



TAIPEI SECTION ANNUAL REPORT 2006

Presented by

Dr. Bao-Shuh Paul Lin, Chair (2005-2006)

IEEE TAIPEI SECTION (R00011)

E-mail: bplin@itri.org.tw

<http://www.ieee.org.tw>

2006

Part A Section Summary

A-1 Executive Summary

This has been a year of tremendous growth in membership for the IEEE Taipei Section. The section has been aggressive in promoting and assisting the eligible members in applying IEEE High Grade (HG) membership. We have a 29.69% growth in overall membership and a 10.05% growth in HG membership based on the Administration Membership Statistics for the Period beginning Feb 28, 2005 through Feb 22, 2006.

IEEE Taipei Section Membership Detail

Grade in IEEE	Feb 28 th , 2005	Feb 22 nd , 2006	Difference	% Of Growth
Life Fellow	2	3	1	50.00%
Fellow	41	46	5	12.20%
Life Senior	2	3	1	50.00%
Senior Member	174	189	15	8.62%
HG Membership	219	241	22	10.05%
Life Member	2	3	1	50.00%
Member	1371	1710	339	24.73%
Pending Member	15	-	-	-
Associate	88	166	78	88.64%
Student Member	535	772	237	44.30%
Total Active Membership	2230	2892	662	29.69%

Source: IEEE Administration membership Statistics & SAMIEEE

In 2005, we formed one new chapter – Magnetics Society Taipei/Tainan joint Chapter. Totally, we have 25 chapters now and they are actively functioning. Our website was established in 2002, where guests can find updated conference information, the Section/Chapters/Student Branch news, and the contact list of Taipei Section officers and Chapter Chairs. This website also provides the function of on-line registration, and reference links to IEEE Headquarter web page.

In 2005, the section had sponsored many activities of society chapters, including one workshop and three conferences. In order to attract and retain student membership, we encourage our student members give oral presentations in the international conferences, and we offer a reimbursement of three thousand NT dollars to each of them for compensating their travel expenses. In 2005, we had 46 student members benefited from this program.

We also co-sponsor the first IEEE 802.16 #39 Wireless Standard Meeting held in Taiwan took place Sept. 12-15,2005 and attracted more than 100 companies worldwide, totaling around 300 participants.

Section Sponsored Events:

- *IEEE 802.16 #39 Wireless Standard Meeting* held on September 12-15, 2005:
The first IEEE 802.16 wireless standard meeting held in Taiwan took place Sept. 12-15, 2005 and attracted more than 100 companies worldwide, totaling around 300 participants.
- *IEEE International Workshop on Memory Technology, Design, and Testing (MTDT'05)* held on Aug. 3-5,2005:
The workshop has solicited 25 technical papers covering all aspects of the enabling technologies of a memory product – from device, design, testing, reliability and yield analysis to mass production. In addition, two papers are especially invited to shed lights on “advanced simulation technology for memory” and to explore a new emerging type of memory called “zero-capacitor DRAM” for System-on-chip applications”
- *IEEE International Workshop on Cellular Neural Networks* held on May 28-30,2005 in Hsinchu, Taiwan :
This conference is significant in two ways. First, it represents a transition from the bi-annual timing of the CNNA Workshops followed in the past to an annual scheduling. *Second, it is the first CNNA Workshop held in Taiwan (outside of Europe) in the history of the CNNA Workshop.* In addition to regular and special sessions, this conference featured one keynote talk, four plenary talks, two panel discussions and a live demo session.. This Conference was chaired by Prof. Zen Chen. The technical program was organized by Prof. Chin-Teng Lin, Dr. Csaba Rekeczky and Prof. J. F Yang.

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 sponsor students' and chapter activities. The total income of the Section in 2005 was NT\$5,653,400 including NT\$532,652 of 2005 rebate for 2004 reported activities.

A-3 Section Officers (2005-2006 & 2003-2004)

Taipei Section Officers 2005~2006

Chair:	Dr. Bao-Shuh Paul Lin (Industrial Technology Research Institute) Email: bplin@itri.org.tw
Vice Chair:	Dr. Liang-Gee Chen (Industrial Technology Research Institute) Email: lgchen@itri.org.tw
Secretary:	Dr. Gin-Kou Ma (Industrial Technology Research Institute)

Email: gkma@itri.org.tw
Treasurer: Dr. Tzung-Pao Lin (Industrial Technology Research Institute)
Email: tplin@itri.org.tw
Membership Development:
Prof. Chung-Ta King (National Tsing Hua University)
Email: king@cs.nthu.edu.tw
Professional Activity: Prof. Ying-Dar Lin (National Chiao Tung University)
Email: ydlin@cis.nctu.edu.tw
Educational Activity: Prof. Rong-Jaye Chen (National Chiao Tung University)
Email: rjchen@csie.nctu.edu.tw
Student Activities: Prof. Chiou-Ting Hsu (National Tsing Hua University)
Email: cthsu@cs.nthu.edu.tw
Newsletter Editor: Dr. Chung-Hsin Lu (Industrial Technology Research Institute)
Email: lu@itri.org.tw

Taipei Section Officers 2003~2004

Chairman: Dr. Jyuo-Min Shyu (Industrial Technology Research Institute)
Vice Chairman: Prof. Jhing-Fa Wang (National Cheng Kung University)
Secretary: Prof. Shih-Chieh Chang (National Tsing Hua University)
Treasurer: Prof. Shi-Yu Huang (National Tsing Hua University)
Membership Development:
Prof. Kuei Ann Wen (National Chiao Tung University)
Professional Activities: Prof. Chin-Liang Wang (National Tsing Hua University)
Educational Activities: Prof. Ting-Ting Hwang (National Tsing Hua University)
Student Activities: Prof. Bing-Yue Tsui (National Chiao Tung University)
Newsletter Editor: Prof. Sau-Gee Chen (National Chiao Tung University)

Part B Organization Activities

B-1 Membership Development Programs

As we mentioned in the Executive Summary, *this has been a year of tremendous growth in membership for the IEEE Taipei Section*. We have focused efforts on promoting and assisting eligible members in applying for Senior Membership and Fellow. A number of 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. The student membership showed an overall growth of 44.30% through 2005. Further more, we disseminate the thoughts of headquarter/region volunteer recruitment, and strongly recommend our members to take this challenge.

To promote the IEEE Taipei Section Local Activities, and retain our membership, maintaining a membership database in Chinese and keeping it updated has been our target task in 2005. More than 300 members have updated their personal contact information in Chinese via the IEEE Taipei Section Website, and more members are taking advantages from visiting the website.

B-2 Professional and Continuing Education Activities

Series of educational activities including conferences, technical events, and training courses were and will be held by 26 chapters constantly.

In 2005, the IEEE Taipei Section Executive Committee approved the “A+ Career Award”, proposed by Professional and Educational Activity Chairs Dr. Ying-Dar Lin and Dr. Rone-Jaye Chen, comprising an attractive amount of prize and an IEEE Award plaque to proudly display.

B-3 Student Activities

Student members of National Chiao Tung University Student Branch and National Taiwan University Student Branch have been very active in IEEE sponsored and local activities. To promote and retain student membership, Taipei Section approved a reward program. According to this program, student members can apply for a reimbursement of NT\$3000 if they attend and give a presentation in any IEEE sponsored international conference. This program is very attractive to students and more than 76 student members applied for and benefited from this program since August 2004. *The National Tsing Hua University Student Branch, the third student branch of Taipei Section, is under petition, and will be established in the coming year.*

B-4 Email and Newsletter Activities

The IEEE Taipei Section has been busy and productive in 2005. Many activities were reported and thirty-eight electronic Newsletters issued in 2005. Below is a summary of our efforts.

- Vehicular Technology Society (VT06) had tutorial course in the subject of “ Quantum Wireless Network” on Dec. 30, 2005.
- The first IEEE co-sponsored Asia Pacific Symposium on EMC Taipei (APEMC 2005) presented 17 technical sections, 5 special sessions, 7 workshops and an exhibition Dec. 6-9, 2005 to showcase the latest EMC-related equipments and technology. More than 250 professionals from the world’s leading electronics companies and organizations in 21 countries participated in this event. The presence of the influential international professionals, including the former Deputy President of Laboratory Section in FCC and the chair of IEEE technical Committee, proves APEMC’s success and its importance to the EMC industry in the Asia Pacific Rim.
- IEEE Solid-State Circuits Society (SSCS) has fully supported the first Asia-SSCC (Nov. 1-3, 2005) to further endorse the industrial potential in Asia’s semiconductor market. In the very first year under its name, the A-SSCC 2005 received in total 362 papers submitted by semiconductor experts from 17 countries and 118 well-qualified papers were presented. A student design contest was held covering 18 designs with implementation and measurement results. Awards were given to top 3 outstanding designs before the conclusion of the Conference.
- Held Oct. 30 - Nov. 2, 2005 in the Grand Hotel, Taipei, the 12th International Conference on Neural Information Processing (ICONIP 2005), which provided a bridge between state of neural technology and best engineering practice, attracted more than 200 participants and matched the main stream of Taiwan Hi-Tech to the prominent neural researches.
- The first IEEE 802.16 wireless standard meeting held in Taiwan took place Sept. 12-15, 2005 and attracted more than 100 companies worldwide, totaling around 300 participants. As a prelude to the interim session # 39, Microwave Theory & Techniques Society (MTT 17) and Computer & Communications Research Lab. (CCL) co-sponsored a Mobile Internet Access Seminar at ITRI on September 6.
- Featuring a strong cast of speakers from NTT and KDDI, KT of Korea, Verizon, UTStarcom, and many others, 2005 Asia Pacific FTTH Forum (July 14-15, 2005) provided a veritable feast of creative ideas through keynote speeches, panel discussions and exhibition of FTTH products for all the 280 attendees.
- The 9th IEEE International Workshop on Cellular Neural Networks and their Applications (CNNA2005) held May 28~30, 2005 in Taiwan. It is the first time the Workshop on CNNA has been held outside of Europe.
- Technical Committee on Distributed Processing (TCDP) of the IEEE Computer Society

sponsored the International Conference on Advanced Information Networking and Applications; AINA 2005) which were held in Taipei in March 2005.

Photos of conferences held in 2005 were put in the photo gallery on our website
Taipei Section web page: <http://www.ieee.org.tw/default.asp>

For 2006, IEEE TS will sponsor the 12th IEEE International Conference on Embedded and Real-Time Computing and Applications (RTCSA) with 25 % ownership of this important event. RTCSA 2006 will be held at Sydney, Australia, in August 2006.

Website List:

IEEE Taipei Section: <http://www.ieee.org.tw/>

IEEE NTU Student Branch: <http://iecentu.org/>

Antennas and Propagation Society Taipei Chapter: <http://www.dyu.edu.tw/~werc/>

Circuits and Systems Society Taipei Chapter: <http://castaipei.ee.ncku.edu.tw/>

Communications Society Taipei Chapter: <http://www.cm.nctu.edu.tw/~IEEEComSocTaipei/>

Components Packaging & Manufacturing Technology Society Taipei Chapter:
<http://cpmt.isu.edu.tw>

Electron Devices Society Taipei Chapter: <http://www.edstaipei.edu.tw/>

Robotics & Automation Society Taipei Chapter:

<http://tc-sfa.ee.ntou.edu.tw/IEEE-RA/e-newsletter.htm>

Solid-State Circuits Society Taipei Chapter: <http://www2.ee.ntu.edu.tw/~sscs/>

Systems, Man, & Cybernetics Society Taipei Chapter:

<http://ins.cn.nctu.edu.tw/SMCTaipei/index.htm>

Vehicular Technology Society Taipei Chapter: <http://cmbsd.cm.nctu.edu.tw/~lichun/vts.htm>

B-5 Awards

As we mentioned in the Professional and Continuous Education Activities, the IEEE Taipei Section Executive Committee approved the “A+ Career Award” in 2005. The winners of the Award will be announced on June 16, 2006. An Awarding Ceremony will be held on July 16, 2006, and each of the three prizewinners will give a talk for experience sharing.

B-6 Chapter Activities

The 25 IEEE Society Taipei chapters are active in supporting their related activities, such as tutorial courses, conferences, workshops, and seminars. More than 119 activities report were submitted to the IEEE HQ.

The Chapters and Chairs are as follow:

1.

Chapter Name: Antennas and Propagation Society Taipei Chapter (AP03)

Chapter Chair: Dau-Chyrh Chang

Title and Affiliation: Director, Wireless Communication Research Center, Da Yeh University

Email: dcchang@mail.dyu.edu.tw

2.

Chapter Name: Broadcast Technology Society Taipei Chapter (BT02)

Chapter Chair: Ying Li

Title and Affiliation: Professor, Department of Communication Engineering, Yuan Ze University

Email: eeyli@saturn.yzu.edu.tw

3.

Chapter Name: Computer Society Taipei Chapter (C16)

Chapter Chair: Wen-Hsiang Tsai

Title and Affiliation: President of Asia University.

Email: whtsai@cis.nctu.edu.tw

4.

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

Chapter Chair: Shyh-Jye Chou

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

Email: jerryjou@mail.nctu.edu.tw

5.

Chapter Name: Consumer Electronics Society Taipei Chapter (CE08)

Chapter Chair: Ja-Ling Wu

Title and Affiliation: Professor, Department of Computer Science and Information Engineering, National Taiwan University

Email: wjl@csie.ntu.edu.tw

6.

Chapter Name: Computational Intelligence Society Taipei Chapter (CIS11)

Chapter Chair: Jyh-Yeong Chang

Title and Affiliation: Professor, Electrical and Control Engineering, National Chiao Tung University.

Email: jychang@mail.nctu.edu.tw

7.

Chapter Name: Communications Society Taipei Chapter (COM19)

Chapter Chair: Po-Ning Chen

Title and Affiliation: Professor, Department of Communication Engineering, National Chiao Tung University

Email: gponing@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: slfu@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

10.

Chapter Name: Education Society Taipei Chapter (E25)

Chapter Chair: Su Lu

Title and Affiliation: Professor, Electrical Engineering, National Defense University

Email: sulu@ccit.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: chung@cc.nctu.edu.tw

12.

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

13.

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@csrr.ncu.edu.tw

14.

Chapter Name: Industrial Electronics Society & Power Electronics Society Taipei Chapter (IE13 /PEL35)

Chapter Chair: Sheng-Nian Yeh

Title and Affiliation: Professor, Department of Electrical Engineering, National Taiwan University of Science and Technology

Email: snyeh@mail.ntust.edu.tw

15.

Chapter Name: Information Theory Society Taipei Chapter (IT12)

Chapter Chair: Yunghsiang S. Han

Title and Affiliation: Graduate Institute of Communication Engineering, National Taipei University

Email: yshan@mail.ntpu.edu.tw

16.

Chapter Name: Lasers & Electro-Optics Society Taipei Chapter (LEO36)

Chapter Chair: Sheng-Lung Huang

Title and Affiliation: Professor and Director, Institute of Electro-Optical Engineering, National Sun Yat-Sen University

Email: shuang@mail.nsysu.edu.tw

17.

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

18.

Chapter Name: Microwave Theory and Techniques Society Taipei Chapter (MTT17)

Chapter Chair: Shih-Jong Chung

Title and Affiliation: Professor, Department of Communication Engineering, National Chiao Tung University

Email: sjchung@cm.nctu.edu.tw

19.

Chapter Name: Oceanic Engineering Society Taipei Chapter (OE22)

Chapter Chair: Sheng-Wen Cheng

Title and Affiliation: Professor, National Taiwan University

Email: niccheng@ccms.ntu.edu.tw

20.

Chapter Name: Power Engineering Society Taipei Chapter (PE31)

Chapter Chair: Ching-Tsai Pan

Title and Affiliation: Professor, Department of Electrical Engineering, National Tsing Hua University

Email: ctpan@ee.nthu.edu.tw

21.

Chapter Name: Robotics & Automation Society Taipei Chapter (RA24)

Chapter Chair: Ching-Chih Tsai

Title and Affiliation: Professor, Department of Electrical Engineering National Chung-Hsing University

Email: cctsai@dragon.nchu.edu.tw

22.

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

Chapter Chair: Wen-June Wang

Title and Affiliation: Dean, College of Science & Technology, National Chi Nan University

Email: wjwang@ncnu.edu.tw

23.

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

24.

Chapter Name: Solid-State Circuits Society Taipei Chapter (SSC37)

Chapter Chair: Sheu-Iuan Liu

Title and Affiliation: Professor, Electronics Engineering, National Taiwan University

Email: lsi@cc.ee.ntu.edu.tw

25.

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

IEEE Broadcast Technology Society Taipei Chapter Activity Report

Report date: 2005/3/29

1. Subject:

Ubiquitous Monitoring via Sensor Networks
– Applications, Technologies and Systems

2. Host by :

- IEEE Broadcast Technology Society-Taipei
- The Dept. of Communications Engineering, Yuan-Ze University
- China Radio Association

3. Date:

- 2005/3/23 (Wednesday)

4. Place :

- Yuan-Ze University, Jung-Li, Taiwan.

5. Speaker : *Prof. C.-C. Jay Kuo*

- Dept of Electrical Engineering, University of Southern California, Los Angeles, CA 90089-2564

■ *Abstract*

Ubiquitous computing and communications have changed our life greatly nowadays via numerous portable devices and cellular phones. An emerging information technology is to allow human to monitor and measure the physical world via a large amount of low-cost sensors for data gathering, query processing and environment monitoring. The general field is called the wireless sensor networks (WSN). Several potential applications of WSN have been considered, such as military surveillance, structural monitoring, habitat monitoring, patient monitoring, etc. Research on WSN has grown quickly over the last 5 years. It is a highly inter-disciplinary field since it involves techniques from the application layer (*e.g.* data/signal processing, distributed algorithms), the networking layer (*e.g.* distributed protocols, routing) and the physical layer (*e.g.* sensor design and manufacturing, wireless communication). One critical issue to be addressed in all three layers is power management. It is expected to be one of the very fast growing fields in the next decade in both academic and industrial sectors. This talk will provide a broad view of recent developments in WSN and point out some interesting research problems. Some new research results conducted at the University of Southern California (USC) will also be mentioned.

■ *Short Biography of Dr. C.-C. Jay Kuo*

Dr. C.-C. Jay Kuo received the B.S. degree from the National Taiwan University, Taipei, in 1980 and the M.S. and Ph.D. degrees from the Massachusetts Institute of Technology, Cambridge, in 1985 and 1987, respectively, all in Electrical Engineering. He is with the Department of Electrical Engineering, the Signal and Image Processing Institute (SIPI) and the Integrated Media Systems Center (IMSC) at the University of Southern California (USC) as Professor of Electrical Engineering and Mathematics. His research interests are in the areas of digital media processing, multimedia compression, communication and networking technologies, and embedded multimedia system design. Dr. Kuo is a Fellow of IEEE and SPIE. He received the National Science Foundation Young Investigator Award (NYI) and Presidential Faculty Fellow (PFF) Award in 1992 and 1993, respectively.

Dr. Kuo has guided 54 students to their Ph.D. degrees and supervised 15 postdoctoral research fellows. Currently, his research group at USC consists around 30 Ph.D. students and 5 postdoctors (please visit website <http://viola.usc.edu>), which is one of the largest academic research groups in multimedia technologies. He is a co-author of more than 600 technical publications in international conferences and journals as well as the following seven books: *Content-based Audio Classification and Retrieval for Audiovisual Data Parsing* (with Tong Zhang, Kluwer Academic Publishers, 2001), *Semantic Video Object Segmentation for Content-based Multimedia Applications* (with Ju Guo, Kluwer Academic Publishers, 2001), *Intelligent Systems for Video Analysis and Access over the Internet* (with Wensheng Zhou, Prentice Hall, 2002), *Video Content Analysis Using Multimodal Information* (with Ying Li, Kluwer Academic Publishers, 2003) *Quality of Service for Internet Multimedia* (with Jitae Shin and Daniel Lee, Prentice Hall, 2003), *Radio Resource management for Multimedia QoS support in Wireless Cellular Networks* (with Huan Chen, Lei Huang and Sunil Kumar, Kluwer Academic Publishers, 2003) and *High Fidelity Multichannel Audio Coding* (with Dai Tracy Yang and Chris Kyriakakis, Hindawi Publishing Corporation, 2004).

Dr. Kuo is Editor-in-Chief for the Journal of Visual Communication and Image Representation, and Editor for the Journal of Information Science and Engineering and the RURASIP Journal of Applied Signal Processing. He is also on the Editorial Board of the IEEE Signal Processing Magazine. He served as Associate Editor for IEEE Transactions on Image Processing in 1995-98, IEEE Transactions on Circuits and Systems for Video Technology in 1995-1997 and IEEE Transactions on Speech and Audio Processing in 2001-2003.

Ying Li

Chair (2005)

IEEE Broadcast Technology Society Taipei Chapter

Appendix:

