ANNUAL REPORT 2011-2012 DSP TC
IEEE CAS SOCIETY

Chairman: **Prof. Yong Lian**
Secretary: **Prof. Moncef Gabbouj**
Secretary-Elect: **Prof. Dr. Wei-Ping Zhu**

Members of the DSP TC of the IEEE CAS continue to be very active in 2011-2012. The following report highlights the members' activities in various areas of interest to CAS community. The members participated actively in ISCAS 2011 as well as ISCAS 2012 as detailed in sections 2.1 and 2.2. They have been involved in various capacities in a large number of conferences listed in section 2.3. Five books have been authored by members of the TC. A total of 31 plenary and invited lectures in international conferences, workshops, universities and industries, have been given by members of the TC as outlined in Section 4. Sections 5 and 6 of the report summarize the various editorial and IEEE services carried out by members of the TC. The DSP TC technically co-sponsored many conferences and workshops, the full list is provided in section 7. Additional activities carried out by members of the TC are highlighted in section 8. Finally, the report ends with news from members of the TC and prestigious distinctions obtained in 2011-2012. We are proud of all the distinctions and awards received by the members.

1   DSP TC Meeting

The 2011 DSP TC Annual Meeting was held at Windsor Barra Hotel from 12:10 PM to 14:20 PM on Wednesday May 18, 2011, during the 2011 IEEE International Symposium on Circuits and Systems, Rio De Janeiro, Brazil. The minutes of the meeting contain a detailed report of the items discussed and decisions taken during the meeting as well as the list of attendees.

2   Conferences and Workshops involving the DSP TC or its Members

2.1 TC members' involvement in the 2012 IEEE International Symposium on Circuits and Systems (ISCAS 2012), May 20-23, 2012, Coex, Seoul, South Korea:

- **DSP Track Co-Chairs:** Prof. Yong Lian, Prof. Moncef Gabbouj, and Prof. Wei-Ping Zhu.

  - **Review Committee Members of DSP Track:** Profs. Oscar Au, Maurice Bellanger, Enis Cetin, M. Chakraborty, Lim Yong Ching, Linda DeBrunner, Karen Eguiazarian, Moncef Gabbouj, Oscar Gustafsson, Xinping Huang, Gwee Bah Hwee, Hakan Johansson, Izzet Kale, Lina Karam, Masayuki Kawamata, Ted Kok, H.K. Kwan, Raija Lehto, Zhiping Lin, Wu-Sheng Lu, Kai-Kuang Ma, Pramod Kumar Meher, Yoshikazu Miyanaga, Truong Nguyen, Behrouz Nowrouzian, Tokunbo Ogunfunmi, Soontorn Oraintara, Ioannis Pitas, Tapio Saramaki, Wan-Chi Siu, Akira Taguchi, David Tay, Chien-Cheng Tseng, Yajun Yu, Wei Xing Zheng, Wei-Ping Zhu.

- **Non-DSP TC member reviewers:** Faouzi Alaya Cheikh, Amel Ben Azza, Azeddine Beghdadi, Fehim Chebil, Lazhar Khriji, Mejdi Trimeche, Yao Wang.

- **Technical Session Chairs:**

  - **David Tay,** session chair, DSP Algorithm and Applications II (C5P-S)
  - **Gwee Bah Hwee**, session chair, C5P-S DSP Algorithm and Applications II in Track: Digital Signal Processing C3L-K Digital Circuit Design I in Track: VLSI Systems, Architectures and Applications C4P-T Digital Circuit Design III in Track: VLSI Systems, Architectures and Applications.
  - **H. K. Kwan & Wei Xing Zheng**, session chair: Digital Filter Design
  - **Håkan Johansson,** session chair: Digital Filters, and DSP for Communications
  - **Mohsin Jamali,** session chair System Design Methodology (A2LB); session chair Image Analysis and Processing II (B5P-Q).
  - **M N S Swamy,** session chair, Digital Signal Processing
  - **Mrityunjoy Chakraborty**, chairing two sessions at ISCAS 2012.
  - **Lim Yong Ching,** session chair: A1LC, FIR & IIR Digital Filters
  - **Lin Zhiping,** session chair**,** Statistical and Blind Signal Processing
  - **Raija Lehto,** session chair, C5P-Q Digital Filters
  - **Wan-Chi Siu,** session chair: HEVC-High Efficient Video Coding and Video Coding
  - **Wei Xing Zheng,** session chair: Statistical and Blind Signal Processing
  - **Xingping Huang**, session chair, DSP for Communications Session (B3L-C)
  - **Yoshikazu Miyanaga,** session chair, ISCAS 2012, Speech Processing
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- **Special Sessions and tutorials organized by TC member:**
  - **Tokunbo Ogunfunmi** (with M.J (Sim) Narasimha and Roberto Tognieri), Tutorial: Advances in Speech Coding, Speech Recognition and Applications, Tutorial at ISCAS 2012.
  - **Mrityunjoy Chakraborty,** special session "Recent Advances in Sparse Adaptive Filters" at ISCAS 2012

2.2 TC members' involvement in the 2011 IEEE International Symposium on Circuits and Systems (ISCAS 2011), May 15-18, 2011, Rio de Janeiro, Brazil.

- **DSP Track Co-Chairs:** Prof. Yong Lian, Prof. Moncef Gabbouj, and Prof. Tapio Saramäki.

- **Review Committee Members of DSP Track:** Profs. M. Omair Ahmad, Oscar Au, M. Chakraborty, Lim Yong Ching, Linda DeBrunner, Tian-Bo Deng, Moncef Gabbouj, Oscar Gustafsson, Xinping Huang, Hakan Johansson, Ted Kok, H.K. Kwan, Daniel Lun, Kai-Kuang Ma, Yoshikazu Miyanaga, Truong Nguyen, Behrouz Nowrouzian, Soontorn Oraintara, Ravi Prakash Ramachandran, W. C. Siu, David Tay, Chien-Cheng Tseng, Tas Venetsanopoulos, Alan Willson, Yajun Yu, Wei Xing Zheng, Wei-Ping Zhu.

- **Technical Session Chairs:**

- **Akira Taguchi, Moncef Gabbouj,** session chairs**, "**Adaptive Techniques in Signal and Image Processing Applications."
- **Yong Lian, Yajun Yu,** session chairs, **"**FIR Digital Filters."
- **Sandar Basu, Weixing Zheng,** session chairs, **"**Detection and Estimation."
- **H K Kwan, Behrouz Nowrouzian,** session chairs, **"**Digital Filter Design and Implementation."
- **Oscar Gustafsson, Tapio Saramäki,** session chairs, **"**IC Implementation of DSP Algorithms."
- **MNS Swamy,** session chair, **"**Image Processing & Analysis."
- **Raija Lehto,** session chair, **"**DSP for Communications; ISCAS 2011 Session Chair: C2L-H Speech Processing."
- **Yajun Yu, M Chakraborty,** session chairs, **"**Digital Signal Processing Applications."
- **Tokunbo Ogunfunmi, Yoshikazu Miyanaga,** session chairs, **"**DSP Implementation."
- **Tapio Saramäki, David Tay,** session chairs, **"**Discrete Transforms."
- **David Tay and Hakan Johansson** session chairs, **"**Multirate & Filter Banks."
- **Wei Xing Zhang, Oscar Au,** session chairs, "Compressed Sensing & Nonlinear Signal Processing."
- **Moncef Gabbouj**, **Tokunbo Ogunfunmi**, session chairs, "Image & Video Compression."
- **Yoshikazu Miyanaga, Wei-Ping Zhu,** session chairs, "Signal Processing in OFDM."
- **Håkan Johansson**, **Raija Lehto**, session chairs, "Speech Processing."
- **Pramod Kumar Meher**, session chair of (i) Cryptography and Security for Communications Systems; (ii) DSP Circuit Design II; and (iii) DSP Circuit Design III.
- **Yajun Yu**, session chair of FIR Digital Filters, and Digital Signal Processing Application
- **Wei Xing Zheng** session chair, "Compressed Sensing & Nonlinear Signal Processing," and "Blind Signal Processing."

- **Special Sessions and tutorials organized by TC member:**
- **Wei-Ping Zhu** and **MNS Swamy**, Compressive Sensing & Its Applications
- **Tokunbo Ogunfunmi**, Co-organized a special session entitled "Circuits and Systems Concept Inventory"; and another special session entitled "Recent Advances in Linear & Non Linear Adaptive Filters" at the 2011 IEEE International Symposium on Circuits and Systems, Rio de Janeiro, Brazil from 15 18 May 2011.

2.3 DSP TC members involved in other conferences

- **Oscar Au**, 11/12 Technical Program Committee, Int. Sym. On Visual Communication and Image Processing (VCIP), San Diego, CA, USA; 10/12 Technical Program Committee, IEEE Int. Workshop on Multimedia Signal Processing (MMSP), Banff, Canada; 9/12 Track Chair/Technical Program Committee, IEEE Int. Conf. on Image Processing (ICIP), Orlando, FL, USA; 7/12 Technical Program Committee, Int. Conf. on Signal Processing and Multimedia Application (SIGMAP), Rome, Italy; 7/12 Technical Program Committee, IEEE Int. Conf. on Multimedia and Expo (ICME), Melbourne, Australia; 6/12 Technical Program Committee, IAST Int. Conf. on Signal and Image Processing (SIP), Honolulu, Hawaii, USA; 3/12 Technical Program Committee, IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP), Kyoto, Japan; 12/11 Technical Program Committee, Int. Conf. on Information, Communications and Signal Processing (ICICS), Singapore; 11/11 Technical Program Committee, Int. Sym. On Visual Communication and Image Processing (VCIP), Tainan, Taiwan, China; 11/11 Technical Program Committee, IEEE Int. Workshop on Information Forensics and Security (WIFS), Fozdo Lguacu, Brazil; 11/11 Technical Program Committee, Pacific-Rim Sym. On Image and Video Technology (PSIVT), Gwangju, Korea; 10/11 Technical Program Committee, APSIPA Annual Summit and Conference (ASC), Xian, China; 10/11 Technical Program Committee, IEEE Int. Workshop on Multimedia Signal Processing (MMSP), Hangzhou, China; 9/11 Track Chair/Technical Program Committee, IEEE Int. Conf. on Image Processing (ICIP), Brussels, Belgium; 9/11 Technical Program Committee, IEEE Vehicular Technology Conference (VTC), San Francisco, CA, USA; 8/11 Technical Program Committee, Int. Conf. on Embedded and Multimedia Computing (EMC), Enshi, China; 7/11 Technical Program Committee, Int. Conf. on Signal Processing and Multimedia Application (SIGMAP), Seville, Spain; 7/11 Technical Program Committee, IEEE Int. Conf. on Multimedia and Expo (ICME), Barcelona, Spain; 6/11 Technical Program Committee, IEEE Int. Conf. on Multimedia and Ubiquitous Engineering (MUE), Crete, Greece; 6/11 Technical Program Committee, IASTED Int. Conf. on Signal and Image Processing and Application (SIPA), Crete, Greece; 5/11 Technical Program Committee, IASTED Int. Conf. on Imaging and Signal Processing in Healthcare and Technology (ISPHT), Washington, DC, USA; 5/11 Technical Program Committee, 3DTV Conference (3DTV-CON), Antalya, Turkey; 3/11 Technical Program Committee, IEEE Int. Conf. on Acoustics, Speech and Signal Processing (ICASSP), Prague, Czech Republic.
- **Mrityunjoy Chakraborty,** General Chair (also TPC chair), "National Conference on Communications (NCC) – 2012", February 3-5, 2012, IIT, Kharagpur, INDIA; Distinguished Lecturer, Asia Pacific Signal and Information Processing Association (APSIPA); Chair, APSIPA TC on "Signal and Information Processing Theory and Methods"
- **Tian-Bo Deng** served as Review Committee Member (RCM) for IEEE ISCAS 2011; TPC member for IEEE ISCIT 2011; TPC member for IEEE ISCIT 2012; TPC member for IEEE ICC 2011; Special Session Chair for International Conference ICESIT 2012; Session Chair for IEEE ICICS 2011

- **Moncef Gabbouj**, member of the TPC 3rd European Workshop on Visual Information Processing, EUVIP2011, July 4-6, 2011, Paris, France; CBMI 2011, Innovation co-chair IEEE ICIP 2011, and Technical Program co-chair of ISCCSP 2012, May 2012, Rome, Italy.
- **Dominic K. Ho**: Review Committee Member, The 7th IEEE Sensor Array and Multichannel Processing Workshop, Hoboken, NJ, Ju17-20, 2012; Financial Chair, The Fourth International Workshop on Computational Advances in Multi-Sensor Adaptive Processing, San Juan, Puerto Rico, Dec.13-16, 2011; Session Chair & Review Committee Member, IEEE Int. Conference on Acoustics, Speech, Signal Processing, Kyoto, Japan, Mar. 25-30, 2012.
- **Gwee Bah Hwee,** Review Committee Member and Session Chair for Session A2L-D Memory Circuits II in Track: VLSI Systems, Architectures and Applications Session A3L-C Design Techniques for Storage Elements in Track: VLSI Systems, Architectures and Applications Session C2L-D Circuit Testing & Modeling in Track: VLSI Systems, Architectures and Applications and TPC Co-Chair - ISIC 2011 and TPC Member - IEEE VLSI-DAT 2012.
- **Mohsin Jamali,** Publication Chair for International Conference on Multimedia, Signal Processing and Communication Technologies (IMPACT-2011), Aligarh, India, December 2011; Session Chair (Multiprocessor and Parallel Processing I) for 2012 IEEE International Conference on Electro/Information Technology, Indianapolis, IN, May 2012.
- **Håkan Johansson,** Member of the Technical Program Committee for GC'11 - SPC, IEEE GLOBECOM, Signal Processing for Communications Symposium, Houston, Texas, USA, Dec. 5-9, 2011; Member of the Technical Program Committee of the IEEE International Conference on Communications (ICC), Kyoto, Japan, June 2011; Member of the Technical Program Committee for I-WASP 2011, International Workshop on Applications of Signal Processing, I-WASP 2011, Kochi, Kerala, India, July, 22-24, 2011; Member of the Technical Program Committee of the Signal Processing and Applications (SPA) track of Mosharaka International Conference on Communications and Signal Processing (MIC-CSP), 2011; Member of the Program Committee of the 7th International Symposium on Image and Signal Processing and Analysis (ISPA), Dubrovnik, Croatia, Sept. 4-6, 2011; Member of the Technical Program Committee for GC'12 - SPC, IEEE GLOBECOM; Signal Processing for Communications Symposium, Anaheim, California, USA, Dec. 3-7, 2012; Member of the Technical Program Committee of the IEEE International Conference on Communications (ICC), Ottawa, Canada, June 2012; Member of the Technical Program Committee of the Signal, Image and Speech Processing (SISP) track of Mosharaka International Conference on Communications, Signals and Coding (MIC-CSC2012), Istanbul, Turkey, Oct. 12-14, 2012; Member of the Technical Program Committee of the First IEEE International Conference on Communications in China: Signal Processing for Communications (ICCC'12 - SPC), Aug. 2012; Technical Program Committee Reviewer for the IEEE Symposium on Industrial Electronics and Applications, Sept. 2012.

- **Ted Kok,** served as Member of Technical Program Committee of 2012 European Conference on Signal Processing, Review Committee Member of 2011 IEEE International Conference on Image Processing 2011, IEEE International Conference on Multimedia & Expo 2011, IEEE Electronic Device and Solid State Circuit Conference, 2011, IEEE International Symposium on Circuit and Systems, IEEE Symposium on Industrial Electronics and Applications 2012,
- **H. K. Kwan,** Program Committee Member, ISCB Great Lakes Bioinformatics Conference (GLBIO 2012), University of Michigan, Ann Arbor, MI, 15-17 May 2012; International Program Committee Member, 13th WSEAS International Conference on Neural Networks (NN 2012), "G. Enescu" University, Iasi, Romania, June 13-15, 2012; International Program Committee Member, Ninth International Symposium on Neural Networks (ISNN 2012), Shenyang, China, 11-14 July 2012; Program Committee Member, 19th International Conference on Neural Information Processing (ICONIP2012), Doha, Qatar, 12-15 November 2012.
- **Yong Lian,** General Chair, 19th Asia and South Pacific Design Automation Conference (ASP-DAC'2014), Jan 2014, Singapore, Technical Program Co-Chair, 2013 IEEE Symposium on Circuits and Systems(ISCAS'2013), May 2013, Beijing, China, Co-Chair of International Advisory Committee, 2013 IEEE MTT-S International Microwave Workshop Series on RF and Wireless Technologies for Biomedical and Healthcare Applications, Aug 1-3, 2013, Singapore, Track Chair, 2012 IEEE International Conference on Electronics, Circuits, and Systems (ICECS 2012), Dec 9-12, Seville, Spain, International Liaison, 2012 IEEE Biomedical Circuits and Systems Conference, Nov 28-30, Hsinchu, Taiwan, Technical Program Committee Member, the 38th European Solid-State Circuits Conference ESSCIRC'2012, September 17-21, 2012, Bordeaux, France, Technical Program Committee Member, the 9th International Conference on ASIC (ASICON 2011), October 25-28, 2011, Xiamen, China, Technical Program Committee Member, the 37th European Solid-State Circuits Conference ESSCIRC'2011, September 12-16, 2011, Helsinki, Finland, Technical Program Committee Member, the 20th European Conference on Circuit Theory and Design (ECCTD 2011), August 29 – 31,2011, Linkoping, Sweden.
- **Pramod Kumar Meher,** Track Chair MWSCAS-2011, MWSCAS-2012, NEWCAS-2012; Program Chair IEEE International Symposium on Consumer Electronics-2011; Program Chair International Symposium on Electronic System Design-2011; Track Chair MWSCAS-2012 and NEWCAS-2012
- **Yoshikazu Miyanaga**, Tutorial co-Chair, IEEE International Conference on Acoustics, Speech, and Signal Processing 2012 (IEEE ICASSP 2012), March 25-30, 2012, Kyoto, Japan; General Chair, IEICE International Technical Conference on Circuits/Systems, Computers and Communications 2012 (IEICE ITC-CSCC 2012), July 15 - 18, 2012, Sapporo, Japan; General co-Chair, International Symposium on Communications and Information Technologies (ISCIT 2012, IEEE), Gold Coast, Australia, October 2 - 5, 2012; International Advisory Board Member, TPC Track Chair, IEEE TENCON 2012, Cebu,

Philippines, November 19 – 22, 2012; General co-Chair, 2011 International Symposium on Multimedia and Communication Technology (ISMAC 2011), Hokkaido University, Sapporo, Japan, September 1 - 2, 2011; General co-Chair, 2011 APSIPA Annual Summit and Conference (APSIPA ASC 2011), Xian, China, October 18 – 21, 2011; International Steering Committee Chair, International Symposium on Communications and Information Technologies (ISCIT 2011, IEEE), Hangzhou, China, October 12-14, 2011; International Advisor Committee Chair , International Workshop on Smart Info-Media Systems in ASIA (IEICE SISB 2011), Nagasaki, Japan, October 31 - November 2, 2011; International Steering Committee Member, International Symposium on Intelligent Signal Processing and Communication Systems 2011 (ISPACS 2011, IEEE), December 7 - 9, 2011, ChiangMai, Thailand.

- **Tokunbo Ogunfunmi,** IEEE Midwest Symposium on Circuits and Systems (MWSCAS 2011), Session Chair; Asilomar Conference on Circuits, Systems and Computers (ACCSC 2012), Session Chair. Organized a special lecture session titled "Embedded Implementations and Adaptation in Wireless Communication Systems" at the 2011 IEEE International Midwest Symposium on Circuits and Systems, Seoul, Korea, Aug. 2011; Organized a special session at Asilomar Conference on Circuits, Systems and Computers (ACCSC 2012); Session titled "Speech Processing and Speech Recognition;" General Co-Chair, IEEE International Conference on Adaptive Science and Technology (ICAST 2011); Member, Technical Program Committee for the IEEE Signal Processing Systems (SiPS) Workshop, 2011.

- **Akira Taguchi,** served as Session Chair, ISPACS 2011, Session Title: Image Processing: Compression/Enhancement; Special Session Chair ICASSP 2012 (March 25-30, 2012); ISPACS 2011 International Steering Committee Member; ISCIT 2012 Technical Program Committee Member; ISPACS 2012 International Steering Committee Member.

- **David Tay** served as a Review Committee Member for the 2011 IEEE International Conference on Image Processing (ICIP 2011); (ii) Program Committee for The 4th International Congress on Image and Signal Processing (CISP 2011), 15-17 October 2011, Shanghai, China; Review Committee Member; 2012 IEEE International Conference on Image Processing (ICIP 2012); Program Committee Member of the 2012 5th International Congress on Image and Signal Processing (CISP 2012), 16-18 October 2012, Chongqing, China.

- **Yajun Yu** served as Track Chair of DSP in IEEE APCCAS2012 in Kaohsiung, Taiwan.

- **Wei-Ping Zhu** served as Track Chair of Image Processing and Multimedia Systems in IEEE MWSCAS2012, Boise, Idaho, USA, and Technical Program Committee Member for WCSP2012 (International Conference on Wireless Communication and Signal Processing), CISP2012 (International Congress on Image and Signal Processing), CHINACOM2011 (International ICST Conference on Communications and Networking in China), and WCSP2011.

- **Wei Xing Zheng** served as Track Co-Chair (Digital Signal Processing Track for Blind Signal Processing) of the 2011 IEEE International Symposium on

Circuits and Systems (ISCAS'2011), Rio de Janeiro, Brazil, May 2011, International Program Committee Member of the 2010 IEEE International Conference on Networking, Sensing and Control (ICNSC'2011), Delft, The Netherlands, April 2011, Technical Program Committee Member of the 2011 International Conference on Multimedia and Signal Processing (CMSP'2011), Guilin, China, May 2011, International Program Committee Member of the 8th Asian Control Conference (ASCC'2011), Kaohsiung, Taiwan, May 2011, Technical Program Committee Member of the 23rd Chinese Control and Decision Conference (CCDC'2011), Mianyang, Sichuan, China, May 2011, Publicity Committee Co-Chair of the 8th IEEE International Conference on Information and Automation (ICIA'2011), Shenzhen, China, June 2011, Technical Program Committee Member of the 30th Chinese Control Conference (CCC'2011), Yantai, China, July 2011, International Program Committee Member of the 2011 International Conference on Intelligent Control and Information Processing (ICICIP'2011), Harbin, China, July 2011, International Program Committee Member of the 2011 Australian Control Conference (AUCC'2011), Melbourne, Australia, September 2011, , Program Committee Member of the Second International Conference on Information Science and Technology (ICIST'2012), Wuhan, China, March 2012, International Program Committee Member of the 2012 IEEE International Conference on Networking, Sensing and Control (ICNSC'2012), Beijing, China, April 2012, Technical Program Committee Member of the 24th Chinese Control and Decision Conference (CCDC'2012), Taiyuan, Shanxi, China, May 2012, International Program Committee Member of the 16th IFAC Symposium on System Identification (SYSID'2012), Brussels, Belgium, July 2012, International Program Committee Member of the 2012 International Conference on Intelligent Control and Information Processing (ICICIP 2012), Dalian, China, July 2012, Technical Program Committee Member of the 31st Chinese Control Conference (CCC'2012), Hefei, China, July 2012, International Program Committee Member of the 2012 IEEE International Conference on Automation and Logistics (ICAL'2012), Zhengzhou, China, August 2012, International Program Committee Member of the 2012 Australian Control Conference (AUCC'2012), Sydney, Australia, November 2012, Program Committee Member of the 51st IEEE Conference on Decision and Control (CDC'2012), Maui, Hawaii, USA, December 2012.

3   Books and Book Chapters

- Serkan Kiranyaz and **Moncef Gabbouj**, Content-Based Management of Multimedia Databases, LAP LAMBERT Academic Publishing, 2012.
- A. Eghbali and **H. Johansson**, "Reconfigurable multirate systems in cognitive radios" in Foundation of Cognitive Radio Systems, S. Cheng, Ed., ISBN 978-953-51-0268-7, 2012, 22 pages
- **C.W. Kok** and W.S. Tam, CMOS Voltage Reference: An Analytical and Practical Perspective, Wiley, 2012.
- **P.S.R. Diniz,** Adaptive Filtering: Algorithms and Practical Implementations, Springer, Boston, MA, Fourth Edition, 2012.

- **P.S.R**. **Diniz,** Martins, W. A., Lima, M. V. S., Block Transceivers: OFDM and Beyond, Morgan & Claypool, CO, 2012.
- **Yajun Yu**, Co-author of a book chapter "Digital Filter Structures and Their Implementation" in the book series of Signal Processing Reference by Elsevier (on-going).

4   Plenary Sessions, Keynote Speakers, Invited Lectures

- **Oscar Au**, 12/11 "Can we get more than 1 pixel resolution out of 1 pixel?" an invited seminar for Tongji University, Shanghai, China.

- **Oscar Au,** 12/11 "Can we get more than 1 pixel resolution out of 1 pixel?" an invited seminar for Alcatel-Lucent Bell Labs, Belgium.

- **Oscar Au,** 11/11 "Can we get more than 1 pixel resolution out of 1 pixel?" an invited seminar for Communication Association Hong Kong (CAHK), Hong Kong.

- **Oscar Au,** 11/11 "Next Generation Video Coding Standard beyond H.264," an invited seminar for Hong Kong Institute of Engineer (HKIE), Hong Kong.

- **Oscar Au,** 10/11 "Can we get more than 1 pixel resolution out of 1 pixel?" an invited seminar at Xidian University, Xian, Shaanxi, China.

- **Oscar Au,** 4/11   "Can we get more than 1 pixel resolution out of 1 pixel?" a live webcast seminar for IEEE CAS MSATC.

- **Oscar Au,** 3/11 "Joint AVS Compression and Encryption for secure communication," an invited seminar for SMPTE Hong Kong Section, Hong Kong.

- **Moncef Gabbouj,** "Multi-Dimensional Particle Swarm Optimization: Algorithms and Applications," Purdue University, USA, Fall 2011.

- **Moncef Gabbouj**, "Collective Network of Binary Classifier Framework (CNBC)," Purdue University, USA, Fall 2011.

- **Moncef Gabbouj**, "Video Coding Using Spatially Varying Transform," Purdue University, USA, Fall 2011.

- **Moncef Gabbouj**, "Subjective quality assessment of asymmetric Stereoscopic 3D Video," Purdue University, USA, Fall 2011.

- **Moncef Gabbouj**, "Subjective quality assessment of asymmetric Stereoscopic 3D Video," Polytechnic Institute of New York University, USA, Fall 2011.

- **Moncef Gabbouj**, "Overview of multimedia research," University of Louisville, USA, Fall 2011.

- **Moncef Gabbouj**, "Extracting Intelligence from Data -- Collective Network of Binary Classifier Framework (CNBC) Using Multi-Dimensional Particle Swarm Optimization," QUALCOMM, San Diego, CA, USA, Spring 2012.

- **Moncef Gabbouj**, "CBIR Based on Collective Network of Binary Classifiers Powered by Multi-Dimensional Particle Swarm Optimization," Nokia Palo Alto, CA, USA, Spring 2012.

- **Moncef Gabbouj**, "Extracting Intelligence from Data -- Collective Network of Binary Classifier Framework (CNBC) Using Multi-Dimensional Particle Swarm Optimization," Huawei, Santa Clara, CA, USA, Spring 2012.

- **Moncef Gabbouj**, "Collective Network of Binary Classifier Framework (CNBC) Using Multi-Dimensional Particle Swarm Optimization for Media Retrieval," University of Southern California, USA, Spring 2012.

- **Yong Lian**, "Google, iPhone, …, What Comes Next?", Med-X Research Institute and School of Microelectronics of Shanghai Jiao Tong University, Shanghai, Dec. 29, 2011.

- **Yong Lian**, "Google, iPhone, …, What Comes Next?", Universite du Quebec a Montreal, Canada, Dec. 21, 2011.

- **Yong Lian,** "Google, iPhone, …, What Comes Next?", The University of British Columbia, Vancouver, Canada, Dec. 8, 2011.

- **Yong Lian**, Panelist, SoC for Biomedical Applications: Trends and Challenges, 19th IFIP/IEEE International Conference on Very Large Scale Integration, Hong Kong, China, Oct 3-5, 2011. (an event for celebrating 30-year anniversary of the conference).

- **Yong Lian**, "Google, iPhone, …, What Comes Next?", Inaugural Lecture of the NUS Engineering Lecture Series, Faculty of Engineering, NUS, Sept. 22, 2011.

- **Yong Lian**, "Towards Self-Powered Wireless Biomedical Devices", Concordia University, Montreal, Canada, June 6, 2011.

- **Zhiping Lin,** Plenary address at the Seventh International Workshop on Multidimensional Systems, France, Sep. 2011.

- **Yoshikazu Miyanaga**, Invited Lecture, Next Generation Wireless Communication Systems, Bangkok, Thailand, February 25, 2011

- **Yoshikazu Miyanaga**, Plenary Lecture of IEEE CASS DLP, Next Generation Wireless Communication Systems, Santa Clara, USA, March 21, 2011

- **Yoshikazu Miyanaga**, Invited Lecture of IEEE Thailand Section, Robust Speech Recognition and its Robot Implementation, Bangkok, Thailand, March 30, 2011

- **Yoshikazu Miyanaga**, Invited Lecture of IEEE Thailand Section, Robust Speech Recognition and Ultra High-Speed Wireless Communications, March 26, 2012.

- **Yoshikazu Miyanaga**, Plenary Keynote Speakers of International Conference on Electrical, Electronics Engineering, Robust Speech Recognition and its Robot Implementation, May 7, 2012.

- **Tokunbo Ogunfunmi**, "New Algorithms for Fast Motion Estimation in H.264/AVC" and "New Hardware Architectures for Fast Motion Estimation in H.264/AVC", IEEE CASS Local Chapter Members at the Universidade Federale do Rio do Grande Sul (UFRGS), Porto Alegre, Brazil, May 2011.

- **Thanos Stouraitis,** Keynote Lecture in 2011 CISP-BMEI Conference, Shanghai, China.

5   Editorial Services

- **Oscar Au**, Associate Editor, IEEE Trans. On Circuits & Systems for Video Technology (TCSVT); Associate Editor, IEEE Trans. On Image Processing (TIP); Guest Editor, Special Issue on Emerging Research and Standards in Next Generation Video Coding (HEVC), IEEE TCSVT. Associate Editor, APSIPA Trans. On Signal and Information Processing (TSIP); Member of Editorial Board, Journal of Multimedia (JMM); Member of Editorial Board, Journal of Franklin Institute (JFI); Member of Editorial Board, Journal of Signal Processing Systems (JSPS); Member of Editorial Board, Journal of Data Acquisition and Processing (JDAP); Member of Editorial Board, Elsevier Journal of Visual Communication and Image Representation (JVCIR), starting in Jan 2012; Guest Editor, Special Issue on Recent Advances and Future Directions in Multimedia and Mobile Computing, Spring Multimedia Tools and Applications Journal (MTAP).
- **Mrityunjoy Chakraborty** serves as Associate Editor, IEEE TCAS I
- **Tian-Bo Deng** served as Editorial Board Member of Signal Processing (Elsevier's Journal); Associate Editor (AE) for IEEE Trans. Circuits and Systems II: Express Briefs (Jan. 2012 ---).
- **Dominic K. Ho**: IEEE Transactions on Signal Processing; Guest Editor, Special Issue, Elsevier Journal on Advances in Signal Processing: Object Tracking and Monitoring Using Advanced Signal Processing Techniques
- **Gwee Bah Hwee** serves Associate Editor - IEEE Transactions on Circuits and Systems I Associate Editor - IEEE Transactions on Circuits and Systems II Associate Editor - Journal of Circuits, Systems and Signal Processing.
- **Ted Kok**, is a Member of Editorial Board, ISRN Signal Processing.
- **Yong Lian** serves as Editor-in-Chief, IEEE Transactions on Circuits and Systems II, Steering Committee Member, IEEE Transactions on Biomedical Circuits and Systems, Associate Editor, IEEE Technology News, Associate Editor, IEEE Transactions on Biomedical Circuits and Systems, Guest Editor.
- **Zhiping Lin** served as Editor-in-Chief of Multidimensional Systems and Signal Processing (Springer) 2011 - present as well as Associate Editor of IEEE Transactions on Circuits & Systems-II: Express Briefs, 2010 -2011.
- **Pramod Kumar Meher**, IEEE Transactions on Circuits & Systems-I: Regular Papers since 2012; IEEE Transactions on Very Large Scale Integration (VLSI) Systems since 2009; IEEE Transactions on Circuits & Systems-II: Express Briefs during 2008-2011; Journal of Circuits, Systems and Signal Processing (Springer) since 2007.
- **Yoshikazu Miyanaga** serves as Associate Editor, Journal of Signal Processing, Japan.
- **Tokunbo Ogunfunmi** serves as Associate Editor, Circuits, Systems and Signal Processing journal; Senior Associate Editor, IEEE Signal Processing Letters, 2012-2014.

- **Ravi P. Ramachandran** is a Member of Editorial Board, IEEE Circuits and Systems Magazine. He also organized Special Issue of the IEEE CAS Magazine on Speaker and Language Recognition, Second Quarter Issue, 2012.
- **David Tay**, Associate editor International Journal of Multidimensional Systems and Signal Processing, Kluwer Academic Press.
- **Yajun Yu** serves as Associate Editor of IEEE Trans. on Circuits and Systems II and Circuit Systems and Signal Processing.
- **Wei-Ping Zhu** serves as Associate Editor of IEEE Trans. on Circuits and Systems II, and Guest Editor for IEEE Journal on Selected Areas in Communications: Broadband Wireless Communications for High Speed Vehicles (2011).
- **Wei Xing Zheng** serves as an Associate Editor, Automatica.
- **Wan-Chi Siu** serves as Associate Editor, IEEE Transactions on Image Processing.

6   IEEE Services

- **Oscar Au**, IEEE Trans. on Circuits and Systems for Video Technology (TCSVT); IEEE Trans. on Image Processing (TIP); IEEE Trans. on Multimedia (TMM); IEEE Trans. on Signal Processing (TSP); IEEE Trans. on Information Forensics and Security (TIFS); IEEE Trans. On Very Large Scale Integration Systems (TVLSI); IEEE Communications Letters (CL); SPIE Journal on Electronic Imaging (JEI); SPIE Journal on Optimal Engineering (OE); IET Image Processing (IPR); Springer Journal on Signal Image and Video Processing (SIVP); Signal Processing: Image Communication (SPIC); British Journal of Mathematics and Computer Science (BJMCS); ETRI Journal.
- **Håkan Johansson**, Committee member for the selection of the IEEE Circuits and Systems Society Guillemin-Cauer and Darlington best paper awards, 2011 and 2012.
- **Dominic K. Ho**, Vice Chair, Sensor Array and Multichannel TC, IEEE Signal Processing Society.
- **Ted Kok**, member of the IEEE Electron Device and Solid State Circuit Hong Kong Chapter.
- **Raija Lehto,** was elected as member of IEEE CAS BoG during 2012-2014, member of IEEE CAS BoG publication division for 2012, also she serves as IEEE CAS Gold Committee Member from 2011.
- **Pramod Kumar Meher**, IEEE CASS Distinguished Lectures in 2011 and 2012 (Delivered Lectures under DLP in France Section, Taipei, Tainan, Kolkata and Montreal Sections).
- **Yoshikazu Miyanaga**, BoG, CAS Society, 2011 – 2013.
- **Thanos Stouraitis** CASS President Elect, 2011, CASS President, 2012-13.
- **Wei Xing Zheng** serves on the International Steering Committee of the IEEE Asia Pacific Conference on Circuits and Systems (APCCAS).

7 DSP TC Technically Co-Sponsored Conferences/Symposia/Workshops

- 2011 International Symposium on Communications and Information Technologies (ISCIT 2011, IEEE), Hangzhou, China, October 12-14, 2011.
- 2011 International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2011, IEEE), December 7 - 9, 2011, ChiangMai, Thailand.
- 2012 International Symposium on Communications and Information Technologies (ISCIT 2012, IEEE), Gold Coast, Australia, October 2 - 5, 2012.
- 2012 International Symposium on Communication, Control and Signal Processing, ISCCSP 2012, May 2012, Rome, Italy
- 2012 International Symposium on Communications and Information Technologies (ISCIT 2012, IEEE), Gold Coast, Australia, October 2 - 5, 2012.
- 2012 International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS 2012), Tamsui, New Taipei City, Taiwan, November 4 - 7, 2012.

8 Other Activities

- **Moncef Gabbouj** served as member of the IMDSP Panel, National Science Foundation, USA, May 2012 and member of the international advisory board, EU Glocal IP project, 2010-2011. He also served on National Science Foundation Review Panel, 2012.
- **Yong Lian,** Yong Lian, served as a member of IEEE Fellow Evaluation Committee of CASS. He was appointed by the IEEE Awards Board as a member of IEEE Medal for Innovations in Healthcare Technology Committee. He served as a member of IEEE Life Sciences New Initiative Committee and member of Prize Paper Award Committee of CASS.
- **Yoshikazu Miyanaga,** vice-President, The Institute of Electronics, Information and Communication Engineers (IEICE), Japan, Engineering Sciences Society (ESS), 2010 - 2012.
- **Yoshikazu Miyanaga**, vice-President, The Asia-Pacific Signal and Information Processing Association (APSIPA), 2010 – present
- **Yoshikazu Miyanaga**, International Steering Committee Honorary Chair, International Symposium on Communications and Information Technologies (ISCIT 2011, IEEE), 2011 - present.
- **Tokunbo Ogunfunmi,** Member, Signal and Information Theory and Methods (SIPTM) Technical Committee (TC) of Asia-Pacific Signal and Information Processing Association (APSIPA), Nov. 2010.
- **W.C. Siu,** Member, Engineering Panel, Research Grant Council (RGC), Hong Kong SAR Government, 2010-2012.
- **W.C. Siu,** Non-executive Director, Teleeye Holding Limited, (a Listed Hi-Tech Company on Video Technology/Video Surveillance in Hong Kong)

- **W.C. Siu,** Member, ASTRI Technology Review Panel, Hong Kong Applied Science and Technology Research Institute, 2006-2012.
- **W.C. Siu,** Member, APAS (Automotive Parts and Accessory Systems R&D Centre) Expert Panel, Productivity Centre, Hong Kong, 2011-now

9 News from the TC Members

- **Oscar Au** was elevated to IEEE Fellow in 2012. Congratulations! He also had 36 technical contributions to ITU-T VCEG international standard in 2011.
- **Tian Bo Deng** received the Best Paper Award at IEEE ICICS 2011. Congratulations!
- **Mohsin Jamali** reported that the University Clean Energy Alliance of Ohio has presented the 2012 Energy Research Poster Session Technical/Scientific Merit Award for the following paper: Golrokh Mirzaei, Selin A. Bastas, Jeremy Ross, Mohammad W. Majid, **Mohsin. M. Jamali** , Peter V. Gorsevski, Joseph P. Frizado, Verner P. Bingman, "Behavior Analysis of Birds/Bats Activity in the Vicinity of Wind Turbines" 6th Annual Conference: Securing Ohio's Energy and Economic Future, Columbus, Ohio, April 2012 8. IEEE services Member-at-Large IEEE Toledo, Ohio Local Chapter. Congratulations!
- **Yong Lian** was featured in national newspaper, The Strait Times on April 20, 2012, in "Wearable sensors among 7 projects get funding" for winning a $10 million grant from National Research Foundation under 8th Competitive Research Program grant call. He received the 2011 Institution of Engineers Singapore Prestigious Engineering Achievement Award and was elected Fellow of Academy of Engineering Singapore. Yong was appointed as Provost Professor. Congratulations!
- **Moncef Gabbouj** has been on sabbatical at Purdue University (August-December 2011) and at the University of Southern California (January-June 2012).
- **H.H. Kwan** received the Best paper award: S. B. Arniker, **H. K. Kwan**, N.-F. Law, and D. P.-K. Lun, "Promoter prediction using DNA numerical representation and neural network: Case study with three organisms," INDICON 2011 (Computing Dialogue Session/Track), Hyderabad, India, 16-18th December 2011, pages 1-4 and the Best poster award: B. Kwan, J. Kwan, and **H. K. Kwan**, "Spectral classification of short numerical exon and intron sequences," International Society for Computational Biology - Student Council Symposium (ISCB-SCS 2011), Vienna, Austria, 15 July 2011. BMC Bioinformatics 2011, 12 (Suppl 11):A13, Published: 21 November 2011.Congratulations!
- **Raija Lehto** was elected as member of IEEE CAS BoG during 2012-2014, member of IEEE CAS BoG publication division for 2012. Congratulations!
- **Tokunbo Ogunfunmi** was appointed Distinguished Lecturer for IEEE Circuits and Systems Society for 2012-2013. Congratulations!
- **P.P. Vaidyanathan** received the 2012 IEEE Signal Processing Society's Education Award. It was presented at ICASSP in March 2012, Congratulations!

- **Alan Willson** received the CAS Society's 2012 Darlington Best Paper Award for his paper in the IEEE CAS Trans., entitled "Desensitized Half-band Filters." Congratulations!