ANNUAL REPORT 2008-2009 DSP TC, IEEE CAS SOCIETY

Chairman: Prof. B. Nowrouzian
Secretary: Prof. Y. Lian
Past Chairman: Prof. Y. Miyanaga

1 DSP TC Meeting:

The 2008 DSP TC Annual Meeting was held at Ballard Room, Sheraton Seattle Hotel, from 12:50 PM to 14:30 PM on Wednesday May 21, 2008, during the 2008 IEEE International Symposium on Circuits and Systems, Seattle, WA, USA.

2 Conferences or Workshops where the DSP TC or Members of the TC was/were actively involved in 2008-2009 include the followings:

2.1 2008 IEEE International Symposium on Circuits and Systems (*ISCAS 2008*), May 18-21,2008, Seattle, Washington, USA:

> ➢ DSP Track Chair: Prof. Yoshikazu Miyanaga
> ➢ Secretary: Prof. Behrouz Nowrouzian,
> ➢ Secretary Elect.: Prof.Yong Lian

- ***Review Committee Members of DSP Track:*** Drs. Tian-Bo Deng, Uday Desai, Karen Egiazarian, Xinping Huang, Gernot Hueber, Håkan Johansson, Masayuki Kawamata, H. K. Kwan, Yong Lian, Yong Ching Lim, Zhiping Lin, Yoshikazu Miyanaga, Behrouz Nowrouzian, Tokunbo Ogunfunmi, Soontorn Oraintara, See-May Phoong, Ravi Prakash Ramachandran, Tapio Saramäki, Wan Chi Siu, Dominic Ho, David Tay, Wei Xing Zheng.

- ***Best Student Paper Award selection committee:*** Prof. Yong Lian

- ***Technical Session Chairs:***

> ➢ Adaptive Signal Processing: Tapio Saramäki, Lars Wanhammar
> ➢ Digital Audio & Speech Processing: Ravi P. Ramachandran, Yoshikazu Miyanaga
> ➢ Digital Signal Processing for Communications: Wei Xing Zheng
> ➢ *Wireless Biomedical Systems I & II:* Yong   Lian
> ➢ *Digital Filter Design Techniques :* Yong   Lian

- ***Organizer and Chair, Special Session, "Blind Signal Processing for MIMO Systems":*** Wei Xing Zheng

2.2 International Conference on Communications, Circuits and Systems (*ICCCAS 2008*), May 25-27, 2008, Xiamen, China:

- *Technical Program Committee Member:* Prof. H. K. Kwan

2.3 **World Congress on Computational Intelligence** *(WCCI 2008)***,** June 1-6, 2008, Hong Kong, China:

- *International Program Committee Member*: Prof. H. K. Kwan

2.4 **2008 North American Simulation Technology Conference (NASTEC 2008), August 13-15, 2008, McGill University, Montreal, Canada:**

- *Technical Program Committee Member:* Prof. H. K. Kwan

2.5 **2008 IEEE Conference on Soft Computing in Industrial Applications** *(SMCia 2008)* **,** June 25-27, 2008, Muroran, Japan:

- *International Advisory Board Member:* Prof. Yoshikazu Miyanaga

2.6 **The 4th International Symposium on Neural Networks** *(ISNN 2008)***,** September 24-28, 2008, Beijing, China:

- *Program Committee Member:* Prof. H. K. Kwan

2.7 **Automatic Face and Gesture Recognition Conference** *(FG 2008)***, S**eptember 17-19, 2008, Amsterdam, The Nethyerlands:

- *Program Committee:* Prof. Ioannis Pitas

2.8 **2009 IEEE International Conference on Image Processing** *(IEEE ICIP 2009)***,** Fall 2009, Cairo, Egypt:

- *Technical Program Chair:* Prof. Lina Karam

2.9 **IEEE 2008 International Conference on Biomedical Circuits and Systems** *(BioCAS 2008),* November 18-21, 2008, Baltimore, USA:

- Technical *Program Co-Chair:* Prof. Yong Lian

2.10 **9th International Conference on Solid-State and Integrated-Circuit Technology** *(ICSICT 2008)***,** October 20-23, 2008, Beijing, China:

- Technical *Program Committee Member:* Prof. Yong Lian

2.11 **16th European Signal Processing Conference** *(EUSICPO 2008)***,** August 25-29, Lausanne, Switzerland:

- Technical *Program Committee Member:* Prof. Yong Lian

2.12 **2008 IASTED Signal and Image Processing** *(SIP 2008)***,** August $18 - 20$, 2008, Hawaii, USA:

- International *Program Committee Member:* Prof. Yong Lian

2.13 **2008 IEEE International Conference on Neural Networks and Signal Processing** *(ICNNSP 2008)***,** June $3 - 7$, 2008, Nanjing, China:

- *International Advisory Committee Co-Chair:* Prof. Yong Lian

2.14 **2008 International Workshop on Multimedia and Communication Technology** *(IWMAC 2008)***,** November 13 - 14, 2008, Bangkok Thailand:

- *General co-Chair:* Prof. Yoshikazu Miyanaga

2.15 **2008 International Workshop on Smart Info-Media Systems in Bangkok,** *(IEICE SISB 2008),* December 18, 2008, Bangkok, Thailand:

- *International Advisor Committee Chair*: Prof. Yoshikazu Miyanaga

2.16 **2008 IEEE World Congress on Computational Intelligence** *(WCCI 2008),* June 2-6, 2008, Hong Kong:

- *Technical Committee Member:* Prof. Wei Xing Zheng

2.17 **7th World Congress on Intelligent Control and Automation** *(WCICA 2008),* June 25-27, 2008, Chongqing, China:

- *International Program Committee Member:* Prof. Wei Xing Zheng

2.18 **2008 Chinese Control and Decision Conference** *(CCDC 2008),* July 2-4, 2008, Yantai China:

- *Technical Committee Member:* Prof. Wei Xing Zheng

2.19 **2008 IEEE International Conference on Automation and Logistics** *(ICAL 2008),* September 1-3, 2008, China:

- *International Program Committee Member:* Prof. Wei Xing Zheng

2.20 **23rd IEEE International Symposium on Intelligent Control** *(ISIC 2008),* September 3-5, 2008, San Antonio, USA:

- *International Program Committee Member:* Prof. Wei Xing Zheng

2.21 **International Symposium on Intelligent Signal Processing and Communication Systems 2008** *(ISPACS 2008),* December 8-11, 2008, Bangkok, Thailand:

- **Honorary Chair**: Yoshikazu Miyanaga

2.22 **2009 International Symposium on Multimedia and Communication Technology (ISMAC 2009)**, January 22-23, 2009, Bangkok, Thailand

- **General Chair**: Yoshikazu Miyanaga

3 **Ongoing Conferences or Workshops where the DSP TC or Members of the TC is/are actively involved include the followings:**

3.1 **2009 IEEE International Symposium on Circuits and Systems** *(ISCAS 2009),* May 24-27,2009, Taipei, Taiwan:

- ➢ DSP Track Chair: Prof. Behrouz Nowrouzian
- ➢ Secretary: Prof.Yong Lian,
- *Review Committee Members of DSP Track:*
- *International Coordinator:* Prof. Yong Lian

3.2 **2011 IEEE International Symposium on Circuits and Systems** *(ISCAS 2011),* Rio de Janeiro, Brazil:

- *General* **Co-Chair:** Prod. P. S. R. Diniz

3.3 **2009 IEEE International Conference on Image Processing** *(ICIP 2009),* Fall 2009, Cairo, Egypt:

- *Technical Program Chair :* Prof. Lina Karam

3.4 **2012 IEEE International Conference on Image Processing (ICIP 2012):**

- *Organizing committee Member:* Prof. Lina Karam

- *Technical Session Chairs, "Digital Filters and Applications":* Profs. Tian-Bo Deng, H. K. Kwan

3.5 **2010 IEEE International Conference on Image Processing *(ICIP 2010)*,** September 2010, Hong Kong:

- *General Chair:* Wan-Chi Siu

3.6 **2009 APSIPA Annual Summit and Conference (APSIPA ASC 2009),** October 4 - 7, 2009, Sapporo Convention Center, Sapporo, Japan:

- **General Chair:** Yoshikazu Miyanaga

4 Books and Book Chapters:

4.1 P. S. R. Diniz, *ADAPTIVE FILTERING: Algorithms and Practical Implementation*, Springer, New York, NY, Third edition, 2008.

5 Short Courses:

5.1 Prof. Lina Karam has given short courses on Image and Video Compression to industry in 2007 and 2008.

5.2 Prof. Tapio Saramäki has served since 1995 the main lecturer and organizer of four intensive DSP courses to the industrial people through EDUTECH, the organization of Tampere University of Technology taking care of educating people outside the university.

6 Plenary Sessions, Keynote Speakers, Invited Lectures:

6.1 Prof. Zhiping Lin serves as a Distinguished Lecturer of the IEEE CAS Society for 2007-2008.

6.2 Prof. Tokunbo Ogunfunmi gave an invited talk at Obafemi Awolowo University, Nigeria in April 2008, titled "Signal Processing challenges in Wireless LANs: A case study of the IEEE 802.11n Amendment".

7 Editorial Services:

7.1 Prof. Oscar Au serves as an Associate Editor for IEEE Transactions On Circuits and Systems for Video Technology.

7.2 Prof. Oscar Au serves as an Editorial Board Member for Journal of Multimedia.

7.3 Prof. Oscar Au serves as an Editorial Board Member for Journal of the Franklin Institute.

7.4 Dr. Sankar Basu served as an Editor-in-Chief of IEEE Transactions on Circuits and Systems Part I.

7.5 Prof. Tamal Bose has served as an Associate Editor of Research Letters in Signal Processing, 2007-Present.

7.6 Prof. Tamal Bose has served as a Reviewer for IEEE Accreditation Board for Engineering and Technology, 2005-Present.

7.7 Prof. Tamal Bose has served as an Advisory Board Member for IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, Japan, 2002-Present.

7.8 Prof. Tamal Bose served as the Publicity Chair for 2009 DSP and SPE Workshop, Marco Island, Florida, USA.

7.9 Prof. Tamal Bose served as a Member of International Program Committee for IEEE SMC Workshop, Germany 2007.

7.10 Prof. Tamal Bose served as a Member of International Program Committee for IEEE International Conference on Communications (ICC 2007), Glasgow, Scotland, UK.

7.11 Prof. Tamal Bose served as a Member of International Membership Advancement Committee for IEEE Circuits and Systems Society, 2006-2008.

7.12 Prof. Tamal Bose served as Local Arrangement Chair for 2008 IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP 2008), Las Vegas, Nevada, 2008.

7.13 Prof. J. B. Evans served as an Associate Editor for IEEE Communications Letters.

7.14 Prof. Takao Hinamoto serves as an Associate Editor for IEEE Transactions on Circuits and Systems Part I.

7.15 Prof. K.C. Ho served as an Associate Editor for IEEE Transactions on Signal Processing.

7.16 Prof. K.C. Ho served as an Associate Editor for IEEE Signal Processing Letters.

7.17 Prof. Yih-Fang Huang serves as the General Program Co-Chair for 2009 IEEE International Symposium on Circuits and Systems *(ISCAS 2009)*, May 24-27, 2009, Taipei.

7.18 Prof. Håkan Johansson served as an Associate Editor for IEEE Transactions on Circuits and Systems Part II.

7.19 Prof. Håkan Johansson served as an Associate Editor for IEEE Signal Processing Letters.

7.20 Prof. Håkan Johansson serves as an Associate Editor for IEEE Transactions Signal Processing.

7.21 Prof. Håkan Johansson served as an Associate Editor for IEEE Transactions on Circuits and Systems Part I.

7.22 Prof. Håkan Johansson served as an Associate Editor for IEEE Transactions on Signal Processing Letters.

7.23 Prof. Håkan Johansson served as a Guest Editor for the Special Issue on Signal Processing for Data Converters in EURASIP Journal on Advances in Signal Processing.

7.24 Prof. Lina Karam served as an Associate Editor for IEEE Signal Processing Letters.

7.25 Prof. Lina Karam is served as the Lead Guest Editor of IEEE Journal of Selected Topics in Signal Processing.

7.26   Prof. Lina Karam served on the Editorial Board of the IEEE Special Issue on Visual Media Quality Assessment.

7.27   Prof. Lina Karam served as a Member of the Editorial board of the Foundation Trends in Signal Processing Journal.

7.28   Prof. Lina Karam served as an Associate Editor for IEEE Transactions on Image Processing.

7.29   Prof. H.K. Kwan serves as an Overseas Member for Editorial Committee of Chinese Journal of Scientific Instrument.

7.30   Prof Yong Lian served as an Associate Editor for IEEE Transactions on Circuits and Systems Part I.

7.31   Prof Yong Lian served as an Associate Editor for IEEE Transactions on Biomedical Circuits and Systems.

7.32   Prof Yong Lian served as an Associate Editor for IEEE Transactions on Circuits and Systems Part II.

7.33   Prof Yong Lian served as a Guest Editor for the Special Issue on Selected Papers from ISCAS 2007 of IEEE Transactions on Biomedical Circuits and Systems.

7.34   Prof Yong Lian served as a Guest Editor for the Special Issue on Low Power Digital Filter Design Techniques and Their Applications of Circuits Systems and Signal Processing.

7.35   Prof. Yong Lian serves on the Editorial Board of IEEE CASS WEB Site.

7.36   Prof. Zhiping Lin serves as a Co-Editor for the Journal of Multidimensional Systems and Signal Processing.

7.37   Prof. Zhiping Lin served as an Associate Editor for the Journal of Circuits, Systems and Signal Processing.

7.38   Prof. Yuan-Pei Lin served as an Associate Editor for Multidimensional, Systems and Signal Processing, Academic Press.

7.39   Prof. Yuan-Pei Lin served as an Associate Editor for IEEE Transaction on Circuits and Systems Part II.

7.40   Prof. Yuan-Pei Lin served as an Associate Editor for IEEE Signal Processing Letters.

7.41   Prof. Yuan-Pei Lin served as an Associate Editor for EURASIP Journal on Applied Signal Processing.

7.42   Prof. Wu-Sheng Lu served as an Associate Editor for IEEE Transactions on Circuits and Systems Part I.

7.43   Prof. Y. Miyanaga served as an Associate Editor for Journal of Signal Processing, Japan.

7.44   Prof. Truong Nguyen served as an Associate Editor for IEEE Transactions on Image Processing.

7.45   Prof. Truong Nguyen served as an Associate Editor for IEEE Signal Processing Letters.

7.46   Prof. Truong Nguyen served as an Associate Editor for IEEE Transactions on Circuits and Systems Part II.

7.47   Prof. Ioannis Pitas served as an Editorial Board Member for Journal of Signal, Image and Video Processing.

7.48   Prof. See-May Phoong served as an Associate Editor for IEEE Transactions on Circuits and Systems Part II.

7.49   Prof. See-May Phoong served as an Associate Editor for IEEE Signal Processing Letters.

7.50   Professor Ravi Prakash Ramachandran served as an Associate Editor the Journal of Pattern Recognition.

7.51   Prof. Ravi P. Ramachandran served as an Associate Editor for IEEE Circuits and Systems Magazine.

7.52   Dr. Ravi P. Ramachandran served as a Member of Editorial Board of IEEE Circuits and Systems Magazine.

7.53   Prof. Tapio Saramäki serves as an Associate Editor for Journal of Circuits, Systems and Signal Processing.

7.54   Prof. T. Stouraitis served as a Regional Editor-Europe for Journal of Circuits, Systems, and Computers.

7.55   Prof. T. Stouraitis served as an Associate Editor for IEEE Transactions on VLSI.

7.56   Prof. T. Stouraitis served as an Associate Editor for IEEE Transactions on Circuits and Systems Part II.

7.57   Prof. David Tay served as an Associate Editor for International Journal of Multidimensional Systems and Signal Processing, Kluwer Academic Press.

7.58   Prof. Sergios Theodoridis serves as Associate Editor for IEEE Transactions on Neural Networks.

7.59   Prof. Sergios Theodoridis serves as an Associate Editor for IEEE Transactions on CAS Part II.

7.60   Prof. Li Xu served as an Associate Editor for Multidimensional Systems and Signal Processing, Academic Press.

7.61   Prof. Wei Xing Zheng served as an Associate Editor for IEEE Transactions on Circuits and Systems Part I.

7.62   Prof. Wei Xing Zheng served as an Associate Editor for IEEE Transactions on Automatic Control.

7.63   Prof. Wei Xing Zheng served as an Associate Editor for IEEE Signal Processing Letters.

7.64   Prof. Wei Xing Zheng serves as an Associate Editor for IEEE Transactions on Automatic Control.

7.65   Prof. Wei Xing Zheng serves as an Associate Editor for IEEE Transactions on Circuits and Systems Part II.

7.66   Prof. Takao Hinamoto serves as an Associate Editor for IEEE Transactions on Circuits and Systems Part I.

8   IEEE Services:

8.1   Prof. Oscar Au served as the Chairman for Multimedia Systems and Applications TC (MSATC) of IEEE CAS Society.

8.2   Prof. Oscar Au served as a Member of Video Signal Processing and Communications TC (VSPC TC) of IEEE CAS Society.

8.3   Prof. Oscar Au served as a Member of Digital Signal Processing TC (DSP TC) of IEEE CAS Society.

8.4   Prof. P. S. R. Diniz served as a Member of IEEE CAS Education Award Committee.

8.5   Prof. Lina Karam served as a Member of IEEE Signal Processing Society's Image and Multidimensional Signal Processing (IMDSP) Technical Committee.

8.6   Prof. Lina Karam serves as a Member of IEEE Signal Processing Society's Technical Directions Board.

8.7   Prof. Zhiping Lin served serves as the Chair of CAS Singapore Chapter for 2007-2008.

8.8   Prof. H. K. Kwan served as an International Steering Committee Member of International Symposium on Intelligent Signal Processing and Communication Systems, November 28-December 1, 2007, Xiamen, China.

8.9   Prof. Wei Xing Zheng served as the *Chair-Elect* of *Technical Committee on Neural Systems and Applications* of *IEEE Circuits and Systems Society*.

8.10   Prof. Wei Xing Zheng served as the *Secretary* of *Technical Committee on Blind Signal Processing* of *IEEE Circuits and Systems Society*.

8.11   Prof. Wei Xing Zheng served on the *International Steering Committee* of *IEEE Asia Pacific Conference on Circuits and Systems (APCCAS)*.

8.12   Prof. Yong Lian served as the Vice President for Asia and Pacific Region of the IEEE CAS Society

8.13   Prof. Yong Lian served as the Chair of the International Steering Committee of IEEE Asia Pacific Conference on Circuits and Systems (APCCAS).

8.14   Prof. Yong Lian served as a member of Chapter-of-the-Year Award committee.

8.15   Prof. Yong Lian served as the IEEE CAS Society's Representative to the BioTechnology Council

8.16   Prof. Yong Lian served as the IEEE CAS Society's Representative to the IEEE Biometrics Council.

8.17   Prof. Sergios Theodoridis was promoted to a Fellow of IEEE.

8.18   Prof. Sergios Theodoridis was elected to the IEEE CAS Society BOG.

8.19   Prof. Sergios Theodoridis was appointed as the Chair of IEEE Long Term

8.20   Strategy Committee.

8.21   Prof. Tokunbo Ogunfunmi serves as Chair of IEEE SPS Santa Clara Valley Chapter, 2007-2009.

8.22   Prof. Tokunbo Ogunfunmi serves as a Member of Digital Signal Processing of IEEE CAS Society's DSP TC.

8.23   Prof. Tokunbo Ogunfunmi serves as a Member of Circuits and Systems for Communications of IEEE CAS Society' CASCOM TC.

9   DSP TC Technically Co-Sponsored Conferences/Symposia/Workshops:

9.1   2008 IEEE International Symposium on Circuits and Systems *(ISCAS 2008)*, May 2008, Seattle, USA.

9.2   International Symposium on Communications and Information Technologies 2008 *(ISCIT 2008)***,** October 21- 23, 2008, Don Chan Palace, Vientiane, Lao PDR.

9.3   International Symposium on Intelligent Signal Processing and Communication Systems 2008 *(ISPACS 2008)***,** December 8-11, 2008, Bangkok,   Thailand.

9.4   International Symposium on Wireless Pervasive Computing 2008 (ISWPC 2008), May 7–9, 2008, Santorini, Greece.

9.5   International Symposium on Communications and Information Technologies 2009 *(ISCIT 2009)***,** September 28- 30, 2009, Incheon, Korea.

9.6   International Symposium on Intelligent Signal Processing and Communication Systems 2009 *(ISPACS 2009)***,** December 7-9, 2009, Kanazawa,   Japan.

10   Other Activities:

10.1   Prof. Oscar Au serves on the Review Committee of Technology Transfer Centre (TTC), HKUST.

10.2   Prof. Oscar Au serves on the Review Committee of ASTRI's Information and Communication Technology (ICT) R&D Center.

10.3   Prof. Oscar Au serves on the Review Committee of Hong Kong Innovation Technology Commission (ITC).

11   Some News from the TC Members are listed below:

11.1   Together with Q. Zou and R.J. Ober, Prof. Zhiping Lin was a co-recipient of the 2008 IEEE Signal Processing Society's Young Author Best Paper Award for the paper entitled "The Cramer Rao lower bound for bilinear systems," IEEE Transactions on Signal Processing, USA, vol. 54, pp. 1666-1680, May, 2008.

12   Acknowledgements:

Thanks are due to Prof. Wei Xing Zheng for maintaining a professional DSP TC web   page.