



# IEEE Taipei Section

# Annual Report 2008

Prepared by

A handwritten signature in black ink, appearing to read "Char-Dir Chung".

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Char-Dir Chung  
Secretary (2007/2008)

A handwritten signature in black ink, appearing to read "Ruey-Beei Wu".

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Ruey-Beei Wu  
Chair (2007/2008)

Approved by

A handwritten signature in black ink, appearing to read "Chin-Teng Lin".

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Chin-Teng Lin  
Chair (2009/2010)

## **PART A - SECTION SUMMARY**

### **A.1 Executive Summary**

Taipei Section has led a fruitful year 2008. We have made efforts to increase several counts in 2008. First, the subsidiary organization count is increased. We founded one new chapter, *Industry Applications Society Chapter*. In total, there are 29 chapters, 1 affinity group and 6 student branches in the Section and they are actively and enthusiastically functioning for IEEE. There will be more activities and interactions among section, chapters, student branches and our members. Second, the membership count is significantly increased. We have increased membership in every grade and from 3060 to 3301 in total with a growth rate of 7.88%. In particular, the membership count grows uniformly and constantly in almost all chapters. We expect to experience a continuing growth in the future.

Our website was established in 2002 and constantly operated, where guests can find updated conference information, Section/Chapters/Group/Branch news, announcement of local academia and industry activities and the contact list of officers and chairs. The content keeps updating every day. This website also provides the function of on-line membership registration, and reference links to IEEE Headquarter web page. The IEEE issued us a new global website URL: <http://ewh.ieee.org/r10/taipei> on Aug. 20, 2007, and in the meantime demanded the website be mirrored on the IEEE servers in order to preserve the related documents. We have then worked on the re-organization of our website and decided to set up a general website for all the chapters to relieve their work load in maintaining the website. The Section was fortunately enough to receive the donation of NT\$193,000 for the related works from the Institute of Information Industry on Feb. 20, 2008. The new website started functioning on May 28, 2008. Currently, it is managed by the Secretariat Office, while the NTU Student Branch is asked to be in charge of the website maintenance.

In 2008, we sponsored many activities of society chapters, including 1 technical course, 2 summer camp programs, 3 lecturers, 5 workshops and 21 conferences. In order to promote student membership, we also encouraged and sponsored 44 student members abroad to deliver oral presentation in international conferences. This sponsorship program has proven to be a positive driving force and healthily continues to promote various activities in the community. In addition, we kicked off new program of Taipei Week on Oct. 2008, in association with the Tawian Electrical and Electronics Manufacturers Association. The major activities were several technical workshops co-sponsored by MAG, SMC, and EMC Chapters, with nearly 300 participants.

For the first time in its history, Taipei Section published its history book of 107 pages on Dec. 5, 2008. The book compiles the important historical documents of the Section, including the Section bylaw, organization chart, listing of all past Chairs, Secretaries, and Treasures, inaugurate days and Chairs of the Chapters and Student Branches, statistics on members and finances, past Chairs' major events, great contributions by members, collections of executive summary of yearly reports, Executive Committee meeting reports, and the 18 articles published in R10 Newsletters. The history book is now available in the Section website for public access.,

### **A.2 Financial Report**

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 2008 was NT\$1,781,828 including NT\$617,914 of 2008 rebate in June 2007. The total expenses was NT\$3,956,006, among which about NT\$1,260,000 is the loan for ICASSP 2009 and will return to the Section by Oct. 2009. The final balance at the End of 2008 is NT\$3,848,812. More detail is included in the 2008 Annual Geographic Unit Financial Report.

## **A.3 Section Officers**

### **A.3.1 Section Officers (2007-2008)**

#### **Chair**

Prof. Ruey-Beei Wu (National Taiwan University)

Email: [rbwu@ew.ee.ntu.edu.tw](mailto:rbwu@ew.ee.ntu.edu.tw)

#### **Vice Chair**

Prof. Chung-Ju Chang (National Chiao Tung University)

Email: [cjchang@mail.nctu.edu.tw](mailto:cjchang@mail.nctu.edu.tw)

#### **Secretary**

Prof. Char-Dir Chung (National Taiwan University)

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

#### **Treasurer**

Prof. Tzong-Lin Wu (National Taiwan University)

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

#### **Membership Development (Industry)**

Deputy Director General Chia-Hsiang Chang (Networks and Multimedia Institute, Institute for Information Industry)

Email: [changch@iii.org.tw](mailto:changch@iii.org.tw)

#### **Membership Development (Academia)**

Prof. Shyi-Ming Chen (National Taiwan University of Science and Technology)

Email: [smchen@mail.ntust.edu.tw](mailto:smchen@mail.ntust.edu.tw)

#### **Educational Activities**

Prof. Yunghsiang S. Han and Prof. Hung-Ta Pai (National Taipei University)

Email: [yshan@mail.ntpu.edu.tw](mailto:yshan@mail.ntpu.edu.tw) and [htpai@mail.ntpu.edu.tw](mailto:htpai@mail.ntpu.edu.tw)

#### **Award and Recognition**

Prof. San-Liang Lee (National Taiwan University of Science and Technology)

Email: [sllee@mail.ntust.edu.tw](mailto:sllee@mail.ntust.edu.tw)

#### **Student Activities**

Prof. Sheng-Luen Chung (National Taiwan University of Science and Technology)

Email: [slchung@mail.ntust.edu.tw](mailto:slchung@mail.ntust.edu.tw)

#### **Electronic Communications**

Prof. Shau-Gang Mao (National Taipei University of Technology)

Email: [sgmao@ieee.org](mailto:sgmao@ieee.org)

### **A.3.2 Supporting Staffs (2008)**

#### **Assistant to Chairman**

Ms. Hui-Yun Hu, [babyhu@cc.ee.ntu.edu.tw](mailto:babyhu@cc.ee.ntu.edu.tw)

Ms. Yi-Fang Lee, [lilyon18@cc.ee.ntu.edu.tw](mailto:lilyon18@cc.ee.ntu.edu.tw)

#### **Assistant to Secretary**

Ms. Hsin-Mei Huang, [gwen0407@cc.ee.ntu.edu.tw](mailto:gwen0407@cc.ee.ntu.edu.tw)

#### **Assistants to Treasure**

Ms. Shih-Ting, Ku, [halima@cc.ee.ntu.edu.tw](mailto:halima@cc.ee.ntu.edu.tw)

Ms. I-hsiu Cheng, [issue@cc.ee.ntu.edu.tw](mailto:issue@cc.ee.ntu.edu.tw)

Ms. Mei-Hsuan Wang, [meimei@cc.ee.ntu.edu.tw](mailto:meimei@cc.ee.ntu.edu.tw)

### A.3.3 Section Officers (2009-2010)

**Chair**

Prof. Chin-Teng Lin (National Chiao Tung University)  
Email: [ctlin@mail.nctu.edu.tw](mailto:ctlin@mail.nctu.edu.tw)

**Vice Chair**

Deputy General Director Gin-Kou Ma (SoC Technology Center, Industrial Technology Research Institute)  
Email: [gkma@itri.org.tw](mailto:gkma@itri.org.tw)

**Secretary**

Prof. Paul C.-P. Chao (National Chiao Tung University)  
Email: [pchao@mail.nctu.edu.tw](mailto:pchao@mail.nctu.edu.tw)

**Treasurer**

Prof. Li-Chun Wang (National Chiao Tung University)  
Email: [lichun@cc.nctu.edu.tw](mailto:lichun@cc.nctu.edu.tw)

**Membership Development (Industry)**

Deputy General Director Shiau-Shian Yu (Information & Communications Research Laboratories, Industrial Technology Research Institute)  
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**Membership Development (Academia)**

Prof. Chuan-Yi Tang (National Tsing Hua University)  
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**Educational Activities**

Prof. Yung-Yaw Chen (National Taiwan University)  
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**Award and Recognition**

Director Ching-Ray Chang (Department of International Cooperation, National Science Council)  
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**Student Activities**

Prof. Faa-Jeng Lin (National Central University)  
Email: [linfj@ee.ncu.edu.tw](mailto:linfj@ee.ncu.edu.tw)

**Electronic Communications**

Prof. Lan-Da Van (National Chiao Tung University)  
Email: [ldvan@cs.nctu.edu.tw](mailto:ldvan@cs.nctu.edu.tw)

### A.3.4 Supporting Staffs (2009-2010)

**Assistant to Chairman****Assistant to Secretary**

Ms. Tz-Ying Wu, [kellywu@mail.nctu.edu.tw](mailto:kellywu@mail.nctu.edu.tw)

**Assistants to Treasure**

Ms. Ru-Ping Weng, [jessicaweng@cc.nctu.edu.tw](mailto:jessicaweng@cc.nctu.edu.tw)

Ms. Hung-Miau Chen, [nao@cc.nctu.edu.tw](mailto:nao@cc.nctu.edu.tw)

## PART B - ORGANIZATIONAL ACTIVITIES

### B.0 Section Meetings

#### B.0.1 Sponsor

Category	Meeting	Date	Attendance (member / other)
Administrative	Section Officers Meeting	2008.1.18 2008.2.20 2008.4.30 2008.8.25 2008.10.20 2008.11.13	10~12
	Section Executive Committee Meeting	2008.2.29 2008.12.5	28 20
	Taipei Section 2009 Annual Congress	2008.12.5	125/10
	Section Chair Election Meeting	2008.11.11 2008.11.13 2008.12.9 2008.12.26	5~12
Professional	Industry Cooperation Meeting	2008.2.20	8/2
	IEEE Membership Promotion at National Taiwan University	2008.10.1	20/60
	IEEE Membership Promotion at National Chiao Tung University	2009.1.7	5/195
Technical	Power Semiconductor Devices and Design Criteria	2008.7.7-15	30/30
	2008 EM Education Initiative - Summer Program	2008.7.28-8.1	39/145
	IEEE Taipei Week	2008.10.8-10	200
	2008 International Workshop on Electromagnetic Compatibility	2008.10.10	40/68
	IEEE Distinguished Lecture on Miniaturization of Ultra-wideband Antennas (AP-S)	2008.11.26	150

#### B.0.2 Co-sponsor

Category	Meeting	Date	Attendance (member / other)
Technical (Financial)	IEEE 802 Wireless Interim Meeting	2008.1.13-18	360
	2008 National Conference on System Science and Engineering (NSSSE'08)	2008.6.6-7	135/45
	IEEE Reliability Society Lecture	2008.7.21	4/40
	Cross-Strait Robotics System Formation Teaching Conference	2008.11.21	76
	IEEE Distinguished Lecture by Dr. John Lau	2008.12.1	7/24
	2008 Workshop on Consumer Electronics	2008.12.5	55/178

	The 16 <sup>th</sup> National Conference on Fuzzy Theory and Its Applications	2008.12.20	
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Category	Meeting	Date	Attendance (member / other)
Technical (Advertisement)	2008 Spring Workshop on Information Theory & Communications	2008.1.20-21	90/121
	Course: Network Methods for Electromagnetics	2008.1.24-25	37/50
	2008 VLSI-TSA & 2008 VLSI-DAT	2008.4.21-25	N/A
	Workshop on Introduction of Robotic Programming	2008.5.22	N/A
	The 3rd Intelligent Living Technology Conference (ILT 2008)	2008.6.6	N/A
	2008 IEEE International Conference on Sensor Networks, Ubiquitous and Trustworthy Computing (SUTC) (#14148)	2008.6.11-13	N/A
	Forum on Applications of IC Design on Robotic Systems	2008.6.26	N/A
	2008 13th Asia-Pacific Computer Systems Architecture Conference (ACSAC) (#14450)	2008.8.4-6	50/100
	IEEE International Conference on Advanced Robotics and its Social Impacts (ARSO'08)	2008.8.23-25	N/A
	International IC-Taiwan Conference & Exhibition (IIC Taiwan)	2008.9.9-11	N/A
	IEEE CAS DLP and VLSI/CAD Workshop	2008.9.10	N/A
	2008 IEEE Compound Semiconductor IC Symposium (2008 CSICS)	2008.10.12-15	N/A
	The 3 <sup>rd</sup> IMPACT and 10 <sup>th</sup> EMAP Joint Conference (2008 IMPACT/EMAP)	2008.10. 22-24	More than 200 papers
	International Symposium on Antennas and Propagation (ISAO 2008)	2008.10.27-30	N/A
	2008 National Symposium on Telecommunications, National Formosa University (NST2008)	2008.12.5-6	N/A
	IEEE International Conference on Electron Devices and Solid-State Circuit 2008	2008.12.8-10	N/A
	Workshops of the 3rd IEEE Asia Pacific Service Computing Conference (IEEE APSCC 2008)	2008.12.9-12	N/A
	2009 International Conference on Communications and Mobile Computing (CMC 2009)	2009.1.6-8	N/A
2009 IEEE Green Technology Conference	2009.4.16-17	N/A	

	2009 IEEE International Symposium on Circuits and Systems (ISCAS 2009)	2009.5.24-27	N/A
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## **B.1 Membership Development Programs**

Taipei Section built up an initiative for the Chapters and Student Branches to promote the membership. According to the increase in the number of members in one year from Oct. 2007 to Oct. 2008, we have selected three Chapters and three Student Branches in recognitions for their achievements. For the Chapters, Com and AP chapters lead the increase of members, and EMC has the largest percentage increase. For the Student Branches, NTU and NCTU lead the increase in members, and YZU has the largest percentage increase.

We have made great efforts on promoting the growth of membership in 2008. As shown in Table B.1.1, the membership count grows in every grade and from 3060 to 3301 in total with a growth rate of 7.88%. In Table B.1.2, the membership distribution in the yearend is shown to be 47%, 27% and 26% in academia, industry, and students, respectively. As also indicated in Table B.1.3, the membership count grows in most chapters. In fact, the membership count keeps growing every month and is expected to experience a higher growth rate in 2009.

### **B.1.1 Statistics on membership in various grades over quarters.**

Grade	Mar-06	Mar-07	Sep-07	Dec-07	Dec-08	07'~08' Growth
Associate Member (A)	95	70	122	142	133	-6.34%
Affiliate (AF)	48	52	64	68	82	20.59%
Fellow (F)	46	53	53	62	63	1.61%
Senior Member (SM)	178	200	210	205	225	9.76%
Member (M)	1370	1445	1691	1784	1829	2.52%
Life Fellow (LF)	3	3	3	4	6	50.00%
Life Senior (LS)	3	2	2	2	3	50.00%
Life Member (LM)	3	7	7	8	9	12.50%
Student (S & GSM)	617	686	716	785	951	21.15%
Total	2363	2518	2868	3060	3301	7.88%

### **B.1.2 Membership distribution in various grades in 2007 and 2008 yearend.**

Field	IEEE Grade	2007 Members	2008 Members	07'~08' Growth
Industry	Fellow	12	11	-8.33%
	Senior Member	32	51	59.38%
	Others	777	913	17.50%
	Subtotal	820	975	18.90%

Academia	Fellow	50	58	16.00%
	Senior Member	173	177	2.31%
	Others	1231	1140	-7.29%
	Subtotal	1455	1375	-5.50%
Student	S & GSM	785	951	21.15%
Total		3060	3301	7.88%

### B.1.3 Statistics on membership in various chapters.

Society	Mar-07	Dec-07	Dec-08	07'~08' Growth
Antennas and Propagation (AP03)	83	87	104	19.54%
Broadcast Technology (BT02)	23	25	27	8.00%
Computer (C16)	357	389	393	1.03%
Circuits and Systems (CAS04)	251	261	257	-1.53%
Consumer Electronics (CE08)	58	62	76	22.58%
Computational Intelligence (CIS11)	85	90	93	3.33%
Communications (COM19)	388	487	537	10.27%
Components Packaging, and Manufacturing Technology (CMPT21)	32	32	37	15.63%
Control Systems (CS23)	68	71	74	4.23%
Education (E25)	20	19	20	5.26%
Electron Devices (ED15)	218	228	234	2.63%
Engineering in Medicine and Biology (EMB18)	62	66	59	-10.61%
Electromagnetic Compatibility (EMC27)	27	32	45	40.63%
Geoscience and Remote Sensing (GRS29)	20	20	25	25%
Industry Applications (IA34) <i>New Chapter</i>	-	-	32	-
Industrial Electronics (IE13)	49	56	75	33.93%
Power Electronics (PEL35)	80	87	87	0.00%
Information Theory (IT12)	53	55	70	27.27%
Lasers & Electro-Optics (LEO36)	73	80	88	10.00%
Magnetics, Taipei/Tainan Joint Chapter (MAG33)	15	16	21	31.25%
Microwave Theory and Techniques (MTT17)	169	182	187	2.75%
Oceanic Engineering (OE22)	12	12	15	25.00%

Power Engineering (PE31)	62	62	64	3.23%
Product Safety Engineering (PSE43)	6	7	6	14.29%
Reliability Society (RL07)	-	26	27	3.85%
Robotics & Automation (RA24)	58	59	68	15.25%
Systems, Man & Cybernetics (SMC28)	152	178	198	11.24%
Signal Processing (SP01)	158	168	163	-2.98%
Solid-State Circuits (SSC37)	320	336	294	-12.50%
Vehicular Technology (VT06)	73	77	85	10.39%

We have also worked very hard on promoting and assisting eligible members in applying for Fellow and Senior Membership (SM). Five honorable members are evaluated to Fellow grade effective Jan 1<sup>st</sup>, 2009, as listed below

1. Prof. Char-Dir Chung, National Taiwan University  
For leadership in the broadband wireless communications industry
2. Prof. Shen-Li Fu, I-Shou University  
For contributions to electronic packaging research and education
3. Prof. Jang-Ping Sheu, National Tsing Hua University  
For contributions to mobile computing and parallel processing
4. Prof. Chi-Kuang Sun, National Taiwan University  
For contributions to high resolution medical microscopy and nano ultrasonic imaging
5. Prof. Jean-Lien Chen Wu, National Taiwan University of Science and Technology  
For leadership in information and communication education

Around 21 successful SM elevations have taken place and more are pending IEEE HQ consideration. We have also been active in attracting more student members through participation with student branches and local academic activities. The number of student membership shows a significant growth with rate 21.15% through 2008.

Furthermore, we disseminate the thoughts of headquarter/region volunteer recruitment, and strongly recommend our members to take this challenge.

## **B.2 Professional and Continuing Education Activities**

There are around 100 (statistics up to Jan. 4, 2009, some Chapters are pending) professional and continuing education activities held by Taipei Section and 29 chapters in 2008. Professional and continuing educational activities including technical events, distinguished lectures and conferences are held by 29 chapters constantly. For the complete list please refer to chapter activity report. The following selected activities are either financially supported by Taipei Section or held by local chapters.

### **B.2.1 Technical Events (Short Courses /Seminars/Technical Speeches/Tutorials)**

1. ComSoc Taipei Chapter successfully held the 2008 Spring Workshop on Information Theory & Communications from 01/20 to 01/21 in 2008. The attendance count is 211 (including 90 members).

2. Circuits and Systems Soc Taipei Chapter successfully held the IEEE CAS DLP speech on 09/10/2008. The attendance count is 88 (including 20 members).
3. Microwave Theory and Techniques Society Taipei Chapter successfully held the 2008 Fall Workshop and member meeting on 10/03/2008. The attendance count is 179 (including 59 members).
4. Magnetics Soc, Taipei/Tainan Joint Chapter successfully held the Magnetic industrial symposium on 10/08/2008. The attendance count is 80 (including 15 members).
5. Electromagnetic Compatibility Society Taipei Chapter, Magnetics, Taipei/Tainan Joint Chapter, Systems, Man & Cybernetics Society Taipei Chapter and Taipei Section successfully offered the *IEEE Taipei Week* from 10/8 to 10/10 in 2008. More than 200 students and engineers from industry attended this activity.
6. Electromagnetic Compatibility Society Taipei Chapter successfully held the 2008 International Workshop on Electromagnetic Compatibility on 10/10/2008. The attendance count is 108 (including 40 members).
7. IE/PELSoc Taipei Chapter successfully held the 2008 Symposium on Electrical Power Engineering from 12/05 to 12/06 in 2008. The attendance count is 815 (including 110 members).

### B.2.2 Distinguished Lecture Programs

1. *Prof. David Pan* was invited by Circuits and Systems Society Taipei Chapter to deliver an IEEE distinguished lectures to researchers and students in Taiwan during his visit on 09/10/2008. The attendance count is 88 (including 30 members).
2. *Dr. Nair, Vijay K* and was invited by Microwave Theory and Techniques Society Taipei Chapter to deliver a series of two IEEE distinguished lectures to researchers and students in Taiwan during his visit from 11/11-13 in 2008. There are more than 100 attendants for each lecture.
3. *Dr. Zhi Ning Chen* and was invited by Antennas and Propagation Society Taipei and Tainan Chapters and Taipei Section to deliver a series of three IEEE distinguished lectures to researchers and students in Taiwan during his visit on 11/23-27 in 2008. There are more than 100 attendants for each lecture.
4. *Dr. John Lau* was invited by Components Packaging, and Manufacturing Technology Society Taipei Chapter to deliver an IEEE distinguished lectures to researchers, engineers and students in Taiwan on 12/01/2008. There are more than 80 attendants for each lecture.
5. *Prof. Robert Stamps* was invited by Magnetics Soc, Taipei/Tainan Joint Chapter to deliver a series speech to researchers, engineers and students in Taiwan on 12/08/2008. There are more than 70 attendants for each lecture.
6. *Prof. Tho Le-Ngoc* was invited by Communication Society Taipei and Tainan Chapters to deliver a series of two IEEE distinguished lectures to researchers, engineers and students in Taiwan during his visit from 12/13 to 12/16 in 2008. There are more than 110 attendants for each lecture.

### B.2.3 Conferences

1. Robotics & Automation Society Taipei Chapter successfully held the Automation 2008 – The Ninth International Conference on Automation Technology, 06/13-06/15, 2008.
2. Computer Soc Taipei Chapter successfully held The Thirteenth IEEE Asia-Pacific Computer Systems Architecture Conference, 08/04-08/06, 2008. The attendance count is 150 (including 50 members).
3. IE/PELSoc Taipei Chapter successfully held the 2008 Taiwan Power Electronics Conference, 09/05, 2008. The attendance count is 570 (including 120 members).
4. Computer Soc Taipei Chapter successfully held the Information Security Conference 2008, 09/15-09/18, 2008. The attendance count is 140 (including 30 members).
5. CPMT Taipei Chapter successfully held The 3rd IMPACT and 10th EMAP Joint Conference 2008. 10/22~10/24, 2008. The attendance count is 518 (including 75 members).

6. Robotics & Automation Society Taipei Chapter successfully held 2008 International Automatic Control Conference, 11/21-11/23, 2008.

### **B.3 Recognized Educational Programs**

In light of the great success of the **Summer School for Communication Theory and Technologies** held jointly by Com and IT Chapters, we set aside a certain amount of budgets to encourage the Chapters for the Summer Camp Program. Two summer camps were held for the new graduate students for the orientation in year 2008, thereby attracting 100+ participants as well as recruiting many new members.

#### **B.3.1 Power Semiconductor Devices and Design Criteria**

Dr. Leo Lorenz (Infineon Technology, China), an IEEE Distinguished Lecturer and an IEEE Fellow, was invited by Profs. Chih-Fang Huang and Po-Tai Cheng of the Center for Advanced Power Technologies (CAPT), National Tsing Hua University (NTHU), Taiwan to hold a workshop entitled "Power Semiconductor Devices and Design Criteria" during July 7-15, 2008 in Hsinchu, Taiwan. This workshop drew nearly 30 participants from the nearby Hsinchu Science Industry Park, a semiconductor industry power house of Taiwan. The other 30 participants were graduate students in the field of power electronics or semiconductor devices. This 24-hour workshop covers fundamental semiconductor physics, operating principles of main power devices such as power diodes, MOSFETs, and IGBTs, limiting factors, driving and protection of power devices. This workshop offered a unique opportunity for industry/academic of power electronics and power semiconductor devices to share experiences, and opened the channel for future cooperations.

At the end of the workshop, Prof. Chen-Hsin Lien, chairperson of the Department of Electrical Engineering, NTHU, presented a plaque reading "Presented to Dr. Leo Lorenz for the inspiring lectures and persistent dedications" ("啓迪新智" in Chinese) for appreciation.

#### **B.3.2 2008 EM Education Initiative - Summer Program**

The first "2008 EM Education Initiative - Summer Program" seminar was held on 28 July to 1 August 2008 in Barry Lam Hall 101 of National Taiwan University (NTU). It received encouraging responses and the outcomes are fruitful. Although the first day was affected by a typhoon, the seminar still got attendees' great support. The number of the attendees reached to 184 people, and remarkably, the rate of full attendance was 76.6%, to 141 people, setting the best example of "Nothing Can Quench One's Thirst for Knowledge."

The seminar was originated from the IEEE Chapter Chairs meeting on 5 July 2007 held by Section Chair Ruey-Beei Wu, and the follow-up MTT/AP/EMC/GRS Joint Chapters meeting on 21 October 2007 initiated by EMC Chapter Chair Song-Tsuen Peng. Mandated to uplift the research momentum in electromagnetic (EM) field and to attract young talents to do R&D, the joint meeting received enthusiastic participation and constructive comments from the Chapter Chairs and members in EM field in Taiwan. One of its resolutions was to kick off a seminar for the new graduate students to review the primary knowledge and grasp the research trends on EM theory and applications in the summer before they enroll the graduate schools.

With strong financial support from MTT Chapter chaired by Fu-Tsan Tsai, the seminar was held by NTU Communication Research Center, thereby fully utilizing NTU's influence to gather venerable professors as speakers and to set up good holding patterns. The Center Director Huei Wang set up the table and organized the seminar agenda including 1 review and 10 tutorials. The invited speakers are among the best and the brightest, and therefore attracted many graduate students nationwide to participate in the seminar. The number of attendees was impressive and as many as 24 graduate schools have joined the efforts.

Highly involved in the program setup, the Taipei Section also sponsored the propagation and member recruiting activities with the NTU student chapter at the seminar place. 23 seminar attendees were recruited in the seminar, while more got acquainted with the chapter services, the importance of IEEE publications in R&D, and member super value offers. Some difficulties in recruiting new members were also experienced and improvements should be made to facilitate the website applications.

In summary, this seminar has reached many benchmark missions. For the first time, top people and resource in EM were gathered, a complete introduction to EM theory and applications was made in 30 hours within a week, and an omni-bearing concept was introduced to graduate students. It was also the first cooperation opportunity for MTT, AP, EMC, and GRS Chapters in Taiwan. All participants, including seminar organizers, speakers, and attendees, applauded the great success. They not only expected more outstanding outcome of the seminar next year, but also longed for the prosperity of EM field in Taiwan to take the center stage.

### **B.3.3 2008 Summer School for Communication Theory and Technologies**

Date: 08/04/2008~08/08/2008

Activity: Ten lectures on communications theory by eight invited speakers

Attendance: Members 31, Guests 211

Homepage: <http://140.113.13.93/wireless/IEEE/2008SummerSchool/index.html>

## **B.4 Students Activities**

There are currently six student branches in Taipei Section including NCTU (National Chiao Tung University) Student Branch, NTU (National Taiwan University) Student Branch, NCU (National Central University), YZU (Yuan-Ze University) Student Branch, NTUST (National Taiwan University of Science and Technology) Student Branch and NTOU (National Taiwan Ocean University) Student Branch. We also have three Student Branch Chapters including NTUST Student Branch Chapter of the Systems, Man & Cybernetics Chapter, NCTU Student Branch Chapter of the Consumer Electronics Chapter and YZU Student Branch Chapter of the Systems, Man, & Cybernetics Society. NTHU (National Tsing Hua University) and more Student Branches are under petition, and will be established in the coming year.

To promote student membership and to encourage student members' internationalization, Taipei Section approved a reward program. According to this program, student members can apply for a reimbursement of NT\$3000 if they attend and render a presentation in any IEEE sponsored international conference. This program is very attractive to students and more than 44 student members applied for and benefited from this program since in 2008.

### **B.4.1 Student Branches**

1. The Branch of Students : National Taiwan University of Science and Technology  
Name of Conference : 3<sup>rd</sup> IEEE SMC Student Branch Chapter at NTUST Study Meeting  
Attendance : associates of IEEE : 18 persons
2. The Branch of Students : National Chiao Tung University  
Name of Conference : 21th Microwave Camps  
Attendance : associates of IEEE : 10 persons ; non-associates of IEEE:120 persons
3. The Branch of Students : National Taiwan University of Science and Technology

Name of Conference : 4<sup>th</sup> IEEE SMC Student Branch Chapter at NTUST Study Meeting

Attendance : associates of IEEE : 18 persons

#### B.4.2 International Conference Reward Program for Student members

Student's Name	Conference
Chun-Jung, Tang	2007 IEEE International Electron Devices Meeting
Tzu-Huan, Cheng	2007 IEEE International Electron Devices Meeting
Tai-You, Lu	2008 International Solid-State Circuits Conference (ISSCC2008)
Ren-Huei, Tzeng	Applied Power Electronic Conference and Exposition (APEC)
Po-Hsuan, Tseng	IEEE Wireless Communications and Networking Conference (WCNC)
Yao-Hsin, Chou	IEEE-VTS 2008
Hsing-Chen, Lin	2008 IEEE International Symposium on Broadband Multimedia Systems and Broadcasting
Li-Wei, Lee	2008 International Conference on Machine Learning and Cybernetics
Yuan-Kai, Ko	2008 International Conference on Machine Learning and Cybernetics
Shih-Ming, Bai	2008 International Conference on Machine Learning and Cybernetics
Wenn-Chieh, Tsai	The 7 <sup>th</sup> International Conference on Autonomous and Multiagent Systems (AAMAS 2008)
Cheng-Long, Chuang	IEEE Congress on Evolutionary Computation 2008 of IEEE World Congress on Computational Intelligence 2008
Sheng-Huei, Dai	2008 IEEE International Reliability Physics Symposium
Shu-Han, Chen	20 <sup>th</sup> International Conference on Indium Phosphide and Related Materials (IPRM2008)
Chu-Jung, Yeh	2008 IEEE 67 <sup>th</sup> Vehicular Technology Conference (VTC) Spring
Yuan-Wen, Hsiao	2 <sup>nd</sup> International ESD Workshop
Wen-Chieh, Wang	2008 IEEE International Symposium on Circuits and Systems (2008 ISCAS)
Tzu-Ming, Wang	2008 IEEE International Symposium on Circuits and Systems (2008 ISCAS)
Chun-Yu, Lin	2008 IEEE International Symposium on Circuits and Systems (2008 ISCAS)
Chung-Jen, Chung	2008 IEEE International Frequency Control Symposium
Tung-Chieh, Chen	2008 45 <sup>th</sup> Design Automation Conference

Yu-Chuan, Chang	2008 IEEE Conference on Systems, Man and Cybernetics
Po-Hung, Lin	2008 45 <sup>th</sup> Design Automation Conference
Ing-Xiang, Chen	32 <sup>nd</sup> Annual IEEE International Computer Software and Applications Conference
Chun-Yu, Chen	2008 IEEE Workshop on Signal Processing Systems
Chien-Min, Chou	The 13 <sup>th</sup> IEEE Symposium on Computers and Communication (ISCC 2008)
Yu-Jen, Liu	IEEE Power & Energy Society 2008 General Meeting
Chi-Pei Lu	Solid State Devices and Materials (SSDM 2008)
Cheng-Yi, Peng	2008 9th International Conference on Solid-State and Integrated-Circuit Technology (ICSICT)
Ching-Fang, Huang	2008 9th International Conference on Solid-State and Integrated-Circuit Technology (ICSICT)
Chun-Hung, Chen	2008 7th International Conference on the Optical Internet (COIN 2008)
Wei-Jen, Huang	IEEE Asian Solid-State Circuits Conference (A-SSCC 2008)
Yung-Shou, Cheng	17 <sup>th</sup> Topical meeting on Electrical Performance of Electronic Packaging
Cheng-Cheng, Yen	2008 IEEE Asian Solid-State Circuit Conference
Meng-Chun, Wueng	IEEE 16 <sup>th</sup> International Symposium on Modeling, Analysis, and Simulation of Computer and Telecommunication Systems (MASCOTS)
Ruey-Bo, Sun	17 <sup>th</sup> Topical meeting on Electrical Performance of Electronic Packaging
Jia-Wei, Fang	International Conference of Computer-aided Design
Tso-Sheng, Chan	IEEE International Conference on Sustainable Energy Technologies (ICSET 2008)
Tse-Ju, Liao	IEEE International Conference on Sustainable Energy Technologies (ICSET 2008)
Chia-Yu, Lin	IEEE Asia Pacific Conference on Circuits and Systems
Yung-Chih, Tsai	2008 International Symposium on Information Theory and its Applications (ISITA 2008)
Hao-Hsiang, Chuang	IEEE Electrical Design of Advanced Packaging and Systems
Hsien Chung	The 10 <sup>th</sup> Electronics Packaging Technology Conference (EPTC 2008)
Hsien-Yuan, Liao	The 20 <sup>th</sup> Asia-Pacific Microwaves Conference (APMC 2008)

## **B.5 Awards**

- Taipei Section received R10 MDC (Membership Development Grant) of US\$1,157 due to the fast growth in the number of members ◦
- Professor Liou, Yuei-An, an IEEE Fellow and Director of Center for Space and Remote Sensing Research of National Central University received the Fellowship from Academy of Engineering Sciences · Russian Federation.
- Professor Homer H. Chen of National Taiwan University, also an IEEE Fellow, Received 2008 IEEE CSVT Transactions Best Paper Award".
- Taipei Section recommended Prof. Yi-Bing Lin of National Chiao-Tung University, also an IEEE Fellow, to apply for Region 10 Academia-Industry Partnership Award.

## **B.6 Chapter Activities (Supported by Chapters)**

### **B.6.1 List of Chapters and Chairs**

In the 2008 yearend, Industry Applications Society Chapter was founded. This increases the chapter count in Taipei Section from 28 to 29. The following is a list of chapters and chairs:

1. Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)  
Chapter Chair: Jean-Fu Kiang  
Title and Affiliation: Professor, Graduate Institute of Communication Engineering, National Taiwan University  
Email: [jfkiang@cc.ee.ntu.edu.tw](mailto:jfkiang@cc.ee.ntu.edu.tw)
2. Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)  
Chapter Chair: Yih-Min Chan  
Title and Affiliation: Professor, Department of Communication Engineering, National Central University  
Email: [ymchen@ce.ncu.edu.tw](mailto:ymchen@ce.ncu.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: Shih-Chieh Chang  
Title and Affiliation: Professor, Department of Computer Science, National Tsing Hua University  
Email: [scchang@cs.nthu.edu.tw](mailto:scchang@cs.nthu.edu.tw)
5. Chapter Name: Consumer Electronics Society Taipei Chapter (CE08)  
Chapter Chair: Tihao Chiang  
Title and Affiliation: Professor, Electronics Engineering, National Chiao Tung University  
Email: [tchiang@mail.nctu.edu.tw](mailto:tchiang@mail.nctu.edu.tw)
6. Chapter Name: Computational Intelligence Society Taipei Chapter (CIS11)  
Chapter Chair: Chih-Min Lin  
Title and Affiliation: Professor, Electrical Engineering, Yuan Ze University.

Email: [cml@saturn.yzu.edu.tw](mailto:cml@saturn.yzu.edu.tw)

7. Chapter Name: Communications Society Taipei Chapter (COM19)  
Chapter Chair: Ta-Sung Lee  
Title and Affiliation: Professor, Department of Communication Engineering, National Chiao Tung University  
Email: [tslee@mail.nctu.edu.tw](mailto:tslee@mail.nctu.edu.tw)
8. Chapter Name: Components Packaging, and Manufacturing Technology Society Taipei Chapter (CMPT21)  
Chapter Chair: Shen-Li Fu  
Title and Affiliation: President of I-Shou University.  
Email: [sifu@isu.edu.tw](mailto:sifu@isu.edu.tw)
9. Chapter Name: Control Systems Society Taipei Chapter (CS23)  
Chapter Chair: Li-Sheng Wang  
Title and Affiliation: Professor, Electrical and Control Engineering, National Chiao Tung University.  
Email: [wangli@iam.ntu.edu.tw](mailto:wangli@iam.ntu.edu.tw)
10. Chapter Name: Education Society Taipei Chapter (E25)  
Chapter Chair: Juing Huei Su  
Title and Affiliation: Dean, College of Electrical & Electronic Engineering, Lunghwa University of Science and Technology  
Email: [suhu@mail.lhu.edu.tw](mailto:suhu@mail.lhu.edu.tw)
11. 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)
12. 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)
13. Chapter Name: Electromagnetic Compatibility Society Taipei Chapter (EMC27)  
Chapter Chair: Song-Tsuen Peng  
Title and Affiliation: Director of Communication Research Center, Yuan Ze University.  
Email: [stpeng@saturn.yzu.edu.tw](mailto:stpeng@saturn.yzu.edu.tw)
14. Chapter Name: Geoscience & Remote Sensing Society Taipei Chapter (GRS29)  
Chapter Chair: Kun-Shan Chen  
Title and Affiliation: Professor, Center for Space and Remote Sensing Research, National Central University  
Email: [dkschen@csrsr.ncu.edu.tw](mailto:dkschen@csrsr.ncu.edu.tw)
15. Chapter Name: Industry Applications Society Taipei Chapter (IA34)  
Chapter Chair: Yen-Shin Lai  
Title and Affiliation: Professor, Dept. of Electrical Engineering, National Taipei University of Technology  
Email: [yslai@ntut.edu.tw](mailto:yslai@ntut.edu.tw)
16. Chapter Name: Industrial Electronics Society & Power Electronics Society Taipei Chapter (IE13 /PEL35)  
Chapter Chair: Faa-Jeng Lin  
Title and Affiliation: Professor, Dept. of Electrical Engineering, National Central University

Email: [linfj@ee.ncu.edu.tw](mailto:linfj@ee.ncu.edu.tw)

17. Chapter Name: Information Theory Society Taipei Chapter (IT12)  
Chapter Chair: Li-Chun Wang  
Title and Affiliation: Professor, Department of Communication Engineering, National Chiao Tung University  
Email: [lichun@cc.nctu.edu.tw](mailto:lichun@cc.nctu.edu.tw)
18. Chapter Name: Lasers & Electro-Optics Society Taipei Chapter (LEO36)  
Chapter Chair: Gong-Ru Lin  
Title and Affiliation: Professor, Graduate Institute of Photonics and optoelectronics, National Taiwan University  
Email: [gmlin@ntu.edu.tw](mailto:gmlin@ntu.edu.tw)
19. Chapter Name: Magnetics Society Taipei/Tainan joint Chapter (MAG33)  
Chapter Chair: Ching-Ray Chang  
Title and Affiliation: Chair, Department of Physics, National Taiwan University  
Email: [crchang@phys.ntu.edu.tw](mailto:crchang@phys.ntu.edu.tw)
20. Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)  
Chapter Chair: Fu-Tsan Tsai  
Title and Affiliation: Vice President, Gemtek Technology Co.,Ltd.  
Email: [jorson@gemtek.com.tw](mailto:jorson@gemtek.com.tw)
21. Chapter Name: Oceanic Engineering Society Taipei Chapter (OE22)  
Chapter Chair: Forng-Chen Chiu  
Title and Affiliation: Professor, Dept. 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)
22. Chapter Name: Power Engineering Society Taipei Chapter (PE31)  
Chapter Chair: Shi-Lin Chen  
Title and Affiliation: Professor, Department of Electrical Engineering, Chung Yuan Christian University  
Email: [slchen@dec.ee.cycu.edu.tw](mailto:slchen@dec.ee.cycu.edu.tw)
23. Chapter Name: Product Safety Engineering Society Taipei Chapter (PSE43)  
Chapter Chair: Zenon Wang  
Title and Affiliation: Manager, Dell.  
Email: [zenon\\_wang@dell.com](mailto:zenon_wang@dell.com)
24. Chapter Name: Robotics & Automation Society Taipei Chapter (RA24)  
Chapter Chair: Kao-Shing Hwang  
Title and Affiliation: Professor, Department of Electrical Engineering  
National Chung Chen University  
Email: [hwang@ccu.edu.tw](mailto:hwang@ccu.edu.tw)
25. Chapter Name: Reliability Society Taipei Chapter (RL07)  
Chapter Chair: Shiuhyng Shieh  
Title and Affiliation: Professor and Director of National Chiao Tung University  
Email: [ssp@cs.nctu.edu.tw](mailto:ssp@cs.nctu.edu.tw)
26. Chapter Name: Systems, Man & Cybernetics Taipei Chapter (SMC28)  
Chapter Chair: Shun-Feng Su  
Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan University of Science and Technology  
Email: [su@orion.ee.ntust.edu.tw](mailto:su@orion.ee.ntust.edu.tw)
27. Chapter Name: Signal Processing Society Taipei Chapter (SP01)  
Chapter Chair: Tihao Chiang

Title and Affiliation: Professor, Electronics Engineering, National Chiao Tung University

Email: [tchiang@mail.nctu.edu.tw](mailto:tchiang@mail.nctu.edu.tw)

28. Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)  
Chapter Chair: Wei-Zen Chen  
Title and Affiliation: Associate Professor, Electronics Engineering, National Chiao-Tung University  
Email: [wzchen@mail.nctu.edu.tw](mailto:wzchen@mail.nctu.edu.tw)
29. Chapter Name: Vehicular Technology Society Taipei Chapter (VT06)  
Chapter Chair: Yu-Chee Tseng  
Title and Affiliation: Chair, Department of Computer Science, National Chiao Tung University  
Email: [yctseng@cs.nctu.edu.tw](mailto:yctseng@cs.nctu.edu.tw)

### B.6.2 Detailed Activity Report

All chapters are very active in supporting their related activities, such as conferences, workshops and meetings. In what follows, detailed activity reports are provided by some chapters:

#### 1. **IEEE Broadcast Tech Soc Taipei Chapter Annual Activities Report (BT02)**

Prepared by Yih-Min Chen (Chapter Chair)

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

- 03/21/2008  
Lecture :Take the opportunity and create success--on the development histories of electronics and optoelectronics industries in Taiwan  
Speaker : IEEE fellow Eric G. Lean  
Attendance: 17 IEEE members  
85 guests  
Category: educational
- 03/23/2008  
Former and Elected Chair Meeting  
Attendance: 6 IEEE members
- 12/6/2008  
Member Meeting of China Radio Association (CRA)  
Attendance: 250 guests

#### 2. **IEEE Computer Soc Taipei Chapter Annual activities Report (C16)**

Prepared by Churn-Jung Liao, Chapter Secretary

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

- 08/04/2008~08/06/2008  
*The Thirteenth IEEE Asia-Pacific Computer Systems Architecture Conference, Hsinchu, Taiwan.*  
Attendance: 50 Members, 100 Guests  
Activities: two invited speeches and two affiliated workshops  
Homepage: <http://www.ccrcc.nthu.edu.tw/acsac2008/index.htm>
- 09/15/2008~09/18/2008  
*Information Security Conference 2008, Taipei, Taiwan*  
Attendance: 30 Members, 110 Guests  
Activities: two invited speeches and several contributed talks.  
Homepage: <http://isc08.twisc.org/index.html>

### 3. IEEE Circuits and Systems Soc Taipei Chapter Annual Activities Report (CAS04)

Prepared by Shih-Chieh Chang, Chapter Chair

Four meeting reports have been submitted to IEEE in 2008. In 2008, we have already achieved the following:

- 08/06/2008 *Annual meeting for IEEE Taipei CAS member in Kenting*
- 09/09/2008 *Cosponsor of 3D IC Design and Architecture Workshop in Hsinchu, Taiwan*
- 09/10/2008 *IEEE CAS DLP speech in Hsinchu, Taiwan*  
 Since Taiwan has strong industries for IC fab/design, there are many design houses going into nano-technologies. To enhance the professional knowledge and vitality both for local industry and academic, we invited CAS DLP speaker Prof. David Pan to give a speech about "Synergistic Modeling and Optimization for Nanometer IC Design/Manufacturing Integration" in Hsinchu, Taiwan on Sept. 10, 2008. The speech attracted 88 attendees, including 20 IEEE members, 10 student members, and 58 non-IEEE members. We would like to mention the DLP speech is not only good for industry and academic but also a good "recruiting vehicle" for IEEE membership.
- 09/10/2008 *VLSI/CAD workshop in Hsinchu, Taiwan*  
 Except for the CAS DLP, we also held a VLSI/CAD workshop inviting four foreign speakers to share their research achievements.

The agenda is listed below.

#### IEEE CAS DLP and VLSI/CAD Workshop

08:00~08:30	Registration
08:30~09:50	<b>Synergistic Modeling and Optimization for Nanometer IC Design/Manufacturing Integration</b> David Z. Pan (DLP Speaker) Department of Electrical and Computer Engineering University of Texas at Austin
09:50~10:20	Coffee Break
10:20~11:40	<b>Delay Test Quality for Logic Circuits</b> Seiji Kajihara Department of Computer Science and Electronics of Kyushu Institute of Technology
11:40~13:00	Lunch
13:00~14:20	<b>Reliable Nanometer IC Design on Top of Unreliable Transistors</b> Yuan Xie Department of Computer Science and Engineering Pennsylvania State University
14:20~14:30	Break
14:30~15:50	<b>Multi-Scale Thermal Analysis for Nanometer-Scale Integrated Circuits</b> Li Shang Electrical and Computer Engineering University of Colorado at Boulder
15:50~16:00	Break
16:00~17:20	<b>New Synthesis and Architecture Solutions for Reconfigurable ICs</b> Deming Chen Department of Electrical and Computer Engineering University of Illinois, Urbana-Champaign

### 4. IEEE Consumer Electronics Society Taipei Chapter Annual Activities Report (CE08)

Prepared by Tihao Chiang

In December 5, 2008, the consumer electronics society has sponsored The 2008 Workshop on Consumer Electronics (WCE 2008). It received a total of 200 submitted papers, each being evaluated by 2 reviewers. After the evaluation, WCE 2008 accepted 148 papers to include them into the Proceedings of the WCE 2008. There are more than 200 people coming to Jinwen University to attend the WCE 2008 conference. It has successfully promoted the exchange of experience between academics and industry.

The industry is represented by a total of nine companies to exhibit their products during the WCE 2008 conference. WCE 2008 has successfully promoted the exchange of experience between academics and industry.

The WCE 2008 conference invites Professor Xi-Zhao Wang (The Distinguished Lecture of the IEEE Systems, Man, and Cybernetics Society) and Professor Chang-Yu Wu (IEEE Life Fellow) to act as Keynote Speakers for the WCE 2008, which has successfully promoted the distinguished experts of the IEEE to share their experience with the experts in academics and industry.

#### **5. IEEE Computational Intelligence Society Taipei Chapter Annual Activities Report (CIS11)**

Prepared by Chih-Min Lin, Chapter Chair

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

- 11/14/2008~11/15/2008  
*2008 Conference on Automatic Control Systems, Tainan, Taiwan.*  
Attendance: Members 127, Guests 81  
Activities: Three Keynote speakers, 37 Sessions, One member meeting.
- 12/20/2009~12/20/2008  
*2008 The Sixteen Fuzzy Theory and Application Conference.*  
Attendance: Members 71, Guests 56  
Activities: One Keynote speaker, 21 Sessions, One member meeting.

#### **6. IEEE ComSoc Taipei Chapter Annual Activities Report (COM19)**

Prepared by Po-Ning Chen, Chapter Chair

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

- 01/20/2008~01/21/2008  
*2008 Spring Workshop on Information Theory & Communications, Nantou, Taiwan*  
Activity: Nine invited speeches and one member meeting.  
Attendance: Members 90, Guests 121  
Homepage: <http://itcc2008.nchu.edu.tw/>
- 08/04/2008~08/08/2008  
*2008 Summer School for Communication Theory and Technologies*  
Activity: Ten lectures on communications theory by eight invited speakers  
Attendance: Members 31, Guests 211  
Homepage: <http://140.113.13.93/wireless/IEEE/2008SummerSchool/index.html>
- 08/27/2008~08/28/2008  
*2008 Fall Workshop on Information Theory & Communications, Tainan, Taiwan.*  
Activity: Eight invited talks and one member meeting  
Attendance: Members 57, Guests 94  
Homepage: <http://itcc2008.ksu.edu.tw/>
- 09/26/2008~09/27/2008  
*2008 Workshop on Computer Communication Networks*  
Activity: Five technical sessions and eighteen invited speeches  
Attendance: Members 80, Guests 56  
Homepage: <http://www.com.ncnu.edu.tw/WCCN2008>
- 12/11/2008~12/16/2008

*2008 IEEE Distinguished Lecturer Tour*

Activity: Lecture by Prof. Tho Le-Ngoc, Department of ECSE, McGill University, Canada

Title: Adaptive Transmission & Resource Allocation Techniques for Broadband Communications

Attendance: Members 66, Guests 89

**Five** unreported activities:

- 01/18/2008  
Talk by Dr. Dave Cavalcanti, Wireless Communications and Networking Dept., Philips Research North America  
Title: Cognitive Radio Networks: New Opportunities and Challenges for Efficient Spectrum Utilization  
Homepage: <http://www.cm.nctu.edu.tw/news/news.php?Sn=8099>
- 03/03/2008  
Activity: Talk by Dr. Wan-Jen Huang, Univ. of Southern California  
Title: Relay-Assisted Decorrelating Multiuser Detector (RAD-MUD) for Cooperative CDMA Networks
- 03/12/2008  
Activity: Talk by Prof. J. Morris Chang, Univ. of Iowa State  
Title: A New ACK Policy to Mitigate the Effects of Coexisting IEEE 802.11/802.11e Devices
- 04/22/2008  
Activity: Talk by Dr. Justin Chuang  
Title: Quarter Century of Wireless Communications Research and Engineering: A Personal Perspective  
Talk by Dr. Qi Bi  
Title: The Emerging Technologies in Wireless Mobile Systems
- September 2008  
Activity: *2008 Young Scholar Best Paper Award* (co-held by *ITSoc Taipei Chapter & ComSoc Taipei/Tainan Chapters*)  
Recipient: Prof. Tsang-Yi Wang  
Paper title: Collaborative Event-Region and Boundary-Region Detections in Wireless Sensor Networks  
Homepage:  
[http://www.cm.nctu.edu.tw/~IEEEITComSoc/news/2008taipei\\_paper\\_award.htm](http://www.cm.nctu.edu.tw/~IEEEITComSoc/news/2008taipei_paper_award.htm)

**7. IEEE CPMT Taipei Chapter Annual Activities Report (CPMT21)**

Prepared by Shen-Li Fu, Chapter Chair

- 10/22/2008~10/24/2008  
*The 3rd IMPACT and 10th EMAP Joint Conference 2008, Taipei, Taiwan*  
Attendance: Members 75, Guests 443  
Activities: Four keynote speeches, twenty eight invited speeches and Best Student Award & Outstanding Paper Award.
- 12/1/2008  
*IEEE Distinguished Lecture, Kaohsiung, Taiwan*  
Attendance: Members 7, Guests 24  
Activities: A speech entitled "Enabling Technologies for 3D IC Integration and Packaging" by Dr. John Lau.

**8. IEEE Education Soc Taipei Chapter Annual Activities Report (E25)**

Prepared by Juing-Huei Su, Chapter Chair

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

- 09/22/2008  
*How to teach vocational high school teachers to build micromouse*  
Attendance: Members 2, Guests 5  
Activities: Technical meeting.

- 12/09/2008  
*Experiences in accreditation of engineering departments in Lunghwa University of Science and Technology*  
Attendance: Members 2, Guests 12  
Activities: Technical meeting.

#### 9. **IEEE EDS Taipei Chapter Annual Activities Report (ED 15)**

Prepared by Steve Chung, Chapter Chair

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

- 04/21/2008- 04/23/2008  
International Symposium on VLSI-TSA  
Attendance: Members 150, Guests 350  
Activities: 3 keynote talks, 57 contributed paper presentations, one-day short course  
Homepage: <http://www.edsTaipei.edu.tw/>
- 05/02/2008  
*Power Semiconductor: An Enabling Technology for Energy Efficiency and Embedded Power Integration*  
Attendance: Members 20, Guests 30  
Activities: DL invited talk  
Homepage: <http://www.edsTaipei.edu.tw/>
- 07/07/2008 and 07/07/2008  
Power Semiconductor Devices and Design Criteria workshop  
Attendance: Members 45, Guests 20  
Activities: a tutorial lectures on semiconductor power devices with a recruitment of 20 student members  
Homepage: <http://www.edsTaipei.edu.tw/>
- 11/17/2008  
Successful Entrepreneurship in the field of Fabless Semiconductors  
Attendance: Members 30, Guests 120  
Activities: DL invited talk  
Homepage: <http://www.edsTaipei.edu.tw/>
- 11/20/2008  
Research Activities of IMEPKU in Resistive-RAM and Other Selected Topics  
Attendance: Members 10, Guests 30  
Activities: invited talk  
Homepage: <http://www.edsTaipei.edu.tw/>
- 11/28/2008- 11/29/2008  
International Electron Devices and Materials Symposium  
Attendance: Members 60, Guests 270  
Activities: 2 keynote talks, 6 invited speakers, 200 contributed paper presentations, one-day short course  
Homepage: <http://www.edsTaipei.edu.tw/>

#### 10. **IEEE ComSoc Taipei Chapter Annual Activities Report (EMB18)**

Prepared by Jyh-Horng Chen, Chapter Chair

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

- *Biomedical Electronics and Bioinformatics Camp III, 2<sup>ed</sup> July to 4<sup>th</sup> July, 2008*  
Venue: National Taiwan University NTUEE building III, Taipei, Taiwan.  
Purpose: To promote Biomedical informatics and Biomedical Electronics to EE, CS students  
Attendee: Bachelor, Master, PhD graduates, 140 students in total  
A very successful event for people with EE specialties, we will continue to have this camp in 2009
- *Molecular Imaging Training Course, 7<sup>th</sup>- 24<sup>th</sup>, July, 2008*  
Venue: Rm 103, National Taiwan University Medical College, Taipei  
Purpose: To integrate various scholars for innovative molecular imaging

diagnosis and therapy; to establish research teams for molecular imaging in Taiwan

Attendee: Professors, PhD graduates, MD, 34 participants in total

Course including lectures and labs on Molecular Imaging Center at NTU

- *NanoBiotechnology Training Course, 7<sup>th</sup>- 26<sup>th</sup>, July, 2008*

Venue: Rm 103, National Taiwan University Medical College, Taipei

Purpose: To introduce fundamentals of Nanomedicine and related industrial challenges issues in Taiwan

Attendee: Professors, PhD graduates, MD, 42 participants in total

Course including lectures and labs on Genome Medical Center at NTU

- *Seminar in NanoBiotechnology, 28<sup>th</sup>, July- 12<sup>th</sup>, Aug, 2008*

Venue: Rm 102, National Taiwan University Medical College, Taipei

Attendee: Professors, PhD graduates, MD, 38 participants in total

- *Taiwan-Japan Bilateral Workshop on Nanobiotechnology, 17<sup>th</sup> & 20<sup>th</sup>, October, 2008*

Venue: Rm 202, National Taiwan University Medical College, Taipei

Attendee: Professors, PhD graduates, MD, 43 participants in total

- *Taiwan-New Zealand Bilateral Workshop on Nanobiotechnology, 26<sup>th</sup>, October, 2008*

Venue: Rm 202, National Taiwan University Medical College, Taipei

Attendee: Professors, PhD graduates, MD, 38 participants in total

#### 11. IEEE Geoscience and Remote Sensing Soc Taipei Chapter Annual Activities Report (GRS29)

Prepared by Kun-Shan Chen, Chapter Chair

**Four** Annual Activities and Professional and Educational Activity Reports:

- 06/18/2008  
Topic: *"A Parallel Approach for Initialization of High-Order Statistic Anomaly Detection in Hyperspectral Imagery"*  
Lecturer: Prof. Hsuan Ren, National Central University  
Place: National Central University
- 08/01/2008  
Topic: *"EM Waves as a Tool for Earth Observation", 2008 EM Education Initiative - Summer Program*  
Lecturer: Prof. Kun-Shan Chen, National Central University  
Place: National Taiwan University
- 11/13/2008  
Topic: *"Application of logistic regression for landslide susceptibility mapping after Taiwan Chichi Earthquake"*  
Lecturer: Prof. Yang-Lang Chang, National Taipei University of Technology  
Place: National Taipei University of Technology
- 10/05/2008~12/31/2008  
2008 Best Thesis Award, Taipei Chapter, IEEE Geoscience & Remote Sensing Society

#### 12. IEEE IE/PELSoc Taipei Chapter Annual Activities Report (IE13/PEL35)

Prepared by Faa-Jeng Lin, Chapter Chair

**Four** activities reports have been submitted to IEEE. They are listed below.

- 07/07/2008~07/15/2008  
*2008 Summer School for Power Semiconductor Devices and Design Criteria, Hsinchu, Taiwan.*  
Attendance: Members 30, Guests 30  
Activities: Seven Courses on Power Semiconductor Devices were given  
Speakers: Dr. Leo Lorenz, IEEE Fellow, IEEE Distinguished Lecturer
- 09/05/2008~09/05/2008  
*2008 Taiwan Power Electronics Conference, Tainan, Taiwan.*  
Attendance: Members 120, Guests 450

Activities: Four invited speeches and one member meeting.

Homepage:

<http://nscpower.ee.ncu.edu.tw/news2008/2008TPECECallforPapers.doc>

- 10/25/2008~10/25/2008

*2008 Annual NSC Power Engineering Division Projects Demonstration, Taichung, Taiwan.*

Attendance: Members 90, Guests 40

Activities: Universities Students' Projects Competition.

- 12/05/2007~12/06/2008

*2008 Symposium on Electrical Power Engineering, Tainan, Taiwan.*

Attendance: Members 110, Guests 705

Activities: Five invited speeches and one member meeting.

Homepage:

[http://nscpower.ee.ncu.edu.tw/news2008/CallForPaper\\_power2008.doc](http://nscpower.ee.ncu.edu.tw/news2008/CallForPaper_power2008.doc)

### 13. **IEEE Information Theory Taipei Chapter Annual Activities Report (IT12)**

Prepared by Li-Chun Wang, Chapter Chair

In this year, we continue our tradition to arrange the semi-annual IT/COM joint workshop held in Tai-Chung (January 20~21) and Tainan (August 27 ~ 28), respectively. These semi-annual meetings are aimed to serve our regular members to meet twice a year. For our student members, we arrange the summer school in National Chiao Tung University (Aug. 4 ~ 8). Besides these regular meetings and activities, we also arranged some technical speeches. Totally, in 2008, we had 18 speeches in 11 technical activities, and eight courses in five day educational activities.

### 14. **IEEE LEOS Taipei Chapter Annual Activities Report (LEO36)**

Prepared by Gong-Ru Lin, Chapter Chair

#### **Optics and Photonics Taiwan (OPT) 2008 Dec 4-6 Taipei**

– IEEE LEOS Taipei Chapter sponsored NT 30000

LCD, LED, DSC, optical components are among some of the top ranked photonic production industries in Taiwan. The revenue from TFT-LCD alone in 2007 has been reported to reach 50 Billion NT dollars which is more than 40% of the total worldwide revenue, and this trend of growth and expansion is continuing. In addition, emerging technologies in areas of environmentally friendly green energy generation of solar cell and energy saving of solid state lighting are among the hottest pursuits in photonic industries of 2008.

Optics and Photonics Taiwan (OPT) is recognized as the largest annual meeting of photonics in academic and research communities of Taiwan, hosted by major universities and professional societies. Last year's meeting was successfully hosted by National Chung-Shing University in Taichung drawing nearly 1800 attendees. This year, **OPT 2008** is greatly expanded and poised to become a major international conference which is held together with the Int'l Conference on Laser Applications in Life Science (**LALS 2008**), the Int'l Symposium in Solar Cell Technology (**ISSCT 2008**), and the Int'l Symposium on Flexible Electronics & Display (**ISFED 2008**). **OPT 2008** is intended to cover all the advanced technologies for Optics and Photonics with emphasis in bio-photonics, solar energy and flexible display/electronics. We are very pleased and indeed honored to have many world experts come to join the event as keynote, plenary and invited speakers. They will be joined by our local faculty members and graduate students who will contribute many exciting oral/poster presentations in the technical program highlighting some of the recent achievements of Taiwan's photonics and academic community. Short courses in solar energy and LED presented by renowned speakers will also be introduced to participants who like to learn and gain technological entry into the hot subjects of optics and photonics of today. <http://www.opt2008.tw/>

OPT 2008 invited OSA and IEEE previous president

Anthony Siegman (Stanford University, USA) OSA previous president

Alan Willner (University of Southern California, USA) LEOS previous president  
 Eugene Arthurs (The International Society for Optical Engineering, USA) SPIE president  
 To deliver wonderful lectures and some Photo of OPT activities

**15. IEEE Magnetics Soc, Taipei/Tainan Joint Chapter Annual Activities Reprot (MAG33)**

Prepared by Ching-Ray Chang, Chapter Chair

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

- 06/10/2008~06/10/2008  
*2007 MRAM Workshop , Taipei, Taiwan.*  
 Attendance: Members 60, Guests 10  
 Activities: Invited speeches .
- 10/08/2008~10/08/2008  
*Magnetic industrial symposium, Taipei, Taiwan.*  
 Attendance: Members 15, Guests 65  
 Activities: Invited speeches
- 11/26/2008~11/26/2008  
*Forum in Condensed Matter Science , Taipei, Taiwan.*  
 Attendance: Members 30, Guests 20  
 Activities: Invited Speeches and Panel Discussion (Prof. Peter Fulde, Prof. Sadamichi Maekawa)
- 12/08/2008  
*2008 IEEE Distinguished Lecture series*  
 Attendance: Members 40, Guests 30  
 Activities: Series Speech made by Prof. Robert Stamps

**One** unreported Activity to IEEE

- 08/04/2008  
*Dr. Stuart Parkin Special Seminar*  
 Attendance: Members 10, Guests 70  
 Activities: Invited Speeches

**16. IEEE Microwave Theory and Techniques Society Taipei Chapter Annual Activities Report (MTT17)**

Prepared by Fu-Tsan Tsai, Chapter Chair

**Three** meeting reports as below.

- 01/24/2008~01/25/2008  
*2008 Distinguished Lecture-Network Methods for Electromagnetics*  
 Attendance: Members 37, Guests 50.  
 Lecturer: Prof . Song-Tsuen Peng (IEEE fellow, SPIE fellow, OSA fellow)  
 Activities: Four speeches  
 Speeches subject:  
 (1) Introduction to Network Methods in Electromagnetics  
 (2) Mathematical and Physical Foundations for Electromagnetics  
 (3)Transmission Line Network Representation  
 (4)Plane Wave Scattering and Guiding by Uniform Dielectric Layers  
 Photos: <http://140.113.166.92/wave/activity-20081221.htm>
- 07/28/2008~08/01/2008  
*2008 EM Education Initiative-Summer Program*  
 Attendance: Members 39, Guests 145  
 Activities: Eleven Courses were given by Eleven Invited Speakers.  
 Photos: <http://140.113.166.92/wave/activity-20081222.htm>
- 10/03/2008  
*2008 Fall Workshop and member meeting*  
 Attendance: Members 59, Guests 120.

Activities: Two invited speeches and one member meeting.

Speeches subject:

(1) "Current Status and Future Trends for Si and Compound MMICs in Millimeter-Wave Regime and Related Issues for System on Chip (SoC) and/or System in Package (SiP)" by Prof. Huei Wang

(2) "Market and technology developing trend of Wireless" by Dr. Zheng-Ren Yang.

Photos: <http://140.113.166.92/wave/activity-20081223.htm>

**17. IEEE Power Engineering Society Taipei Chapter Annual Activities Report (PE31)**

Prepared by Shi-Lin Chen, Chapter Chair

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

- 05/12/2008~06/12/2008  
*The 29<sup>th</sup> Symposium on Electrical Power Engineering, Tainan, Taiwan, 5~6, Dec., 2008.*  
Attendance: Members 150, Guests 750  
Activities: Seven invited speeches.  
Homepage: <http://163.26.227.175/stut/>
- 05/09/2008  
*The 7<sup>th</sup> Taiwan Power Electronics Conference & Exhibition, 5 Sept., 2008.*  
Attendance: Members 70, Guests 495  
Activities: Three invited speeches.  
Homepage: <http://www2.ksu.edu.tw/ksuTPECE/index.html>

**18. IEEE Robotics & Automation Society Taipei Chapter Annual Activities Report (RA24)**

Prepared by Kao-Shing Hwang, Chapter Chair

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

- 03/07/2008  
*Forum on Applications of SoC on Robotic Systems*  
Venue: National Chung Cheng University, Taiwan  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 05/20/2008  
*Workshop on Use of Computer Vision in Robotics*  
Venue: National Chung Cheng University, Taiwan  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 05/22/2008  
*Workshop on Introduction of Robotic Programming*  
Venue: National Chung Cheng University, Taiwan  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 06/13-15, 2008  
*Automation 2008 – The Ninth International Conference on Automation Technology*  
Venue: National Kaohsiung First University of Science and Technology, Taiwan  
Organizer: National Kaohsiung First University of Science and Technology  
Conference Chair: Professor Han- Pan Huang  
Website: <http://auto2008.nkfust.edu.tw/>
- 06/26/2008  
*Forum on Applications of IC Design on Robotic Systems*  
Venue: National Chung Cheng University, Taiwan  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 08/06/2008  
*Forum on Embedded System Design of Robotic System*

- Venue: National Chung Cheng University, Taiwan  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 08/13/2008  
*Forum on Embedded System Design of Robotic System*  
Venue: National Chung Cheng University, Taiwan  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 09/08-09, 2008  
*Forum on Embedded System Design of Robotic System*  
Venue: Department of Electrical Engineering National Chung Hsing University  
Organizer: National Chung Hsing University  
Chair: Professor Kao-Shing Hwang
- 11/12/2008  
*Workshop of Kalmann Filter for the Application of Robotics*  
Venue: National Chung Cheng University  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 11/19/2008  
*Workshop of Curriculum Design of Robotic System*  
Venue: Department of Electrical Engineering National Chung Hsing University  
Organizer: National Chung Hsing University  
Chair: Professor Kao-Shing Hwang
- 11/21/2008  
*Workshop of Curriculum Design of Robotic System*  
Venue: National Chung Cheng University  
Organizer: National Chung Cheng University  
Chair: Professor Kao-Shing Hwang
- 11/21-23, 2008  
*2008 International Automatic Control Conference*  
Venue: National Cheng Kung University, Taichung, Taiwan  
Organizer: Department of Electrical engineering National Cheng Kung University  
Conference Chair: Professor Tsu-Shen Lee Ching-Chih Tsai  
Website: <http://cacs20087.nckhu.edu.tw/>
- 11/25/2008  
*Workshop of Curriculum Design of Robotic System*  
Venue: National Kaohsiung First University of Science and Technology, Taiwan  
Organizer: National Kaohsiung First University of Science and Technology  
Chair: Professor Kao-Shing Hwang

**19. IEEE Reliability Soc Taipei Chapter Annual Activities Report (RL07)**

Prepared by Shiuhyng Shieh, Chapter Chair

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

- 03/05/2008  
*The Technical Lecture*  
Attendance: Members 1, Guests 50  
Activities: Speech made by Dr. Tyng-Luh Liu, Institute of Information Science, Academia Sinica
- 04/09/20008  
*The Technical Lecture*  
Attendance: Members 1, Guests 40  
Activities: One invited speech. Manager of BizAnchor Service Network
- 05/15/2008  
*The Educational Lecture*  
Attendance: Members 2, Guests 60  
Activities: Speech made by Prof. Huei-Wen Ferng, National Taiwan University of Science and Technology.

- 07/21/2008~07/22/2008  
*IEEE Delegation Itinerary*  
Attendance: Members 5, Guests 15  
Activities: One invited speech and one member meeting. IEEE reliability society
- 08/20/2008  
*The Educational Lecture*  
Attendance: Members 1, Guests 40  
Activities: Speech made by Dr. Chuang, Trees-Juen, Genomics research Center, Academia
- 09/23/2008  
*The Educational Lecture*  
Attendance: Members 2, Guests 50  
Activities: Speech made by Prof. C.R. Tseng, Chung Hua University
- 10/14/2008  
*The Educational Lecture*  
Attendance: Members 2, Guests 50  
Activities: Speech made by Prof. Sun Wu, National Chung Cheng University
- 10/27/2008  
*The Educational Lecture*  
Attendance: Members 1, Guests 40  
Activities: Speech made by Andy Keane, General Manager Tesla GPU Computing, NVIDIA
- 11/05/2008  
*The Technical Lecture*  
Attendance: Members 1, Guests 60  
Activities: Speech made by Prof. Shang-Hong Lai, National Tsing Hua University.
- 11/27/2008  
*The Educational Lecture*  
Attendance: Members 2, Guests 70  
Activities: Speech made by Ian Chen, NVIDIA Taiwan, Senior Manager.

## 20. IEEE SMC Society Taipei Chapter Annual Activities Report (SMC28)

Prepared by Shun-Feng Su, Chapter Chair (Dec. , 2007 - Dec. , 2009)

Our meeting report consists of three parts. The first part is the meeting of the SMC Taipei chapter officer, the second part is about the invited talks, and the final part is the sponsored/co-sponsored conferences.

**Part 1:** SMC officer meeting: We have held three meeting to discuss the chapter activities and the membership promotion mission on 3/21, 6/6, and 10/9. Afterward, we had send out three membership promotion flyers to socialite colleagues to join the IEEE SMC society.

**Part 2:** In 2008, we have organized various invited talks. Some of them were also supported by the SMC DL programs. The details are listed below.

- 3/19/2008~3/25/2008  
Invited talks  
Attendance: Member 15 and Guests 70  
Activities: The speaker is Prof. C. L. Philip Chen of the Department of Electrical and Computer Engineering, University of Texas, San Antonio. Two talks: one is "Optimal Acceleration Schedules for Life Extending and Adaptive Sensor Fault Detection and Identification" and the other is "Steganography and Steganalysis: An Overview of Research and Challenges"  
Homepage: <http://smctaipeichapter.no-ip.org/main/en/node/73>
- 9/23/2008~9/27/2008  
Invited talks (The SMC DL Program supported)  
Attendance: Member 60 and Guests 160

Activities: The speaker is Prof. Hideyuki Takagi, of Design, Kyushu University. Two talks with the same topic as “Humanized Computational Intelligence with Interactive Evolutionary Computation,” in two different universities.

- 10/4/2008~10/9/2008  
Invited talks  
Attendance: Member 60 and Guests 160  
Activities: The speaker is Dr. Daniel Yeung, President, IEEE Systems, Man and Cybernetics Society. Two talks with the same topic as “Feature and Sample Reduction for Supervised Classification Problems,” in two different Universities.
- 10/4/2008~10/10/2008  
Invited talks (The SMC DL Program supported)  
Attendance: Member 40 and Guests 140  
Activities: The speaker is Dr. William A. Gruver President of Intelligent Robotics Corporation. Two talks with the same topic as “Distributed Intelligence Systems: Technologies and Applications,” in two different places.
- 10/4/2008~10/10/2008  
Invited talks  
Attendance: Member 40 and Guests 140  
Activities: The speaker is Prof. Ljiljana Trajkovic of School of Engineering Science, Simon Fraser University. Two talks are “Mining Traffic Data,” and “Stability Analysis of TCP/RED Communication Algorithms.”
- 10/4/2008~10/10/2008  
Invited talks  
Attendance: Member 40 and Guests 140  
Activities: The speaker is Prof. Imre Rudas, President of Budapest Tech. Two talks with the same topic as “Recent advances in information aggregation in intelligent systems,” in two different places.
- 10/6/2008~10/11/2008  
Invited seminar  
Attendance: Member 20 and Guests 50  
Activities: The speaker is Dr. Keith Hipel Systems Design Engineering, University of Waterloo. Three talks are “Trade versus the Environment: Strategic Settlement from a Systems Engineering Perspective,” “Strategic opportunities in Systems Engineering”, and “Competition and Cooperation in Societal and Technological Systems of Systems.”
- 10/8/2008~10/11/2008  
Invited talks  
Attendance: Member 30 and Guests 130  
Activities: The speaker is Prof. Mengchu Zhou, Dept. of Electrical and Computer Engineering. New Jersey Institute of Technology. Two talks with the same topic as “Petri nets and applications to Web Service Composition,” in two different places.
- 12/02/2008~12/09/2008  
Invited talks (The SMC DL Program supported)  
Attendance: Member 20 and Guests 65  
Activities: The speaker is Prof. Xi-Zhao Wang of Mathematics and Computer Science, Hebei University. The topic is “Fuzzy integral and its application to classification.”

**Part 3:** In 2008, we have organized one workshop on 10/9. 2008 Workshop on Systems, Man and Cybernetics, Attendance: Members 50, Guests 100, Activities: The workshop invited five speeches and also offered a video program. Homepage: <http://smctaipeichapter.no-ip.org/main/en/category/specail-issue/smc2008-workshop> . We also cosponsor various conferences and Forums as follow.

- 05/23/2008  
2008 Intelligent Robot Industry Development Project: Intelligent Robot Product Forum  
Attendance: Members 50, Guests 110  
Activities: Eight invited speeches

- Homepage: <http://smctaipeichapter.no-ip.org/main/zh-hant/content/97robot>
- 06/06/2008~06/07/2008  
2008 National Symposium on System Science and Engineering  
Attendance: Members 60, Guests 150  
Activities: Three invited speeches and parallel sessions of oral presentation  
Homepage: <http://smctaipei.no-ip.org/system>
  - 11/21/2008~11/22/2008  
The 13th Conference on Artificial Intelligence and Applications  
Attendance: Members 30, Guests 100  
Activities: Two speeches and also offered a video program.
  - 11/22/2008~11/14/2008  
2008 CACS International Automatic Control Conference  
Attendance: Members 80, Guests 250  
Activities: Three speeches and parallel sessions of oral presentation.
  - 12/20/2008~12/20/2008  
The 16th Conference on Fuzzy Theorem and Its Applications  
Attendance: Members 50, Guests 100  
Activities: Three speeches and parallel sessions of oral presentation.

## 21. IEEE Signal Processing Society Taipei Chapter Annual Activities Report (SP01)

Prepared by Tihao Chiang

**Professor Thomas Huang** received his Sc.D. from MIT in 1963. He is William L. Everitt Distinguished Professor in the University of Illinois, Department of Electrical and Computer Engineering and the Coordinated Science Lab (CSL); and a full-time faculty member in the Beckman Institute Image Formation and Processing and Artificial Intelligence groups. His professional interests are computer vision, image compression and enhancement, pattern recognition, and multimodal signal processing. He published 21 books and over 600 journal and conference papers.

The talk is entitled **“What are the 7 Millennium Problems in Multimedia Annotation and Search?”** In the spirit of the Clay Mathematics Institute's 7 Millennium Problems in Mathematics, we ask: "What are the 7 Millennium Problems in Multimedia Annotation and Search?" My talk is meant to stir up discussions. I shall offer my list of the 7; but the audience are strongly encouraged to comment and come up with their own candidates. In my opinion, the most intriguing Millennium Problem is: To invent Internet-enabled new paradigms of multimedia annotation and search. In particular, how do we take advantage of Web-Scale multimedia data, Web-Scale computing (Cloud Computing), and Web-Scale interconnection?

**Professor Wen Gao** received his Ph.D. degree in electronics engineering from the University of Tokyo 1991. He joined with the Harbin Institute of Technology from 1991 to 1995, as professor, chairman of department of computer science. He joined with Institute of Computing Technology (ICT), Chinese Academy of Sciences (CAS), as professor from 1996 to 2005. During that period, he was appointed as managing director of ICT from 1998 to 1999, professor and vice president of Graduate School of Chinese Academy of Sciences from 2000 to 2004, professor and vice president of University of Science and Technology China from 2000 to 2003. He is joining with the Peking University as professor since 2006. Dr. Gao has published four books and over 400 technical articles in refereed journals and proceedings in the areas of multimedia, data compression, face recognition, sign language recognition and synthesis, image retrieval, multimodal interface, and bioinformatics. He has earned five national awards for science and technology achievement in year of 2000, 2002, 2003, 2005 and 2006 respectively.

**The talk is entitled “China Audio Video Coding Standard (AVS)”**. AVS (Audio Video coding Standard) Working Group was established on June 2002, and based on the contributions from 100s video expert, the video part of standard has published as Chinese National Standard on Feb. of 2006, known as GB/T 20090.2-2006. The mission of this working group is to establish the national standard for compression, decompression, manipulation and display in digital audio and video multimedia

equipment and systems. The experience of drafting AVS standard is that the technical standard must be synthetically considered the problems of standard and patent, to get a better balance between the licensor (patent holders), licensee, and end-user, then eventually to realize.

## 22. IEEE SSCS Taipei Chapter Annual Activities Report (SSC37)

Prepared by Wei-Zen Chen, Chapter Chair

**Homepage:** <http://www.ics.ee.nctu.edu.tw/~SSCSTPE/>

- (1) Student IC Design Contest. The goal of this contest is to promote students' interests and involvement in IC design. Through the design contest, students can gain valuable experience on how to evaluate the tradeoffs among different design parameters, and find a feasible solution within limited time and design resources. Furthermore, through the work of a two-person team, students can understand the importance of teamwork in IC design. In 2008, the contest was held in April and May.
- (2) Course Development. As semiconductor technologies evolve, many undergraduate and graduate courses need to be revamped to reflect the rapid progress. Taipei Chapter and many of its faculty member staff have worked with the Ministry of Education of Taiwan to develop or update IC related courses. Course topic examples include nano-IC design, electronics for bio-medical systems, NEMS, etc. The lecture materials are made available to all universities in Taiwan, so the information can be shared and conveyed in a more efficient way.  
In addition, other education initiatives related to ISSCC are taken by the Chapter, and are described briefly below.
- (3) ISSCC Presentation Rehearsal. To enhance technical presentation quality, starting from 2005, a formal rehearsal meeting was arranged by the Chapter shortly before ISSCC. For the papers accepted to ISSCC from Taiwan, the designated speakers were invited to this meeting and rehearsed in front of selected audience. In 2008, this meeting was scheduled in January.
- (4) ISSCC Program Review. After ISSCC2008, Taipei Chapter organized an ISSCC review meeting. Several PhD candidates who attended the 2008 ISSCC were invited to give introductions on selected paper sessions. For the audience who did not attend ISSCC, this event provided a well-organized overview to the technical contents of the conference. This year, the review event was held on March 27, 2008, at National Taiwan University.

**Short courses/seminars/technical workshops** are the most popular events among all the Taipei Chapter activities. These events often drew large audience. Following is a list of these events during 2008.

- "**Successful Entrepreneurship in the field of Fabless Semiconductors**", by Rakesh Kumar, (Nov. 17/18, 2008, at NTU/NCTU, Taipei/Hsinchu)
- "**Design of Fe mto-joule Energy Efficient ADCs in CMOS**", by Dr. Geert Van der Plas, IMEC (Nov. 14, 2008, at NCTU, Hsinchu)
- "**MEMS-based Capacitive Ultrasonic Microsystem and Circuit Design for Medical Imaging and Therapy**", by Prof. Jingkuang Chen, Univ. of New Mexico, USA (Dec. 11/12, 2008, at NTU/NCTU, Taipei/Hsinchu)
- "**Digital RF Processor (DRP) for Single-Chip Mobile Radios: All-Digital PLL, Transmitter and Discrete-Time Receiver**," by Dr. R. Bogdan Staszewski, Texas Instruments, USA (Aug. 20/21, 2008, at NCTU/NTU, Hsinchu/Taipei).
- "**More Moore or More than Moore**," by Prof. Willy Sansen, K.U. Leuven, Belgium (Apr. 24, 2008, at NTU, Taipei).
- "**High-Speed ADCs: History and Future**," by Prof. Akira Matsuzawa, Tokyo Institute of Technology, Japan (Apr. 24, 2008, at NTU, Taipei).
- "**Microscopic Wireless**," by Prof. Jan M. Rabaey, UC Berkeley, USA (Apr. 1, 2008, at NTU, Taipei).

- **“Noise Measurements in Mixed-signal LSIs,”** by Prof. Makoto Ikeda, University of Tokyo, Japan (Mar. 28, 2008, at NTU, Taipei).
- **“Designing with Nanoscale Switches,”** by Prof. Siva Narendra, Portland State University, USA (Mar. 28, 2008, at NTU, Taipei).

Taipei Chapter actively supports and participates in international and domestic conferences. The following three conferences/symposiums are the main focus.

- (1) IEEE Asian Solid-State Circuit Conference (A-SSCC). The SSCS-endorsed A-SSCC was successfully held in Hsinchu, Taiwan in Nov. 2005. More than 340 persons attended this first A-SSCC. Many Chapter members were involved. Among them, Prof. C.-K. Wang and Prof. S.-I. Liu (former Chapter Chairs), served as the Steering Committee (SC) Chair and Secretary, respectively. The 2009 A-SSCC will once again be held in Taiwan. Taipei Chapter will continue to play an important role in this important technical gathering event to ensure its success.  
2008 IEEE A-SSCC Student Travel Compensation. To encourage student paper submission and participation, Taipei Chapter has implemented a student award plan. For the students who have papers accepted to 2008 A-SSCC (held in Fukuoka, Japan), financial support will be granted to compensate for their travel expense.  
2008 IEEE A-SSCC Press Conference. To promote the 2008 A-SSCC, Taipei Chapter hosted a press conference in the Hyatt Hotel, Taipei, in 9/15/2008. Several News media attended this press conference to report this event.
- (2) IEEE International Symposium on VLSI-TSA-DAT. Taipei Chapter also co-sponsors this international symposium, which is held in April annually in Taiwan. The symposium drew about 300 registrants in 2008.
- (3) VLSI Design/CAD Symposium. Taipei Chapter is actively involved in this domestic symposium, which has become a major island-wide technical event. In Aug. 2008, this symposium attracted near 1,000 participants. The 2008 annual Chapter meeting was also held during the symposium.

Taipei Chapter also broadcast other SSCS-sponsored conference Call for Papers/Participation (e.g. ISSCC) to its members via the email broadcasting system.

On the competition event, Taipei Chapter co-sponsored the Student IC Design Contest with the Ministry of Education of Taiwan. A detailed report of this event can be found in the SSCS Newsletters (Jan. 2006 issue).

Taipei Chapter is also keen on linking the research institutes and IC design industry, and setting up possible cooperation between the two. The following forum was co-sponsored with the Ministry of Education of Taiwan. It provided an opportunity for the university faculties and industrial IC design professionals to share their views on Power Management IC design.

- (1) EMC and Signal Integrity Design Strategies. (Jan. 18, 2008)

#### **Other activities**

- (1) ISSCC Press Conference  
ISSCC 2009 press conference (11/2008)
- (2) Taipei Chapter will continue to co-sponsor and co-host other important events with the Ministry of Education of Taiwan.
- (3) Others: Press conferences for upcoming major conferences; ISSCC presentation rehearsal; ISSCC review meeting, etc.

#### **23. IEEE ComSoc Taipei Chapter Annual Activities Report (VT06)**

Prepared by Yu-Chee Tseng, Chapter Chair

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

- 12/09/2008  
*Exploring the Power of Link Analysis*  
Attendance: Members 13, Guests: 102  
Activities: Speaking of Prof. Philip S. Yu
- 10/23/2008  
*Enriching work and daily life with "Essential Computing" in Intel Research*  
Attendance: Members 17, Guests: 94  
Activities: Speaking of Dr. Andrew Chien

## **B.7 E-mail and Newsletter Activities, Home Page**

Taipei section held more than 10 administrative meetings in 2008. All participants including section chair and vice chair, officers, chapter chairs and officers, and staffs gathered in a warm scene. There are 23 international events co-sponsored by Taipei Section and 3 student branch activities held this year. The related co-sponsored conferences and a list of websites are listed as below.

### **B.7.1 Membership information in Chinese**

To familiar with, or coordinate the maintenance of membership information in Chinese, Taipei section collects more than 3000 data and regularly send emails to members to announce section activities. Taipei section also held a lottery to attract members to update their personal information, there are more than 350 people participate in a lucky draw activities and the awards includes Wii and many computer peripherals.

### **B.7.2 Conference Advertisement List**

1. 2008 IEEE Compound Semiconductor IC Symposium (CSICS), Monterey, California, USA, October 12-15, 2008.
2. 2008 VLSI-TSA & 2008 VLSI-DAT, Hsinchu, April 21-25, 2008.
3. The 3<sup>rd</sup> IMPACT and 10<sup>th</sup> EMAP Joint Conference (2008 IMPACT/EMAP), Taipei, October 22-24, 2008.
4. 2008 IEEE International Conference on Sensor Networks, Ubiquitous and Trustworthy Computing (SUTC) (#14148), Taichung, June 11-13, 2008.
5. IEEE International Conference on Electron Devices and Solid-State Circuit 2008, Hong Kong, December 8-10, 2008.
6. 2009 IEEE International Symposium on Circuits and Systems (ISCAS 2009), Taipei, May 24-27, 2009.
7. Workshop on Introduction of Robotic Programming, National Chung Cheng University, Chia-Yi, May 22, 2008.
8. The 3rd Intelligent Living Technology Conference (ILT 2008), National Chin-Yi University of Technology, Taichung, June 6, 2008.
9. IEEE International Conference on Advanced Robotics and its Social Impacts (ARSO'08), Taipei International Convention Center, August 23-25, 2008.
10. Workshops of the 3rd IEEE Asia Pacific Service Computing Conference (IEEE APSCC 2008), Yilan, December 9-12, 2008.
11. Forum on Applications of IC Design on Robotic Systems, National Chung Cheng University, Chia-Yi, June 26, 2008.
12. 2009 International Conference on Communications and Mobile Computing (CMC 2009), Kunming, Yunnan, China, January 6-8, 2009.
13. 2008 13th Asia-Pacific Computer Systems Architecture Conference (ACSAC) (#14450), Hsinchu, August 4-6, 2008.
14. IEEE CAS DLP and VLSI/CAD Workshop, National Tsin-Hua University, September 10, 2008.
15. International IC-Taiwan Conference & Exhibition (IIC Taiwan), Taipei World Trade Center, September 9-11, 2008
16. IEEE Taipei Week, Taipei World Trade Center, October 8-10, 2008.

17. 2009 IEEE Green Technology Conference, Lubbock, TX, USA, April 16-17, 2009.
18. 2008 Workshop on Consumer Electronics, Jinwen University of Science and Technology, December 5, 2008.
19. 2008 Spring Workshop on Information Theory & Communications, Nantou, January 20-21, 2008.
20. Course: Network Methods for Electromagnetics, National Chin-Yi University of Technology, Taichung, January 24-25, 2008
21. 2008 EM Education Initiative - Summer Program, National Taiwan University, July 28-August 1, 2008.
22. 2008 National Symposium on Telecommunications, National Formosa University, December 5-6, 2008.
23. International Symposium on Antennas and Propagation (ISAO 2008), Taipei International Convention Center, October 27-30, 2008.

### B.7.3 Website List

1. IEEE Taipei Section: <http://www.ieee.org.tw/>
2. IEEE NTU Student Branch: <http://ieee-ntu.org/>
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. Antennas and Propagation Society Taipei Chapter: <http://www.dyu.edu.tw/~wrcrc/>
7. Circuits and Systems Society Taipei Chapter: <http://dodger.ee.ntu.edu.tw/cass/>
8. Communications Society Taipei Chapter:  
<http://www.cm.nctu.edu.tw/~IEEEITComSoc/>
9. Components Packaging & Manufacturing Technology Society Taipei Chapter:  
<http://cpmt.isu.edu.tw>
10. Computer Society Taipei Chapter: <http://www.ieee-computer.org.tw/>
11. Electron Devices Society Taipei Chapter: <http://www.edstaipei.edu.tw/>
12. Geoscience & Remote Sensing Society Taipei Chapter: <http://grss-ieee.ee.ntut.edu.tw/>
13. Information Theory Society Taipei Chapter:  
<http://www.cm.nctu.edu.tw/~IEEEITComSoc/>
14. Microwave Theory and Techniques Society Taipei Chapter: <http://microwave-taiwan.org/wave/index.htm>
15. Robotics & Automation Society Taipei Chapter: <http://mmrl.cgu.edu.tw/IEEE-R&A-2007/index.htm>
16. Solid-State Circuits Society Taipei Chapter: <http://www2.ee.ntu.edu.tw/~sscs/>
17. Systems, Man, & Cybernetics Society Taipei Chapter: <http://smctaipeichapter.no-ip.org/main/>
18. Product Safety Engineering Society Taipei Chapter: <http://ewh.ieee.org/soc/pses/>
19. Vehicular Technology Society Taipei Chapter: <http://www.cs.nctu.edu.tw/~vts/>

### B.7.4 Contributions to R10 Newsletters

We have been strongly supporting the R10 Newsletters and keep contributing articles on the section events and activities. On the March, June, September, and December issues of the R10 Newsletters, we have published 4, 3, 4, and 2 essays, respectively. They are:

1. March 2008 issue
  - EDAPS 2007: International Workshop on Electrical Design of Advanced Packaging and Systems
  - IEEE 802 Wireless Interim Meeting
  - APS 2007: Advanced Packaging Seminar 2007
  - The 12<sup>th</sup> Conference on Artificial Intelligence and Applications, 2007
2. June 2008 issue

- 2007 National Symposium on Telecommunications
  - 2007 Workshop on Consumer Electronics and Signal Processing
  - Student Branch Counselor of Taipei Section Won the 2007 Outstanding Branch Counselor Awards of Region 10
3. September 2008 issue
- 2008 EM Education Initiative - Summer Program
  - 2008 National Conference on System Science and Engineering
  - Workshop on “Power Semiconductor Devices and Design Criteria”
  - IEEE Reliability Society Delegation visits IEEE RS Taipei/Tainan Chapter
4. December 2008 issue
- 2008 IEEE Taipei Week
  - 2008 International Workshop on Electromagnetic Compatibility

Please consult the R10 Newsletters for more details.

### **B.8 Women in Engineering**

The affinity group of Women in Engineering was founded in June, 2007. There are 25 female members in the group (Taipei Section female members: 170). The group chair is currently organizing various activities to consolidate these female colleagues with an attempt to manifest the great impact of woman researchers and engineers in professional societies.

#### **Chair**

Prof. Jane Yung-jen Hsu (National Taiwan University)

Email: [yjhsu@csie.ntu.edu.tw](mailto:yjhsu@csie.ntu.edu.tw)

## **PART C - OTHERS**

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

#### **C.1.1 Corporation with TEEMA (IEEE Taipei Week)**

IEEE Taipei Section has always been dedicated to promoting the communication with the industries. To accommodate with Cross-Strait Electronics Show, Taiwan Electrical and Electronics Manufactures Association and IEEE Taipei Section hosted a series of workshops for “2008 IEEE Taipei Week” in the newly-built Taipei World Trade Center, Nangang Exhibition Hall.

Three workshops were held daily during Oct. 8-10, co-hosted by IEEE MAG, SMC, and EMC Chapters sequentially. The topics were “Workshop on Magnetic Material Industry” hosted by Prof. Chang, Ching-Ray in Department of Physics, NTU, “Workshop on Systems, Man, and Cybernetics” hosted by IEEE SMC Chapter Chair Prof. Su, Shun-Feng in NTUST, and “Workshop on Electromagnetic Compatibility” hosted by IEEE EMC Chapter, Prof. Wu, Tzong-Lin in Department of Electrical Engineering, NTU. All were held successfully. In total, this event invited 24 foreign and native scholars, and 8 of them are IEEE fellow. Not only teachers and students attended the seminars, but also general public and government specialists were interested in these topics. It was an amazing and precious opportunity that all the related scholars and specialists could all gather in the event, having deep discussion and exchanging on different ideas. Many attendees also visit the Electronics Show to witness the latest development in Taitronics, Broadband communications, and RFID applications.

It is also deserved to be mentioned that a favorable program was held by the IEEE Taipei Section to encourage students to join IEEE. To facilitate the domestic students in joining IEEE, section staffs were on the spot to explain the web application process and collected the membership fee. In addition, joining the IEEE Taipei Section on the event days could get the NT 200 coupon. There were 20 members recruited (including new and renewal members), and over 2000 leaflets were issued, which is believed to fulfill the goal of publicity and recruitment.

#### **C.1.2 NSC Sponsorship of Membership**

To enrich the global view and promote international participation of the researchers, Taipei Section has aggressively approached the National Science Council, the major funding agency of the academia researches in Taiwan, to encourage the graduate students to participate international society. The Chairman, Prof. Ruey-Beei Wu, has visited the vice President Yang of NSC on 3/13/2007, suggesting that the membership fee for the participating graduate students can be reimbursed by NSC research grants. After serious internal discussion and detailed consideration, NSC has finally made the nationwide official announcement on 12/4/2007 to adopt the above suggestion and extend it to both the project PI and participating graduate students for all major international societies inclusive of IEEE. Since NSC projects have accounted for more than 90% of all the academic research grants in Taiwan, it is expected that this change in policy can trigger significant increase in the membership size in the coming years.

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

IEEE Taipei Section organizes many activities in Taiwan this year. Two are selected to be reported here. These include the *2008 IEEE 802.11/802.15 Wireless Interim Meeting* and a special summary on the Section history under the invitation from the Editor of *R10 Newsletters*.

#### **C.2.1 2008 IEEE 802.11/802.15 Wireless Interim Meeting**

The first IEEE 802.11/802.15 joint meeting in 2008 was held in Howard Plaza hotel, Taipei, Taiwan, from January 13 to January 18. The IEEE 802 is an international standard organization which has defined many popular communication standards, like 802.11a/b/g Wireless Local Area Network (WLAN), 802.15.1 Bluetooth Wireless Personal Area Network (WPAN) to be used in people's daily life, and 802.15.4 Low-Rate WPAN for home automation and wireless sensor network. The IEEE 802 standard meetings are held six times per year, with most meetings located in the United States. Hence, it is our great honor to have 2008's first meeting in Taipei. The IEEE Taipei section is the co-sponsor for the 2008/01 Taipei IEEE 802.11/802.15 joint meeting, while the MediaTek from Taiwan is the Platinum Sponsor for this meeting. The section was asked to step in at a late stage to help out solving the visa problems regarding to participants with Chinese nationality.

The number of attendance is 360 for the Taipei meeting, which is low comparing to most IEEE 802 Interim meetings. There are three main reasons for such a low number: (1) It is an international trip for most attendees. (2) Taiwan's industry has many excellent medium-size technology companies, but we don't have many system-related companies to show interests in defining the future worldwide communication standards. (3) Taipei meeting has the highest registration fee in IEEE 802 meeting history, which is AUD\$1,000 (Australian Dollars, equivalent to 905 US Dollars) and is too pricy for many engineers or students. Also, the lodging in Howard Plaza is expensive as well (5830NT/night). Nevertheless, most attendees do feel Taipei has very delicious food and excellent transportation system. Not to say people are friendly and everything outside the hotel is very inexpensive. Many attendees expressed their interest of coming back in the future. Therefore, it is suggested to invite the local organizations, i.e., IEEE Taipei Section, to host or co-host such an important meeting next time, thereby taking full advantage of the local resources.

### **C.2.2 Brief History of IEEE Taipei Section**

Established on 16 October 1974 by Dr. Lok Lin, IEEE Taipei Section was among the first several sections in Region 10. Its major function then was to maintain the communications among members and help them subscribe to IEEE professional journals. Local activities were rarely held, and the members were fewer than 300 people, mostly scholars back from USA. Until 1984-85, the then-chairman Dr. Ching C. Hsieh made various efforts to promote the section affairs, e.g., introducing the IEEE bylaws to set up section administrative procedures, inviting professors in universities to serve as officers, and getting subsidies from IEEE rebate. Besides, he publicized IEEE's powerful research resources to local academia by organizing exhibitions for IEEE 100<sup>th</sup> anniversary, thereby resulting in substantial increase in the member size and being awarded IEEE 100 years decoration. One of the members, Dr. Irving T. Ho, was even elected R10 Director (1985-86), and Taipei Section also got the most fast growing member award.

In the next 10 years (1986-95), Taipei Section was heavily engaged in the formation of chapters to enhance the participations from IEEE members of different technical societies, with total chapter number from 1 (C16 in 1975) to 15 in 1995, and up to now 28. The organization under the Section kept stably expanding afterwards. Student chapters were started in 1998 by NTU and NCCU consecutively, and in total 6 now. The official website was established on 16 October 1997, with most updated section status and chapter activities. In 2001, Taipei Section initiated the establishment of Tainan Section which later became effective on 30 June 2003, and its Deputy Chairman Dr. Jhing-Fa Wang was assigned as the first Chairman. About the IEEE Affinity Groups, the Women in Engineering Group was established in 2007. Because of the above efforts made by previous Chairmen, the member size of Taipei Section keeps booming and is now more than 3000.

Recently, Taipei Section has actively encouraged its members to participate in IEEE global services. A milestone progress was its co-sponsorship to Communications Society Taipei Chapter in holding the IEEE GlobalCom 2002, and thus substantial subsidy from the conference surplus. It made Taipei Section financially healthy and capable to initiate several promotion programs to further strengthen IEEE activities, e.g., for students attending IEEE conferences abroad about 30-50 students per year, for chapters holding seminars and/or academic workshops about 30 times per year, and for chapters organizing educational initiative summer camps to nurture new graduate students. Many members

have performed excellently, including 64 members elected as IEEE fellow. Many others served as distinguished lecturers, journal editors, conference chairs or TPC members in IEEE Societies. Altogether, Taipei Section has become internationally well recognized and one of the most successful sections in Region 10 of IEEE.

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

#### **C.3.1 Permanent Office, Staff, and Bank Account**

Taipei Section has been operating for years without a permanent office, staff and bank accounts. Section Chair is reappointed every two years. After inauguration, every chair has to reorganize a new and inexperienced staff, find a new office and open a new bank account in order to keep administrative, technical and professional affairs running. This becomes a major effort and sometimes trouble for every new chair. To resolve the problem, Taipei Section is currently seeking for the collaboration of a well-founded organization and endeavoring to develop a permanent office, regular staff and fixed bank accounts.

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

### **D.1 Increasing Members(Membership Development)**

We will pay the maximum effort to increase our membership number closer to the actual circumstance and endeavor to increase Taiwan's population as our major goal within the next 2 years. Industrial elites and graduate students will be our target audience at this wave. IEEE Taipei Section will make more efforts on enhancing their specialties.

Therefore, producing and publishing our brand new DM/pamphlets can be the first step to promote ourselves island-wide by holding a series of activities for individuals, industries, and technical conferences. By sponsoring grand conferences and seminars, we can mainly stress the privilege benefits from those congresses for IEEE attendees in order to attract non-IEEE participants' attentions as well as compiling IEEE application forms to the congress package for their convenient registrations.

Meanwhile, we will continue to translate English IEEE membership information to Chinese to overcome the language barrier. IEEE Taipei Section Newsletter is also planning to launch another new media channel, and hopefully inserting relative recruitment information which may keep track of potential audiences for further contact requirement. On another hand, we'll subsidize membership fee for students and propose NSC (National Science Council, Taiwan) to regard membership amounts of technical academic organizations as one of the KPI with talent culture.

### **D.2 Promoting Membership Upgrade**

To establish a higher grade promotion committee is necessary to drive members to accelerate their accomplishment with senior members and fellows. Furthermore, we will ask existing senior members and fellows permission to disclose their data in Chinese for web-retrieving.

### **D.3 Establishing New Chapters and Student Branches**

Currently, there are 29 Taipei Chapter Societies. However, we may have some opportunities to assist other non-registered-chapter societies to become new Chapters. As for the student side, the Student Activities Officer will provide help to formulate campus activities for supporting the establishment of student branches at universities.

### **D.4 Awards**

We are panning varied Chapter Awards and Chapter Contribution Awards for stimulating Chapter members' collaboration and cooperate with research organizations like ITRI (Industrial Technology Research Institute of Taiwan), III (Institute for Information Industry), and enterprises to render representative awards exclusively for IEEE membership. Moreover, to hold robot competitions may encourage student branches teamwork and active branches operation.

### **D.5 In- and Out-of-Section Activities**

Voluntarily acquiring and participating in Region 10 activities, supporting and subsidizing Chapters and Student Branches, Inviting College Principals, relative Deans, and Chairmen to canvass for the activities combining IEEE Taipei Section and Colleges, and issuing IEEE Taipei Section Newsletters to inform the target audience, are the significant indexes of activity evaluation.

## **D.6 Revising Website Function & Publishing Newsletter**

Adding interactive functions at IEEE Taipei Section website, integrating information of cooperation units, job opportunities of enterprises for members' inquiries, and initiating the newsletter in circulation, will become our main tasks for improving the interaction among IEEE Taipei Section in the following years.

## **D.7 Continuing Chinese Data Transformation**

The Chinese membership data is critical to help high grade promotion programs so we plan to ask Chapters favors on offering their members data in Chinese and then adopt other plans to obtain more uncollecting data.

## **D.8 Chapters (Provided by Chapters)**

All chapters are very active in promoting their related activities, such as conferences, workshops and meetings. In what follows, detailed plans and goals are provided by some chapters:

### **D.8.1 Broadcast Technology (BT02)**

- 1. Continuation of project/activity in progress and their implementation plans:**
  - 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.
  - Continue to cooperate with Chung-Hua Telecommunications Research Institute through joint activities. Members of the institute consist of researchers and engineers in wireless communications and broadcasting technologies.
- 2. Goals and future plans:**
  - Cooperate with the new "Digital Television and Broadcasting Education Promotion Alliance Center" through joint activities. Funded by the ministry of education, the center promotes digital broadcasting curriculum and course materials development. Participants are mostly faculty members in colleges and universities.

### **D.8.2 Computer (C16)**

- 1. Continuation of project/activity in progress and their implementation plans:**  
Sponsored conferences:
  - The 9th IEEE International Conference on Bioinformatics and Bioengineering, June 22-24, 2009 Taichung, Taiwan
  - The 9th International Conference on Algorithms and Architectures for Parallel Processing (ICA3PP'09), June 8-11, 2009, Taipei, Taiwan
- 2. Goals and future plans:**
  - New member recruitment
  - Collaboration with local societies or affiliations, such as TAAI, IICM, TWISC, etc.

### **D.8.3 Circuits and Systems (CAS04)**

In 2009, we plan to have a workshop, a DLP lecture, and member recruiting activities.

We will hold a workshop on May 20<sup>th</sup> ~ 22<sup>nd</sup>, 2009.

**Title of the workshop:** International Workshop on Neuromorphic Systems and Neural Prostheses

**Dates:** 20<sup>th</sup> ~ 22<sup>nd</sup> May 2009

**Location:** National Tsing Hua University, Taiwan

**Organizer :** Design Technology Center, National Tsing Hua University

**Introduction:**

Taiwan's capacity in integrated-circuit(IC) design has reached the second place in the world recently. The IC technology plays an important role not only for commercial electronic products, but also for the development of biomedical instruments, allowing biomedical instruments to become miniaturized, automatic, high-speed, and low-cost. As bio-mimetic principles help to introduce novel concepts and user-friendly interfaces, integrated circuits mimicking nervous systems, i.e. the brain, have received great attention in recent years. *Neuromorphic engineering* thus refers to the engineering approaches to model our nervous systems, and subsequently to realise the models as a system-on-a-chip which exhibits computational capability analogous to the brain. Neuromorphic integrated circuits have found advantages over conventional computers in applications like real-time processing of visual and auditory signals [1-7], or intelligent sensing of biomedical signals [8]. The feasibility of realising high-level cognitive functions such as attention and consciousness in integrated circuits has also been investigated by researchers like Prof. Indiveri, Prof. Aleksander, etc [9-12]. These research activities will further enrich the computational power of neuromorphic ICs.

In addition to providing novel signal-processing techniques, neuromorphic ICs also play an important role in the development of neural prostheses. For example, the silicon cochlea and the silicon retina have proved useful for rehabilitating part of the visual or auditory ability of patients [13-18], and have improved the life quality of the patients effectively. On the other hand, Prof. Donoghue et al. has also demonstrated the feasibility of using neural signals in the motor cortex to control prosthetic devices [19-22]. This technology will enable the rehabilitation of the motor functions for paralysed patients. Furthermore, the possibility of using neuromorphic ICs to replace biological neurons in a neuronal network has also been demonstrated by Prof. Renaud et al.[23,24]. This promising finding provides an optional therapy for neural degenerative diseases like the Parkinson's disease. Even though biological neurons have limited ability to regenerate themselves, nervous systems could restore their functions by incorporating neuromorphic electronic neurons. Nevertheless, an interface allowing biological neurons to communicate with electronic circuits is crucial for neural prosthetic devices of various forms. Many researchers have thus devoted to the development of long-term, reliable, neuro-electronic interfaces [13].

The research in neuromorphic engineering and neural prostheses in Taiwan has also grown rapidly in recent years. For example, the organizers of this workshop, Prof. Chang, Y.C., Prof. Chen, H., and Prof. Tang, K.T. etc. are conducting many interdisciplinary research projects to develop carbon-nanotube neural probes and portable electronic nose. In addition, Prof. Chen, H. and Prof. Tang, K.T. have been designing and offering an one-year course on neuromorphic IC design. This course not only covers the design of low-power, neuromorphic integrated circuits, but also introduces various neuromimetic models and their VLSI implementation. Therefore, this workshop aims to

- (1) Provide a forum for Taiwan and international researchers to exchange their latest research findings in neuromorphic engineering.
- (2) Promote the neuromorphic engineering to more researchers and students, so as to trig their interests in involving in related research in the future.
- (3) Demonstrate the importance of integrating interdisciplinary knowledge including electrical engineering, material science, and neuroscience etc.
- (4) Promote the long-term collaboration between Taiwan and international researchers in neuromorphic engineering.

#### **D.8.4 Consumer Electronics (CE08)**

**Goals and future plans:**

We plan to do the following few events

- Sponsor the WCE 2009 in December
- Host Distinguished Lecturer's speaker in April
- Expand the student chapters to two other universities
- Co-sponsor the ISCE conference with active participations of the technical committee
- Attend the CES show

#### D.8.5 Computational Intelligence (CIS11)

1. **Continuation of project/activity in progress and their Implementation Plans:**
  - 2009 Conference on Automatic Control Systems
  - 2009 The Seventeen Fuzzy Theory and Application Conference
2. **Goals and future plans:**
  - Increase member number
  - Help member to promote their membership.

#### D.8.6 Communications (COM19)

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

- 02/04/2009~02/05/2009  
*2009 Spring Workshop on Information Theory & Communications, Hualien, Taiwan*  
Activity: Eight invited speeches and one member meeting  
Homepage: <http://www.ee.ndhu.edu.tw/~itcom2009/>
- 08/03/2009~08/07/2009  
*2009 Summer School for Communication Theory and Technologies*  
Activity: Ten Courses on Communications Theory by Nine Invited Speakers
- August or September 2009  
*2009 Fall Workshop on Information Theory & Communications, Tai, Chung, Taiwan*  
Activity: Nine invited speeches and one member meeting
- September 2009  
*2009 Young Scholar Best Paper Award (co-held by ITSoc Taipei Chapter & ComSoc Taipei/Tainan Chapter)*
- *2009 Distinguished Lecturer Tours*

#### D.8.7 Components Packaging, and Manufacturing Technology (CMPT21)

1. **Continuation of project/activity in progress and their implementation plans:**  
CPMT Taipei Chapter, SMTA-Taiwan, TPCA, I-Shou University, ITRI, and IMAPS-Taiwan will organize the 4th International Microsystems, Packaging, Assembly and Circuits Technology (IMPACT) Conference. This conference is to bring together scientists, engineers and experts actively engaged in research and development on Microsystems, IC Packaging, Assembly and PCB to discuss current progress and emerging technologies in the fields. The 4th IMPACT Conference and TPCA Show 2009 will be held at Taipei Nangang Exhibition Hall.
2. **Goals and future plans:**  
We will continue to boost up the membership of CPMT Taipei Chapter. Besides, we will also keep on collaborating with SMTA-Taiwan and TPCA to organize the workshop or conferences in the field of IC packaging, assembly and PCB.

#### D.8.8 Education (E25)

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

*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.

**2. Goals and future plans:**

- 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.
- 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.

**D.8.9 Electromagnetic Compatibility (ED 15)**

**Goals and future plans:**

The ED Taipei chapter has been very active in its activities. In the year 2009, three major tasks have been planned-

- Co-sponsorship of two major semiconductor conferences  
With the assistance of our chapter members, two major conferences in the area have been annual and important conferences in Taiwan. Our members will involve in paper review, organizing sessions, soliciting invited speakers for invited talks and the short courses.
- 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 the Hsinchu Science Park.
- At least 2 student chapters will be formed in 2009.
- A target of 40 new student members will be forced with the assistance from our professor members.
- The chapter will help to find more available resources for our members to become TPC members of major international conferences.
- Promoting of senior members- a target of 10 senior members will be filed and approved in 2009.

**D.8.10 Engineering in Medicine and Biology (EMB18)**

**1. Continuation of project/activity in progress and their Implementation Plans:**

- Biomedical Electronics and Bioinformatics Camp will be continued every year to promote biomedical engineering to engineers
- Molecular Imaging Training Course and Nan Biotechnology Training Course will also be held each year to introduce new technology to medical practitioners and students in medical campus

**2. Goals and future plans:**

- To promote biomedical engineering education to students, engineers and medical practitioners through workshops and conferences
- To facilitate biomedical industry through intensive and extensive collaborations between research institutes, universities and industries

- To have international visibility through hosting conferences and international collaborations

#### **D.8.11 Geoscience and Remote Sensing (GRS29)**

##### **Goals and future plans:**

Descriptions of IEEE Geoscience and Remote Sensing Society  
Taipei Chapter Best Student Thesis Award

- The IEEE GRSS Taipei Chapter Best Student Thesis Award has been established to recognize both college and the graduated students who are excellent in the field of geoscience and remote sensing.
- The Best Student Thesis Award is granted on an annual basis to full-time final-year students who excel in the academic pursuits during their studies. Each geoscience and remote sensing related academic department is allowed to nominate one candidate, who has to compete with other top students in the same faculty for the Award.
- In selecting the individual, the factors considered are significance of both academic and educational contributions in terms of innovation and the extent of its overall impact.

#### **D.8.12 Industrial Electronics (IE13)/Power Electronics (PEL35)**

##### **Goals and future plans:**

- Sep. 2009  
*2009 Taiwan Power Electronics Conference, Taoyuan, Taiwan.*  
Attendance: Members 120, Guests 450  
Activities: Four invited speeches and one member meeting.
- Oct. 2009  
*2009 Annual NSC Power Engineering Division Projects Demonstration, Koushong, Taiwan.*  
Attendance: Members 90, Guests 40  
Activities: Universities Students' Projects Competition.
- Nov. 2009  
*2009 Symposium on Electrical Power Engineering, Taoyuan, Taiwan.*  
Attendance: Members 110, Guests 705  
Activities: Five invited speeches and one member meeting.

#### **D.8.13 Information Theory (IT12)**

##### **1. Continuation of project/activity in progress and their Implementation Plans**

- Continue to host the biannual "*Workshop on Information Theory & Communication*" to educate and recruit the young graduate students as well as junior engineers
- Continue to cooperate with *Communications Society(COM19)* and *Vehicular Technology (VT06)* to leverage the impacts and activities with each other.

##### **2. Goals and future plans**

- Try to get the opportunity to host 2010 International Symposium on Information Theory and Its Applications (ISITA'2010) in Taiwan.

#### **D.8.14 Lasers & Electro-Optics (LEO36)**

##### **Goals and future plans:**

- We are planning to organize in October renewal process with new members recruitment (include students, since we have Student Branch).
- We are planning to have about more than 10 new student members to January 1, 2010.
- We will continue to issue on-line Magazine- NTU GIPO and NCTU IEO.
- We have 3 our chapter members in editorial board, including the Editor in Chief and Vice-Chief Editor.
- We are planning to have tight cooperation with other OSA/SPIE Chapters in Taipei.
- We are planning to nominate our 3 – 4 Members for Senior Member grade.
- We are planning to update regularly our WEB-Page
- Support OPT 2009 (Optics and Photonics Taiwan)

#### **D.8.15 Magnetism, Taipei/Tainan Joint Chapter (MAG33)**

##### **1. Continuation of project/activity in progress and their Implementation Plans**

- To promote magnetic knowledge and increase the member.

##### **2. Goals and future plans**

- Dr. Albert Fert visit  
Time : 1/17~1/24, 2008  
Schedule :  
1/19(一) 1:40-2:30pm, NCUE, Changhua  
Lecture: Spintronics: fundamentals and emerging directions  
1/22(四) 10:00-11:30am, NTU , Taipei  
Lecture: Spintronics: from the spin of the electrons to our computers and telephones  
3:30pm, Academia Sinica, Taipei  
Forum : Spin transfer, generation of microwave oscillations by spin transfer, synchronization of spin transfer oscillators.  
1/23(五) Hsinchu  
Lecture: Carbon nanotube : a promising nano-object for spintronics (advantage over semiconductors for spin transport between source and drain) ◦
- 21th Annual Conference of Taiwan Association Magnetic Technology 6/24-6/26, 2009, National Sun Yat-sen University, Kaohsiung, Taiwan
- Spin electronics and magnetic conference  
6/26-6/28, 2009, National Sun Yat-sen University, Kaohsiung, Taiwan,
- 2009 IEEE Magnetic Society distinguished lecturer program  
A. Prof. Kannan Krishnan  
University of Washington  
kannanmk@u.washington.edu  
Biomedical Nanomagnetism :  
A Spin Through New Possibilities  
B. Prof. Hideo Ohno  
Tohoku University  
ohno@riec.tohoku.ac.jp  
Spintronics: Nanoscience and Nanoelectronics

#### **D.8.16 Microwave Theory and Techniques (MTT17)**

##### **1. Active Plan**

- Hold the EM Education Initiative program on 2009. And will hold Winter School for PHD students and teachers
- Invite MTT Distinguished Lecturers to give electromagnetics and communication technology related lectures.

##### **2. Goals and future plans**

- Host and support microwave technology related activities positively, so as to double the member number.
- Encourage and commend the microwave technology scholars to attend international technology meetings and activities.

#### D.8.17 Power Engineering (PE31)

1. Will co-sponsor five large-scale meetings and one medium-size meeting, among them two are international conferences :
  - The 30<sup>th</sup> Symposium on Electrical Power Engineering, Taipei, Nov., 2009.
  - Association of the Electricity Supply Industry of East Asia and the Western Pacific(AESIEAP) 2009 CEO Conference, Kaohsiung, Taiwan, 14~16, Oct., 2009.
  - CEPSI Taipei , 2010.
  - NSC Power Engineering Research Results Exhibition, Kaohsiung, Taiwan, Oct., 2009
  - The 8<sup>th</sup> Taiwan Power Electronics Conference & Exhibition, Jhongli, Taiwan, Sept., 2009
  - Next – Generation Transmission Network Technology, Plenary Meeting of Scholars and Professionals, Tai Power Building, Taipei, 10 March, 2009.
2. Will also hold an IEEE meeting for the graduate students and the professionals respectively both in 2009.

#### D.8.18 Robotics & Automation (RA24)

1. **Continuation of project/activity in progress and their implementation plans:**  
The chapter will keep in close co-operation with the techniques societies related to the field of IEEE and prompt more technical activities jointly sponsored with each other. Besides, the cooperation between Korea and Taiwan in related areas will be established and some activities will be jointly held.
2. **Goals and future plans:**  
The major activity for 2009 of Taipei Chapter will be the co-organizer of;
  - 2009 the 16th National conference on Automation Technologies;
  - 2009 International Automatic Control Conference;
  - 2009 International Conference of Automation;
  - The 2nd National Competition on Robot Soccer;
  - 2009 FIRA Robot Soccer Competition, Androidsoft Section.

and the organizer of

  - Workshop on the Technologies of Robot Equipments;
  - 2009 Workshop on Robotics Technologies between Cross-Taiwanese Strait.

#### D.8.19 Reliability Society (RL07)

1. **Continuation of project/activity in progress and their implementation plans:**  
The chapter website and member email list have been constructed. Through them, members will be able to know the recent progress in both the Reliability Society and local chapter.
2. **Goals and future plans:**  
The Reliability Society Taipei/Tainan Chapter aims to promote reliability, dependability and security research and development in Taiwan. This includes the design and implementation of both software and hardware.

#### **D.8.20 Systems, Man & Cybernetics (SMC28)**

##### **Goals and future plans:**

- We will have two DLs and two invited talks.
- For conference sponsorship, there will be at least 4 conferences; two are international two are domestically.
- We will also seek cooperation with other chapters in 2009.

#### **D.8.21 Signal Processing (SP01)**

##### **Goals and future plans:**

We plan to do the following few events

- Host the 2009 ISCAS and ICASSP conference with active participations of the technical committee
- Host Distinguished Lecturer's speaker in April
- Expand the student chapters to other universities

#### **D.8.22 Solid-State Circuits (SSC37)**

##### **Goals and future plans:**

- Continue holding Short Course/ Conference/Membership drive/ Educational Affairs.

#### **D.8.23 Vehicular Technology (VT06)**

##### **1. Continuation of project/activity in progress and their implementation plans:**

We will continue hosting speeches by VTS. It is expected that at least 2 or 3 such activities will be held annually.

##### **2. Goals and future plans:**

Taipei hosted APWCS (Asia-Pacific Wireless Communications Symposium) in year 2007. The next APWCS 2008 is planned in Japan. Participations from Taipei side will be encouraged. We plan to host APWCS in 2010.