Technical Committee – Circuits and Systems for Communications (CASCOM)

Annual Report 6/2012 – 5/2013
TC Chair for the period: Chang-Ho Lee

TC website: http://ieee-cas.org/community/technical-committees/casctc

1. **TC memberships and appointments:**

   a. The TC now has 60 members, and there are two candidates as of now. The candidates will be voted by the TC on May 2013:
      - Fernando Rangel de Sousa (University of Santa Catarina)
      - Li Min (IMEC)
   b. TC co-chair members with 2 year period till May 2014:
      - TC Chair – Chang-Ho Lee (Qualcomm, USA)
      - TC Vice-Chair (Chair-Elect) – Tokunbo Ogunfunmi (Santa Clara University, USA)
      - TC Secretary – Shoba Krishnan (Santa Clara University)

2. **ISCAS 2013 involvements:**

   a. Wireless communication sub-track was divided into two areas (Wireless Mobile communications and Wireless connectivity communications) to attract more papers.
   b. Our track (Track 3) received 166 papers in 12 sub-track.
   c. Of the 166 papers that were submitted to our track, 80 papers were accepted (48% acceptance rate) in 12 lecture sessions and 4 poster sessions.
   d. 3 TC members served as CASCOM track co-chairs, Chang-Ho Lee, Tokunbo Ogunfunmi and Shoba Krishnan.
   e. 17 TC members served as CASCOM track Reviewer Committee Members:
      Andrea Neviani, Gerald Sobelman, Hanho Lee, Hassan Aboushady, Joseph R. Cavallaro, Li Li, Maire O'Neill, Murat Torlak, Pui-In Mak, Tong Zhang, Tung-Sang Ng, Vassilis Paliouras, Wael Badawy, Wee Ser, Xinmiao Zhang, Zhiyuan Yan, Zhongfeng Wang

3. **Awards & honors received by TC members (based on feedback from TC members):**

   a. Tsuiying Chair Professorship, Lanzhou University, China, June 27, 2012 -- Nam Ling
   b. IEEE Distinguished Lecturer, IEEE Broadcast Technology Society (2009-2013) – Lap-Pui Chau
   c. IEEE Circuits and Systems Distinguished Lecturer (2012-2013) -- Tokunbo Ogunfunmi
   d. Eta Kappa Nu (HKN) Outstanding Professor Award, 2012 -- Xinming Huang
   e. IEEE Circuits and Systems Society Distinguished Lecturer (2012-2013) – Joseph R. Cavallaro

4. **TC members' service on journal editorial boards (based on feedback from TC members):**

   a. Guest Co-Editor, IEEE Journal of Selected Topics in Signal Processing (Special Issue on Video Coding: HEVC and Beyond) -- Nam Ling
   b. Associate Editor, Journal of Multidimensional Systems and Signal Processing (MSSP), Springer -- Nam Ling
   c. Associate Editor, IEEE Circuits and Systems Society Newsletter – Lap-Pui Chau
   d. Associate Editor, IEEE Transactions on Circuits and Systems for Video Technology – Lap-Pui Chau
   e. Associate Editor, IEEE Transactions on Broadcasting – Lap-Pui Chau
   f. Associate Editor, IEEE Signal Processing Letters – Lap-Pui Chau
   g. Senior Associate Editor, IEEE Signal Processing Letters. -- Tokunbo Ogunfunmi

h. Associate Editor, IEEE Trans. Circuits and Systems-I: Regular Papers -- Tokunbo Ogunfunmi
i. Associate Editor, Circuits, Systems and Signal Processing journal -- Tokunbo Ogunfunmi
j. Associate Editor, Journal of Signal Processing Systems (JSPS), -- An-Yeu (Andy) Wu
k. Guest Editor, IEEE Journal on Emerging and Selected Topics in Circuits and Systems (JETCAS), Special Issue on "Low-Power, Reliable, and Secure Solutions for Realization of Internet of Things" -- An-Yeu (Andy) Wu
l. Guest Editor, Journal of Electrical and Computer Engineering (JECE), Special Issue on "Networks-on-Chip: Architectures, Design Methodologies, and Case Studies" -- An-Yeu (Andy) Wu
m. Associate Editor, Journal of Low Power Electronics and Applications (JLPEA) – Jongsun Park
n. Guest Editor, Journal of Semiconductor Technology and Science (JSTS) – Jongsun Park
o. Associate Editor, IEEE Trans. on Circuits and Systems II – Zhongfeng Wang
p. Associate Editor, IEEE Trans. on VLSI Systems – Zhongfeng Wang
q. Associate Editor, Journal of Semiconductor Technology and Science, 2013 – Hanho Lee
r. Associate Editor, IEEK Journal, 2012, 2013 – Hanho Lee
s. Associate editor, Elsevier Journal "Physical Communication" -- Xinming Huang
t. Associate Editor, IEEE Signal Processing Letters– Joseph R. Cavallaro
u. Associate editor, Journal of Circuits, Systems, and Computers—Qiaoyan Yu
v. Associate editor, IEEE Transactions on Circuits and Systems II – Tong Zhang
w. Associate editor, IEEE Transactions on Signal Processing, – Tong Zhang
x. Associate Editor, Journal of Circuits, Systems, and Computers – Andrea Gerosa
y. Associate Editor, IEEE Trans. on Circuits and Systems - I until Dec. 31st, 2012. – Andrea Neviani
z. Associate Editor, TCAS-I -- Xinmiao Zhang
aa. Associate Editor, IEEE Transactions on Circuits and Systems-I: Regular Papers – Zhengya Zhang,
bb. Associate Editor, IEEE Signal Processing Letters – Lin Weisi
cc. Associate Editor, IEEE Transactions on Multimedia – Lin Weisi
dd. Associate Editor, Journal of Visual Communication and Image Representation – Lin Weisi
ee. Associate Editor, IEEE Transactions on Circuits and Systems II -- Pui-In Mak,

5. **Conferences organized/chaired by TC members (based on feedback from TC members):**

a. General Chair, IEEE ICME 2013. -- Nam Ling
b. Technical Program Co-Chair, IEEE/SPIE VCIP 2013. -- Nam Ling
c. Technical Program Co-Chairs for Visual Communications and Image Processing (VCIP 2013) – Lap-Pui Chau
d. Steering Committee Member, IEEE Transactions on Mobile Computing (2011-2013) --Lap-Pui Chau
e. Signals, Systems and Computers, Asilomar, CA, Nov. 2012 -- Tokunbo Ogunfunmi
f. Co-organizer, Invited special session titled "Recent Advances in Sparse and Nonlinear Speech Processing and Speech Recognition" at the 2012 APSIPA Conference, Hollywood, CA, Dec. 2012 -- Tokunbo Ogunfunmi
g.
h. TP Co-Chair, 2012 International Symposium on VLSI Design, Automation& Test (VLSI-DAT), Hsinchu, Taiwan – An-Yeu (Andy) Wu
i. TP Co-Chair, VLSI System & Architectures – An-Yeu (Andy) Wu
j. International Coordinator, 2012 IEEE International Symposium on Circuits and Systems (ISCAS), Seoul, Korea – An-Yeu (Andy) Wu
k. General Co-Chair, 2013 International Symposium on VLSI Design, Automation& Test (VLSI-DAT), Hsinchu, Taiwan – An-Yeu (Andy) Wu
l. Track Co-Chair (VLSI Systems & Architectures), 2013 IEEE International Symposium on Circuits and Systems (ISCAS), Beijing, China – An-Yeu (Andy) Wu

m. General Co-Chair, 2013 IEEE Workshop on Signal Processing Systems (SiPS), Taipei, Taiwan – An-Yeu (Andy) Wu

n. Steering Committee Member, 2013 International Symposium on System-on-Chip, Tampere, Finland. Finland – An-Yeu (Andy) Wu

o. Track Chair, 26th IEEE International SOC Conference (2013) – Zhongfeng Wang

p. Industry Liaison Chair and TPC for 2012 IEEE Workshop on Signal Processing Systems (SiPS'2012) – Zhongfeng Wang

q. Finance Chair, 2013 IEEE Signal Processing Society Global SIP, Austin, TX. – Joseph R. Cavallaro

r. Session Co-Organizer, "Implementation Aspects for Full Duplex and Large-Scale MIMO Wireless Systems" 2013, 47th Asilomar Conference on Signal, Systems, and Computers, Pacific Grove, CA. – Joseph R. Cavallaro

s. Session Organizer, "Heterogeneous and Reconfigurable Computing" 2013, 47th Asilomar Conference on Signal, Systems, and Computers, Pacific Grove, CA. – Joseph R. Cavallaro

t. Technical Area Chair (TAC), 2012, 46th Asilomar Conference on Signal, Systems, and Computers, Pacific Grove, CA, for Area G, Architecture and Implementation (Nov. 2012). – Joseph R. Cavallaro

u. Co-organizer, Invited special session titled "Speech Processing and Speech Recognition" and contributed to a special session titled "Voice Coding" at the 2012 IEEE Asilomar Conference on

v. Publication Chair for IEEE International Symposium on Defect and Fault Tolerance in VLSI and Nanotechnology Systems —Qiaoyan Yu

w. Technical Program Co-Chair, ACM Great Lakes Symposium on VLSI, 2012 Technical Program Co-Chair, IEEE Workshop on Signal Processing Systems (SiPS): Design and Implementation, 2012 – Tong Zhang

x. Technical Program Co-Chair, IEEE Int'l Conf. Multimedia and Expo (ICME), 2013 – Lin Weisi

y. Lead Technical Program Chair, Pacific-Rim Conf. On Multimedia (PCM), 2012 – Lin Weisi

z. Plenary Session Chair, IEEE Visual Communications and Image Processing (VCIP 2013) – Lin Weisi

aa. Publication Chair: IEEE Visual Communications and Image Processing (VCIP 2012) – Lin Weisi

bb. Publication Chair: APSIPA Annual Summit and Conference 2012– Lin Weisi

cc. Secretary for IEEE Circuits and Systems Society Seoul Chapter – Hanho Lee

6. **Participations in conference committees by TC members (based on feedback from TC members):**

Many of our TC members were active in many conference technical program committees, organizing committees, and served as many track chairs and session chairs. The list of participations is very long and therefore not listed here.

7. **Books published by TC members:**

a. Y. Sun, K. Amiri, G. Wang, B. Yin, J. R. Cavallaro, T. Ly, "Chapter 8: High-Level Design Tools for Complex DSP Applications," (R. Oshana, Ed.), in Expert Guide DSP for Embedded and Real-Time Systems, Newnes-Elsevier, pp. 133-155, (September 2012). – Joseph R. Cavallaro

b. K. Amiri, M. Duarte, J. R. Cavallaro, C. Dick, R. Rao, A. Sabharwal, "Chapter 5: FPGA in Wireless Communications Applications," (R. Oshana, Ed.), in Expert Guide DSP for Embedded and Real-Time Systems, Newnes-Elsevier, pp. 75-101 (September 2012). – Joseph R. Cavallaro

c. L. M. Zhang and W. Lin, Modeling Selective Visual Attention: Techniques and Applications, John Wiley & Sons, 2013. – Lin Weisi

d. Pui-In Mak and R. P. Martins, High-/Mixed-Voltage Analog and RF Circuit Techniques for Nanoscale CMOS, Series of Analog Circuits and Signal Processing (ACSP), Springer, Apr. 2012. -- Pui-In Mak

e. Ka-Fai Un, Pui-In Mak and R. P. Martins, Low Power Emerging Wireless Technologies - An Open-Loop Multi-Phase Local-Oscillator Generation Technique, Editors: R. Mahmoudi and K. Iniewski, Chapter 10, pp. 233-248, CRC Press, Feb. 2013 -- Pui-In Mak

8. **Invited talks by TC members (based on feedback from TC members):**

   a. Keynote Speaker, Keynote Speech: "High Efficiency Video Coding and its 3D Extension: A Research Perspective," IEEE ICIEA 2012, July 2012. -- Nam Ling,
   b. Keynote Speaker, Keynote Speech: "Next Generation Video Coding – HEVC with a Special Look at Intra Prediction," IET U-media and FC 2012, August 2012. -- Nam Ling,
   c. Invited talk, University of Massachusetts, USA -- Xinming Huang
   d. Invited talk, University of Rhode Island, USA -- Xinming Huang
   e. Invited talk, Peking University, China -- Xinming Huang
   f. Reliability Management for Energy---Efficient Hybrid Many---Core Systems, Invited by Oak Ridge National Lab, November 2012. —Qiaoyan Yu
   g. Reliability VLSI Designs, Invited by Ningbo University, China, January 2013. —Qiaoyan Yu
   h. "Low-Power Ultra-Wide-Band Impulse Radio Transceivers for Short Range Communications" at the International Conference on Integrated Circuit Design & Technology (ICICDT) 2012, held in Austin, TX, USA from May 30th to June 1st, 2012 – Andrea Neviani
   i. The Asia-Pacific Signal and Information Processing Association (APSIPA) Distinguished Lecture 2012, "Human-vision Friendly Processing for Images and Graphics", Beijing Jiaotong University, Beijing, China, 13 June 2012– Lin Weisi
   j. Invited talk, "Perceptual Visual Quality Metrics: Fundamentals, Issues and Recent Developments", Beijing Institute of Technology, Beijing, China, 14 June 2012– Lin Weisi
   k. Invited talk, "Perceptual Multimedia Quality Evaluation via Machine Learning", Institute of Information Science, Beijing Jiaotong University, Beijing, China, 14 June 2012– Lin Weisi
   l. Invited talk, "Some 'Out-of-the-Box' Thinking for Image and Video Coding", Institute of Information Science, Beijing Jiaotong University, Beijing, China, 15 June 2012– Lin Weisi
   m. Invited talk, "Visual & Speech Quality Models with Support Vector Regression", Technicolor Ltd, Beijing, China, 15 June 2012– Lin Weisi
   n. Panelist talk, "Multimedia Research with Industrial Relevancy: My Perspectives", Pacific-Rim Conference on Multimedia (PCM 2012), 6 Dec 2012. – Lin Weisi
   o. Invited talk, "Enable Machines to Appreciate Pictures as Humans do", the Institution of Engineering and Technology (IET), Brunei, in Universiti Brunei Darussalam, 10 Jan. 2013. – Lin Weisi
   p. Invited talk, "Ultra-Low-Power ZigBee/WPAN Radios in 65nm CMOS," Hong Kong University of Science and Technology, Hong Kong, China, Jan. 2013. -- Pui-In Mak
   q. Invited talk, "An Intelligent Digital Microfluidic (iDMF) System and its Potential Biology/Chemistry Applications," CN Innovations Ltd., Shenzhen, Jan. 2013. -- Pui-In Mak

9. **Others professional activity by TC members (based on feedback from TC members):**

   Many of our TC members were active as reviewers for several journals and conferences. The list of participations is very long, and therefore not listed here.