

# Meeting Minutes of Nanoelectronics and Giga-scale Systems Technical Committee

Wed. May 26, 2004; 12:45 PM – 2:15 PM, Vancouver, ISCAS-2004

Prof. Andreas Andreou, the Chair called the meeting to order. The meeting started at 12:45 PM. The meeting agenda was approved by the TC as shown below:

Agenda:

1. Welcome and Introduction
2. Brief discussion of past year activities and technical committee scope.
3. On going Conferences or Workshops
4. Election of Chair/Secretary
5. Other agenda items

## 1. Welcome and introduction

Meeting participants made self-introduction. Prof. Andreou welcomed all participants and made an open remark: The Nanoelectronics and Giga-scale Systems Technical Committee has actively participated in the publications, conferences, and technical activities to promote this exciting field since the date our TC was established on May 6, 2001. Our TC is growing both in membership number as well as activities. Currently, our committee involves more than 40 members representing a good mix of junior and senior members including 23 IEEE Fellows.

Several new members were introduced and approved by the TC who are **Prof. Bill Tai**, **Prof. Rong-Jian Chen**, **Prof. Jui-Lin Lai**, all with National United University (nominated by **Prof. B. Sheu** and **Prof. C.T. Lin**), **Dr. Jeong-Taek Kong**, VP, CAE Team of Samsung Electronics Semiconductor R&D Center, **Prof. Cotofana**, etc.

## 2. Brief discussions of past year activities and technical committee scope.

Prof./Chair Andreas Andreou reported the achieved activities (see Attachment #1 TC 2003-2004 Annual Report)

### (1) Last TC Meeting:

The past TC meeting was held on May 26, 2003 during the IEEE International Symposium on Circuits and Systems, Bangkok, Thailand, May 25-29, 2003.

### (2) The TC Website:

Over the last year, **Prof. Yusuf Leblebici** has done an excellent job in designing an informative web page for the technical committee ( <http://nano-giga.epfl.ch/> ). The current membership information can be found in our web page.

### (3) Conferences or workshops:

(a) IEEE International Symposium on Circuits and Systems (ISCAS), Bangkok, Thailand, May 25-29, 2003

(**Prof. C.T. Lin** acting as Review Committee member and Session Chair).

(b) Third IEEE Conference on Nanotechnology August 12-14, 2003, San Francisco, CA (**Prof. C. T. Lin**).

(c) International Symposium on Nano-Electronic Circuits and Giga-Scale Systems (ISNCGS), IEEE CASS, Feb. 12-13, 2003, Taiwan. (**Prof. Peter Wu** and **Prof. Bing Sheu** acting as the Program Chairs, and **Prof. C.T. Lin**

acting as the Technical Program Vice co-Chair).

(d) IEEE International Workshop on System-on-Chip for Real-Time Applications Calgary, Canada - June 30 to July 2, 2003 **Prof. E. Friedman** Technical Program Co-chair.

(e) **Prof. T. Stouraitis** - member of the TP Committee and steering committee of IEEE CASS-supported ICECS 2003 - held in Sarjah, UAE, Dec, 2003.

(f) **Prof. T. Stouraitis** and **Prof. E. Friedman**- member of the TP Committee PATMOS 2003 Sep., 2003.

(g) **Prof. T. Stouraitis** - member of the TP Committee SiPS 2003 Oct., 2003.

#### **(4) Distinguished Lecturer in 2003-2004**

(a) **Prof. C.T. Lin**, "Brain-inspired Fuzzy Neural Networks and their Applications".

#### **(5) Editorial Services:**

(a) IEEE TCAS-I: Prof. Parhi , **EIC; C.T. Lin**, AE

(b) IEEE TCAS-II Express Letters: **C.T. Lin, A.G. Andreou, W. Porod**, AE

(c) IEEE Trans. on Systems, Man, and Cybernetics - Parts B: **C.T. Lin**, AE

(d) IEEE Transactions on Very Large Scale Integrated Circuits, **Prof. E. Friedman**, Chair Steering Committee.

**Prof. T. Stouraitis** (AE)

(e) Proceedings of the IEEE, **Prof. E. Friedman** (AE).

#### **(6) Journals, Books and book chapters**

(a) **Prof. B. Sheu** together with **Prof. P. Wu** and Prof. S. Sze were guest editors of a special issue of Proceedings of IEEE on Nanoelectronics (September 2003). **Prof. L. Chua** was a contributor to this special issue.

(b) **Prof. C. T. Lin**, "SVM-Based Fuzzy Neural Network and its Applications to Nano-BioInformatics", edited by Isabelle Guyon, Steve Gunn, Masoud Nikravesh, and Lofti Zadeh, under the Series in Feature extraction, foundations and Applications, Springer Verlag, Winter 2004.

(c) **Prof. E.G. Friedman** and A. V. Mezhiba, Power Distribution Networks in High Speed Integrated Circuits, Kluwer Academic Publishers, 2004.

(d) **Prof. A.G. Andreou** upon invitation by **Prof. B. Sheu** will write a review article on the different directions of Nanotechnology for the IEEE C&Devices Magazine.

(e) **Prof. T. Roska** and **Prof. W. Porod** have organized a special issue of TCAS-I with Nanotechnology theme.

(f) **Prof. M. Zaghoul, Prof. P. Wu** and **Prof. Jing-Yang Jou** are guest editors for Transactions of VLSI Systems with the theme of Nanoelectronics Circuits and Systems.

(g) **Dr. Jeong-Taek Kong** will contribute an invited article titled: "CAD for Nanometer Silicon Design Challenges and Success" in the TVLSI special issue on Nanoelectronics Circuits and Systems.

#### **(7) IEEE-level activities:**

(a) Upon request of the VP for Technical Activities, **Prof. A.G. Andreou** reported on the technical committee at the November 2003 meeting of the BOG.

(b) Prof. Prof. Robert Newcomb , **Dr./Prof. Wai-Chi Fang** and **Prof. E. Friedman** are Member of CAS BOG.

(c) **Prof. B. Sheu**, is a CASS representative to the IEEE Nanotechnology Council (2003, 2004).

### 3. Ongoing Conferences or workshops:

- (a) 2004 IEEE International Symposium on Circuits and Systems (ISCAS), Vancouver, Canada, May 23-26, 2004. Our members have taken lead role in multiple activities that relate to the conference. The Nano-Giga TC actively participated in the technical program committee of the ISCAS 2004. C. T. Lin acting as the Technical Program Committee (TPC) member to help to organize the oral/poster sessions of Nano-Giga Track under 7 topics: 1. Nano-Circuits and Nano-Architectures, 2. Nanoelectronics, Molecular Electronics, 3. Nanosensors, Actuators, 4. Nano-Optoelectronics, 5. Nano-Robotics, Manufacturing Issues, Reliability, 6. Modeling and Simulation, 7. Nano-Bio Electronic Fusion. 8. Other Areas in NANO). **Prof. Fathi M. Salem, Prof./Dean Chung-Yu Peter Wu, Prof. Karim S. Karim, Prof. Jing-Yang Jou, Prof. Yuh-Shyong Yang, Prof. Pedro M. Julián** served as Review Committee Members for the track. For the record, we are acknowledging with gratitude their dedication, diligence, fairness, competence and promptness in completing the review process. There are 16 papers submitted for the track. Five papers are accepted for one lecture session and eight papers for two poster sessions. Also great thanks to **Prof. Robert Newcomb, Prof. Eby Friedman, Prof. Wolfgang Porod, and Prof. Wai-Chi Fang** for being willing to serve as the Nano-Giga Special Session Chairs in ISCAS2004. **Prof. Mona Zaghoul** has organized a ISCAS04 Forum titled “New Era of Technology” with several presentations on emerging and new technologies. **Prof. Robert Newcomb**, has organized the other ISCAS 2004 Forum titled: “The Future of Circuits and Systems”. **Prof. Tamas Roska** is a plenary speaker in the conference.
- (b) IEEE International Conference on Electronics, Circuits, and Systems, TelAviv, Israel - December 13 to 15, 2004, **Prof. E. Friedman** Technical Program Chair, **Prof. A.G. Andreou** Tutorial Chair.
- (c) **Prof. T. Roska**, US National Nanotechnological Initiative (NNI) Workshop on Nano-electronics, -photonics, and -magnetism, in Washington DC, in February, 2004.
- (d) ISCAS-2005: Prof. **Andreas Andreou** will serve as the TC representative; **Prof. C.T. Lin** serves as the Organizing Committee member as the International Liaison representing Taiwan.
- (e) ISCAS 2006, Greece. (**Prof. C.T. Lin** serves as the Organizing Committee member as the Special Session Co-Chair)
- (f) ICONIP05 (2005) International Conference on Neural Information Processing, Taiwan. (**Prof. C.T. Lin** serves as the Program Committee Chair)

### 4. Election of Chair/Secretary

Dr./Prof. Wai-Ch Fang (the current Chair-elect), Prof. C. T. Lin (the current Secretary), and Prof. ? were elected to be the new Chair, the new Chair-elect, and the new Secretary respectively.

### 5. Plan of the future activities:

For the plan of future activities, a few key decisions were made at the meeting under the new leadership of **Dr./Prof. Wai-Chi Fang**, including:

#### In the technical activities area:

- (a) The TC assigned Prof. **C.T Lin** as the coordinator to nominate candidates for Distinguished Lecturers Program for Year-2005.

- (b) The TC continued to assign Prof. **Bing Shu** as the coordinator to recruit new TC members.

**In publication activities area,:**

- (a) The TC opens for further suggestions about additional candidates to help on various archival journals such as TCAS-I, TCAS-II, T-VLSI, and the Transactions on Nanotechnology.
- (b) TC members to contribute feature articles and activity reports to IEEE CAS Magazine, IEEE Circuits and Devices Magazine, and the IEEE Spectrum.

**In the award recognition and endorsement area:**

- (a) For IEEE ISCAS-2005 (May 21-24, Kobe, Japan):

Prof. **Andreas Andreou** will serve as the Chair of the Nano-Gig Track;

- (b) For IEEE NANO-2004 (Aug. 17-19, Munich, Germany):

**Profs. Peter Wu** and **Wofgang Porod** have served as Organizing Committee members.

**In the award recognition and endorsement area:**

- (a) The TC's approved the endorsement for Prof. Keshab Parhi and Prof. C.-T. Lin who are running for Member of Board of Governors. The motion has been passed unanimously.
- (b) The TC's approved the endorsement for Prof. Bin-Da Liu who is running for VP-Region 10. The motion has been passed unanimously.

**The meeting adjourned at 2:15 PM**

\* This meeting minutes is recorded by Dr. Wai-Chi Fang.

**Meeting Attendance: (To be verified)**

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