



Signal Processing for Communications Symposium

Symposium Co-Chairs

Sumei Sun

Inst. for Infocomm Research, Singapore, Email: sunsm@i2r.a-star.edu.sg

Fu-Chun Zheng

Univ. Reading, UK, Email: f.zheng@reading.ac.uk

Henk Wymeersch

Chalmers Univ. Technol., Sweden, Email: henkw@chalmers.se

The 2015 IEEE International Conference on Communications (ICC) will be held in London, UK from 8-12 June 2015. Themed "Smart City & Smart World," with its proximity to Tech City, the fastest growing technology cluster in Europe, this flagship conference of IEEE Communications Society will feature a comprehensive technical program including twelve Symposia and a number of Tutorials and Workshops. IEEE ICC 2015 will also include an exceptional Industry Forum & Exhibition program including business panels and keynote speakers. We invite you to submit your original technical papers, and industry forum, workshop, and tutorial proposals to this event. Accepted and presented papers will be published in the IEEE ICC 2015 Conference Proceedings and submitted for inclusion in IEEE Xplore®/IEEE Digital Library. Full details of submission procedures are available at <http://www.ieee-icc.org/2015>.

Scope and Topics of Interest

Smart signal processing has been the driving force behind the recent advancement in communication systems, characterized by higher speed, higher energy efficient and low cost. More and more signal processing algorithms are designed and modules developed to provide novel solutions to current and emerging communication systems. Considering the diverse and fast-growing nature of research in this field, the Signal Processing for Communications Symposium welcomes paper with original contributions in all relevant aspects of signal processing for communications and networking, including design, analysis, implementation, and application. The issues addressed in this symposium are broad, ranging from traditional transceiver design, to cross-layer optimization, state-of-the-art signal processing methodologies in prevalent and emerging communication systems, and application to new frontiers including cognitive radio and smart grid. Also of great interest are state-of-the-art signal processing methodologies, theories and practices in prevalent communication standards such as 3G/4G/5G, LTE/LTE-A/LTE-B, WLAN, WMAN, WiMAX, UWB, DSRC and gigabit wireless. To ensure complete coverage of the advances in this field, the Signal Processing for Communications Symposium solicits original contributions in, but not limited to, the following topical areas:

- Adaptive Antennas and Beamforming
- Channel Characterization, Estimation, Modelling and Equalization
- Multi-user Systems
- SISO, SIMO, MISO, MIMO, and Massive MIMO Systems
- Single-carrier, OFDM and Multi-carrier Systems
- Novel Signal Processing in LTE/LTE-A/LTE-B and Other Emerging Systems
- New Signal Processing Techniques in CDMA or WCDMA
- Space-Time Processing and Decoding
- Signal Detection and Synchronization
- Software Defined and Cognitive Radio
- Text, Speech, Image and Video Signal Processing
- Spectrum Shaping and Filters
- Waveform Design for 5G Systems

- Signal Processing for Spatial, Temporal, Code and Spectral Diversities
- Transmitter, Receiver, Modulation and Coding Techniques
- Adaptive Signal Processing
- Human Communication Behavior, Emotion and Feeling Recognition
- Green and Sustainable Communication Techniques
- Fast Transforms and Algorithms for Communications and Signal Processing
- VLSI/ASIC/FPGA Circuits and Systems for Communications
- Signal Processing for Security, Cryptography, and Privacy
- Compressive Sensing and Compressive Sampling
- Localization, Positioning, and Tracking Techniques
- Communications test-bed Development
- Advanced Signal Processing Modules for Smart Grid
- Low Complexity Baseband Processing

Submission Guidelines

Prospective authors are invited to submit original technical papers by the deadline 15 October 2014 for publication in the IEEE ICC 2015 Conference Proceedings. All submissions should be written in English with a maximum paper length of Six (6) printed pages (10-point font) including figures without incurring additional page charges (maximum 1 additional page with over length page charge if accepted).

Standard IEEE Transactions templates for Microsoft Word or LaTeX formats found at
<http://www.ieee.org/portal/pages/pubs/transactions/stylesheets.html>

Alternatively you can follow the sample instructions in template.pdf at
<http://www.comsoc.org/confs/globecom/2008/downloads/template.pdf>

Only PDF files will be accepted for the review process and all submissions must be done through EDAS at
<https://edas.info/newPaper.php?c=17705>

Co-Chairs Biographies

Sumei SUN obtained the B.Sc.(Honours) Degree from Peking University, China, the M.Eng Degree from Nanyang Technological University, and Ph.D Degree from National University of Singapore. She's been with Institute for Infocomm Research (formerly Centre for Wireless Communications) since 1995. She was the Communication Systems and Signal Processing (CSSP) Technology Group Leader during 2000 to 2002, Modem Technology Laboratory Head during 2003 to 2006. Since 2007, she has been the Head of Modulation & Coding Department, developing physical layer-related solutions for next-generation communication systems. Dr. Sun has published actively in IEEE journals and conference, and she was co-recipient of IEEE PIMRC'2005 Best Paper Award. She's inventor and co-inventor of over twenty patents and patent applications, many of which have been licensed to industry. For the achievement in technology invention and industry contribution, she and her team was honored with the Scientist-Entrepreneur Award from the Agency for Science, Technology, and Research (A*STAR) in 2008. Dr. Sun has served as Track Co-Chair of Mobile Networks, Applications, Services, IEEE Vehicular Technology Conference (VTC) 2014 Spring, Track Co-Chair of Transmission Technologies, IEEE VTC 2012 Spring, TPC Vice Chair of 14th (2014) and TPC Chair of 12th (2010) IEEE International Conference on Communications, General Co-Chair of 7th (2010) and 8th (2011) IEEE Vehicular Technology Society Asia Pacific Wireless Communications Symposium (APWCS), and Track Chair of Signal Processing for Communications, Asia-Pacific Signal and Information Processing Association Annual Summit and Conference 2010 (APSIPA ASC 2010). She has also served as TPC members for many IEEE conferences for many years, for example, ICC, Globecom, WCNC, PIMRC, etc. She's serving as an Editor of IEEE Transactions on Vehicular Technology, and Editor of IEEE Wireless Communication Letters. Her research interests lie in general digital communication systems and specifically in signal processing, coding and modulation techniques for communication systems. Her recent research focus is on energy efficient wireless communication systems, transmission technologies for 5G, joint source-channel processing for wireless multimedia communications, and wireless transceiver design.

Fu-Chun Zheng obtained the BEng (1985) and MEng (1988) degrees in radio engineering from Harbin Institute of Technology, China, and the PhD degree in Electrical Engineering from the University of Edinburgh, UK, in 1992. From 1992 to 1995, he was a post-doctoral research associate with the University of Bradford, UK, Between May 1995 and August 2007, he was with Victoria University, Melbourne, Australia, first as a lecturer and then as an associate professor in mobile communications. He joined the University of Reading, UK, in September 2007 as Professor (Chair) of Signal Processing. He has been awarded two UK EPSRC Visiting Fellowships - both hosted by the University of York (UK): first from August 2002 to July 2003 and then from August 2006 to July 2007. Over the

past 15 years, Dr Zheng has also carried out and managed many industry-sponsored projects. He has been both a short term visiting fellow and a long term visiting research fellow with British Telecom, UK. Dr Zheng's current research interests include signal processing for communications, multiple antenna systems, and green communications. He has been an active IEEE member since 1995. He was an editor (2001 – 2004) of IEEE Transactions on Wireless Communications. In 2006, Dr Zheng served as the general chair of IEEE VTC 2006-Spring in Melbourne, Australia (<http://ieeevtc.org/vtc2006spring/>) - the first ever VTC held in the southern hemisphere. He will be the TPC chair for VTC 2016-S in Nanjing (the first VTC in mainland China).

Henk Wymeersch is an Associate Professor with the Department of Signals and Systems at Chalmers University of Technology, Sweden. He is also affiliated with the FORCE research center on fiber-optic communication, and is the PI of COOPNET, an ERC project on cooperative networks. Prior to joining Chalmers, he was a Postdoctoral Associate during 2006-2009 with the Laboratory for Information and Decision Systems (LIDS) at the Massachusetts Institute of Technology (MIT). Henk Wymeersch obtained the Ph.D. Degree in Electrical Engineering/Applied Sciences in 2005 from Ghent University, Belgium. For his thesis, he won the 2006 Alcatel Bell Scientific Award. He received a fellowship from the Belgian American Educational Foundation in 2005-2006. He is a member of the IEEE, and served Associate Editor for IEEE Transactions on Wireless Communications (2013-present), for IEEE Communication Letters (2009-2013) and the Transactions on Emerging Telecommunications Technologies (ETT) (2011-present). He served as Guest Editor for EURASIP Journal on Wireless Communications and Networking (special issue on Localization in Mobile Wireless and Sensor Networks), and for EURASIP Journal on Advances in Signal Processing (special Issue on Signal Processing Techniques for Anywhere, anytime positioning). He has co-authored over 100 contributions in journals and international conferences, and is the author of Iterative Receiver Design (Cambridge University Press, 2007). In 2009, he was part of a team that won the L3 Communications Prize at the 2009 Soldier Design Competition, for the practical demonstration of cooperative impulse radio ultra-wide bandwidth localization. Other awards include a Best Paper Award at GLOBECOM 2009 and a NEWCOM++ best paper award in 2010. His research interests include algorithm design for wireless transmission, statistical inference and iterative processing.