section

- Rendering Awards (Best Paper Award)

We will plan out best Paper Awards for stimulating chapter student members' effort on research. Each year, we will release the chapter list.

Each chapter can recommend 1-2 PhD thesis to IEEE Taipei Section. We will group a selection committee to choose the superior (3-5 PhD) . The winners and their supervisors can get award medal. They also can publish their work on IEEE Taipei Section Newsletter. It may encourage student focus on their research work.

➤ **Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**

- Continue to recruit members and student members from academia and industries through technical and educational activities (symposiums, seminars, short courses).
- Continue to cooperate with China Radio Association (CRA) through joint activities. CRA's two thousand members consist of practical engineers in radio stations and television companies in Taiwan.

➤ **Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**

Owing to the change of CASS Taipei Chapter, we need to organize a new Section group to serve for CASS Taipei members. Based on previous successful experience and operation, as well as the feedback from the event attendees and local members, in 2014, the IEEE Circuits and Systems Society (CASS) Taipei Chapter plans to continue its effort in the following areasl :

- Promoting Membership
- Increasing Voting percentage of CASS Taipei Chapter
- Inviting speakers to give short courses, tutorials, and lectures
- Co-sponsoring international and domestic workshops and conferences
- Networking with CASS Chapters in Region 10
- Involving in university student activities
- Continuing website improvement

➤ **Chapter Name: Education Society Taipei Chapter (E25)**

To recruit new members for the education society  
We will first approach those local Taiwan authors whose papers are published in the IEEE Transactions on Education, or the International Journal of Engineering Education. We will also try to increase the student members for Education Society, because they are now financially supported by the project from the National Science Council.

➤ **Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**

Taipei EMC Chapter (EMC27) will continue to progress in

- holding one EMC technical workshop per season,
- holding one national EMC conference per year,
- preparing and holding the APEMC'15 international symposium in Taipei.

➤ **Chapter Name: Electron Devices Society Taipei Chapter (ED15)**

The ED Taipei chapter is in the promotion of helping the ED student branch chapters to recruit more new student members. Also, several members were promoted to senior members in 2014.

- In 2014, about 20 new student members were recruited with the assistance from our professor members.
- Need to work more on the promotion of IEEE senior members.

➤ **Chapter Name: Instrumentation & Measurement Society (IM09)**

Since 2009, the I&M Society Taipei Section Chapter has continuously followed the steps and reached the goals that we set up. Marching to our fifth year of establishment, we need to be stronger and have made the following goals and plans,

- To add value to existing members and explore the growth of new members.
- To continuously provide local academia and research circles the access to the world's largest research community, and vice versa help to disseminate the research results to the world.
- To enhance the influence of the chapter in relevant research community.
- To participate in relevant international and domestic activities such as conferences and exhibitions to absorb the latest research development, to build up chapter publicity, and to recruit more members joining the chapter.
- To serve the research communities related to instrument technology by introducing the latest frontier research progress through organizing seminars, talks, and courses.

➤ **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**

2015 IEEE Distinguished Lecturer Progress

This year there are totally four distinguished lecturers: Prof. Russell Cowburn, Prof. Ivan K. Schuller, Prof. Ludwig Schultz, and Prof. Bethanie Stadler. We plan to invite two of them in the first half of this year and the rest of them in the second half of this year. We have contacted all of them via emails. Due to their tight schedules we are still waiting for their responses to the specific date of visiting Taiwan.

➤ **Chapter Name: Reliability Society Taipei Chapter (RL07)**

IEEE Taipei Section (RL07) in 2014 has committed itself to promote IEEE Reliability Society in Taiwan. We continuously invite experts, researchers and scholars to deliver keynote speeches sharing the cutting edge technology and their innovative research results not only with the members of RL07 but also with the non-members in Taiwan. Furthermore, we encourage student members to have in-depth discussions with the invited speakers and exchange opinions with them in the field of Computer Science.

➤ **Chapter Name: Robotics & Automation Society (RA24)**

While we have invited the most outstanding robotics researcher to deliver speeches and to have strong interactions with our professional members of RA24, we kept pushing on the member recruiting and have identified several effective approaches.

➤ **Chapter Name: Sensors Council Society (SEN39)**

Sensor council in Taipei Section (SEN39) aims to promote the researches on sensor area to undergraduate and graduate students. Also, SEN39 wants to stimulate the interaction between different sensor areas. Hence, SEN39 puts activity to demonstrate various kinds of



sensor technology. When foreign researchers on sensor area visit Taiwan, SEN39 also invite them to give talk to student to introduce the sensor works in these foreign research institutes.

➤ **Chapter Name: Signal Processing Society Society Taipei Chapter (SP-01)**

We plan to do the following few events

- Sponsor the MPEG resource sharing program
- Prepare to continue the summer school program at NCTU
- Host several DLP talks in NCTU and other universities.

➤ **Chapter Name: Solid-State Circuits Society Taipei Chapter (SSCS37)**

Increase student membership through sponsoring domestic events.

Invited speakers for both DL and non-DL: To increase the visibility of IEEE SSCS in Taiwan academic and industry.

➤ **Chapter Name: Systems, Man, & Cybernetics Society Taipei Chapter (SMC28)**

- SMC Taipei Chapter helps host The 2015 IEEE International Conference on Networking, Sensing and Control (ICNSC15), Taipei, Taiwan, April 9-11, 2015.
- SMC Taipei Chapter helps host The 9th ICME Int. Conf. on Complex Medical Engineering (CME 2015), Okayama and Kyoto, Japan, June 18-21, 2015

➤ **Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**

Continuation of project/activity in progress and their implementation plans:

- We will continue hosting technical talks given by local or international experts. It is expected that at least two such activities, particularly IEEE VTS Distinguished lectures, will be held in 2015.
- We will co-host and sponsor the 25th Wireless and Optical Conference (WOCC) 2015, which is to be held in Taipei, Taiwan, in August of 2014

➤ **Student Branch Name: IEEE YZU Student Branch (Yuan-Ze University)**

Activity	Category
Research Presentation Contest	Technical
Invite Speaker	Professional (Continuing Education)
Mobile Applications Contest	Technical
Final Year Project Contest	Technical
Basic Chinese Class for Foreign Students	Nontechnical (Social)
Welcoming and introduction speech about "YZU IEEE student branch activities"	Nontechnical(Pre-University Activity)
English Corner	Nontechnical(Other)

➤ **Student Branch Name: IEEE NTHU Student Branch (National Tsing Hua University)**

We need to be more known by students and help more students get familiar with IEEE. Since many students in NTHU still don't know our existence and what we do, by holding more activities, we can let more people know about us and receive the help we can give.

➤ **Student Branch Name: EDS Society Student Branch Chapter at NTHU**

We will hold some activities and plans in 2015. We will expect to hold regular membership promotion activities. The requested subsidy will be used to support:

Regular seminars conjunction with the regular seminar events in the campus, we will invite speakers, including DLs and experts from the Science park.

The expenses used in the social events for membership promotion.

➤ **Student Branch Name: IEEE Chung Yuan Christian University Student Branch**

Future plan:

Nontechnical meeting in March 2015

Technical meeting in June 2014

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

➤ **Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)**

- Cooperate with the new “Digital Convergence Education Promotion Alliance Center” through joint activities. Funded by the ministry of education, the center promotes digital convergence curriculum and course materials development. Participants are mostly faculty members in colleges and universities.

➤ **Chapter Name: Circuits and Systems Society Taipei Chapter (CAS04)**

In 2015, we plan to hold two to three DLP lectures, one to two invited lectures, some networking activities, and member recruiting activities. A brief introduction and planned schedule about those activities are described as follows :

- Invited Lecture :
  - I. Speaker: Prof. Dragan Maksimovic; Date : 1/12~1/16, 2015
  - II. Speaker: to be invited.
- Support National Collegiate IC Design Contest, March ~ April, 2015
  - I. Number of attendees: 1000
  - II. Invite the awardees to join IEEE and support their first-year member fee
- Annual meeting of IEEE CASS Taipei Chapter
  - I. Location: Parkview Hotel, Hualien, Taiwan
  - II. Date: around early August, 2015
- Distinguished Lecture:
 

Speaker: to be invited; Date : around early Aug. or Sept., 2015
- Taiwan and Japan Conference on Circuits and Systems (TJCAS)
  - I. Attendees: 75
  - II. Date : around summer of 2015

➤ **Chapter Name: Communications Society Taipei Chapter (COM19)**

We plan to do the following few events

- 01/22/2015~01/23/2015
 

*2015 Spring Workshop on Information Theory & Communications*, Hualien, Taiwan

Activity: Eight invited speeches and one member meeting

Homepage: <http://itcom2015s.ndhu.edu.tw/conference.html>
- 03/06/2015
 

*2015 Taiwan Spring School on Information Theory and Communications*, Taipei, Taiwan

Activity: Fifteen presentations
- 08/03/2015~08/07/2015
 

*2015 Summer School on Information/Communication Theory and Technologies*, Hsinchu, Taiwan

Activity: Nine courses on communications theory by nine invited speakers
- 08/20/2015~08/21/2015
 

*2015 Fall Workshop on Information Theory & Communications*, Taipei, Taiwan

Activity: Eight invited speeches and one member meeting
- *2015 Distinguished Lecturer Tours*

➤ **Chapter Name: Council on Electronic Design Automation Society Taipei Chapter (CEDA44)**

The goals of IEEE CEDA Taipei Chapter include the continuation of serving EDA faculty, students, and professionals in Taiwan for more effective discussions and explorations of new ideas. The following activities are our future plans to fulfill the goals in 2015:

- 2 Chapter Meetings
- 10 Seminars
- 2 EDA Forums
- 2 Workshops
- SASIMI (March 16-17, 2015, Yilan, Taiwan)
- EDA Workshop
- 1 Symposium
- VLSI Design/CAD Symposium

➤ **Chapter Name: Education Society Taipei Chapter (E25)**

- I. To promote local practice oriented courseware design and teaching  
The chapter chair will join the board of directors of the Taiwan Embedded Microcontroller Development Institute. The society will try to cooperate with the Institute to hold several technical meetings for technical and vocational students and teachers in Taiwan.
  
- II. To promote local colleagues to submit papers to engineering education oriented international conference and journals  
The chapter chair was promoted as a Professor by using representative papers published in engineering education oriented international journals. We hope to encourage local colleagues who are not working in research oriented universities to do research works for engineer education, and to benefit those not so smart students in Taiwan.

➤ **Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)**

The goals of Taipei EMC Chapter (EMC27) are to advance the Taiwan EMC industry technology, enrich information exchange in the Taiwan EMC society, and foster the links between the society and the world. For these goals, three committees (Executive Committee, Advisory Committee, and Technical Program Committee) were founded. They will aggressively participate in accomplishing the activities stated in D.1 to achieve the Chapter goals.

➤ **Chapter Name: Electron Devices Society Taipei Chapter (ED15)**

The ED Taipei chapter has been very active in its activities. In the year 2015, several major tasks have been planned as below-

- Help of the local society to seek for IEEE EDS Co-sponsorship
- In 2014, an international symposium, eMDC, via the help of the chapter has acquired the EDS technical co-sponsorship.
- The chapter will host 2015IPFA, 22nd International Symposium on the Physical and Failure Analysis of Integrated Circuits, from June 29-July 2, in Hsinchu, and the filing for IEEE EDS technical co-sponsorship is undergoing.
- In 2012-2014, an international symposium, eMDC, via the help of the chapter has acquired the EDS technical co-sponsorship. Special assistance will be provided in 2015.
- The chapter will regularly invite at least 6-8 invited speakers from overseas in stimulating the academic research, encouraging DL from overseas. These talks are open to university students and engineers in northern Taiwan.
- The chapter will help to solicit more members to become DL (Distinguished Lecturers) and become the TPC members in worldwide conferences.

- Promoting of senior members- a target of 5-10senior members will be filed and approved in 2015.

➤ **Chapter Name: Instrumentation & Measurement Society (IM09)**

To carry out these goals, the chapter has set up the following plans for year 2015.

- To hold at least 10 seminars, talks, or short courses.
- To organize a Taiwan delegation to attend 2015 International Instrumentation and Measurement Technology Conference (I2MTC).
- To provide technical sponsorship to at least 2 international activities.
- To strengthen cross-chapter activities by joint visits or activities.
- To well-prepare for the 2016 I2MTC held in Taipei.

➤ **Chapter Name: Magnetics Society Taipei Chapter (MAG33)**

Promotion of interactions between members via regular meetings:

-Plan to hold more meetings in Northern and Southern Taiwan to promote interactions between members.

Recruiting more MAG33 members:

-By promotions in any activities.

-Working out an approach to support the registrations of new members.

Other Workshops are being planned:

-More likely to hold some workshops.

➤ **Chapter Name: Reliability Society Taipei Chapter (RL07)**

- In order to promote IEEE Reliability Society in Taiwan, IEEE Taipei Section (RL07) will continue to serve its members next year by holding invited lectures, keynote speeches, and seminars.

➤ **Chapter Name: Robotics & Automation Society (RA24)**

Although the number of the robotics and automation professionals in academics does not increase and the number of our graduate student memberships is decreasing, it should be still feasible to invite professionals in industry to join IEEE and our RA society as more local and international companies are investigating on robotics. This would be the key plan in the near future and a number of activities have been planned.

➤ **Chapter Name: Sensors Council Society (SEN39)**

In 2015, SEN39 likes to further combine one activity with social service. We plan to accumulate undergraduate students to design sensor-related science activity for children with weak social status, such as children in poor country area. Also, SEN39 will start to discuss the possible collaboration with the students in SPIE Taipei Student Chapter in NCTU to try to further promote IEEE Taipei Section and the Sensor Council.

➤ **Chapter Name: Systems, Man, & Cybernetics Society Taipei Chapter (SMC28)**

- Goal:
  1. Continue to promote IEEE SMC visibility.
  2. Recruit more faculty and students to join IEEE SMC membership.
- Future Plans:
  1. Continue to expand faculty and students volume in IEEE SMC membership.
  2. Host more activities to make faculty and students understand the advantages of becoming members to the SMC society.
  3. Organize and host Distinguished Lectures workshops in Taipei.

➤ **Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)**

- Goals and future plans:
  - We plan to do membership promotion and hope to have more members enrolled in 2015.
  - We plan to offer some VTC2015-Fall Travel Grants to local Ph.D. students who have student membership of the VT society.
  - We plan to sponsor IEEE VTS Taipei members to give technical talks in Taiwan in order to promote technical interactions among IEEE VTS Taipei members
  - We plan to invite the following scholars to Taiwan for research interactions and/or possible research collaborations:
    1. Prof. Dr. Lajos Hanzo, University of Southampton, IEEE VTS Distinguished Lecturer. IEEE Fellow.
    2. Prof. Andreas Molisch, University of Southern California IEEE Fellow. IEEE VTS Distinguished Lecturer. IEEE Fellow.