

# Call for Papers for *Signal Processing for Communications Symposium*

## **Scope and Motivation:**

Signal processing plays a pivotal role in the development of modern communication technologies. Advanced signal processing algorithms are designed and modules are developed to provide innovative solutions to contemporary and emerging communication systems. Considering the diverse and fast-growing nature of research in this field, the Signal Processing for Communications symposium welcomes original contributions in all relevant aspects of signal processing for communications and networking, including design, analysis, implementation, and application.

## **Main Topics of Interest:**

The issues covered in the Signal Processing for Communications symposium are broad, spanning from traditional transceiver design to state-of-the-art signal processing methodologies in contemporary and emerging communication systems, and application to new frontiers including cognitive radio and smart grid. Our intention is to provide a comprehensive coverage of signal processing methodologies, theories and practices in prevalent and next-generation communication systems and networks. Topics of interest to the Signal Processing for Communications symposium include, but are not limited to:

- Channel estimation, equalization
- Signal detection and synchronization
- Novel architectures for signal demodulation and decoding
- Signal processing for single-carrier, OFDM and OFDMA systems
- Signal processing for spread-spectrum, CDMA, ultra-wideband systems
- Multi-antenna (SIMO, MISO, MIMO, Massive MIMO) and multi-user systems
- Distributed, decentralized, and cooperative signal processing in networked systems
- Compressive sensing algorithms
- Signal processing techniques for commercial/standardized (LTE, LTE/A, WiMAX etc.) and other emerging systems
- Waveform design for 5G systems, full-duplex technology
- Signal processing for interference cancellation
- Signal processing for sensor networks



- Signal processing for software defined and cognitive radio
- Adaptive antennas and beamforming
- Signal processing for green communications, communications powered by energy harvesters and wireless power transmissions
- Signal processing for security and cryptography
- Signal processing for optical communications
- Signal processing for Nano ( molecular and EM) communications
- Signal processing for millimeter and Tera-Hz communication systems
- VLSI/ASIC/FPGA circuits and systems for communications
- Multimedia (Speech, image and video) signal processing
- Signal processing for smart grid and powerline communications
- Localization, positioning and tracking techniques
- Signal processing for big data
- Machine learning, and stochastic geometry-based signal processing for 5G

### **Sponsoring Technical Committees:**

- Signal Processing & Communications Electronics
- Radio Communications

### **How to Submit a Paper:**

The IEEE Globecom 2016 website provides full instructions on how to submit papers. You will select the desired symposium when submitting.

### **Important Dates:**

- Paper Submission (Symposium): April 1, 2016
- Paper Acceptance Notification: July 1, 2016
- Camera-Ready Papers Due: August 1, 2016

### **Symposium Co-Chairs:**

- Dania Marabissi, University of Florence, Italy, [daniamarabissi@unifi.it](mailto:daniamarabissi@unifi.it)
- Trung Q. Duong, Queen's University Belfast, United Kingdom, [trung.q.duong@qub.ac.uk](mailto:trung.q.duong@qub.ac.uk)
- Yuan Shen, Tsinghua University, China, [shenyuan\\_ee@tsinghua.edu.cn](mailto:shenyuan_ee@tsinghua.edu.cn)

## Biographies:



**Dania Marabissi** (SM'13) received her Master Degree in Telecommunication Engineering summa cum laude in 2000 and the Ph.D. in Computer Engineering and Telecommunications in 2004, from the University of Florence, Italy. In 2000 she joined the Department of Information Engineering, University of Florence. She has been involved in several national and international funded projects. She is winner of the contest "FIRB - Futuro in Ricerca 2013" funded by the Italian Ministry of Education, with the Project "Heterogeneous LTE Deployment (HeLD)". She is also responsible of the scientific activities of the TICom (Technologies for Information and Communication) consortium, born between the University of Florence and Selex ES S.p.A., a Finmeccanica company. Dr. Marabissi is author of several publications on journals, international conference proceedings and is owner of an European Patent. Dr. Marabissi is Associated Editor for the Journals IEEE Transaction on Vehicular Technology and IET Communications and member of the Editorial Board of the "The Scientific World Journal" Hindawi (communications area). She is guest editor of a Special Issue of the Journal of Signal Processing Systems, Springer, has served as a member of the Organizing Committee of the TIWDC 2006 "Satellite Communications and Navigation Systems" conference, Co-chair of the "Mobile Communications for Emergency Management" Workshop in the 9th IWCMC Conference, Paper Review Committee Chair of the SDR- WINN Comm Europe 2014, Co-chair of the "Heterogeneous Networks" Workshop in the IWCMC 2015 and IWCMC 2016 conferences. Her research interests include new generation wireless communication systems, in particular resource allocation, cognitive systems, heterogeneous networks.



**Trung Q. Duong** (IEEE S'05, M'12, SM'13) received his Ph.D. degree in Telecommunications Systems from Blekinge Institute of Technology (BTH), Sweden in 2012. Since 2013, he has joined Queen's University Belfast, UK as a Lecturer (Assistant Professor). He is the author/coauthor of more than 170

technical papers in peer reviewed journals and conferences in the field of signal processing and communications (including 50 IEEE Journals and 40 ICC/GLOBECOM papers). His academic achievements include receiving the prestigious award of Royal Academy of Engineering Research Fellowship (2015 – 2020), the Best Paper Award at the IEEE Vehicular Technology Conference (VTC-Spring) in 2013, IEEE International Conference on Communications (ICC) 2014. Dr. Duong currently serves on the Editorial Board of IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE COMMUNICATIONS LETTERS, IET COMMUNICATIONS, WILEY TRANSACTIONS ON EMERGING TELECOMMUNICATIONS TECHNOLOGIES, and ELECTRONICS LETTERS. He has served as the Guest Editor for several journals IEEE JOURNAL IN SELECTED AREAS ON COMMUNICATIONS, IET COMMUNICATIONS, IEEE WIRELESS COMMUNICATIONS MAGAZINE, IEEE COMMUNICATIONS MAGAZINE, EURASIP JOURNAL ON WIRELESS COMMUNICATIONS AND NETWORKING, and EURASIP JOURNAL ON ADVANCES SIGNAL PROCESSING. His research interests are in the areas of wireless communications, signal processing for communications and communication theory, in particular, relay networks, energy harvesting communications, physical layer security, and cognitive radio.



**Yuan Shen** (IEEE S'05, M'14) received the Ph.D. degree and S.M. degree in electrical engineering and computer science from MIT, in 2014 and 2008, respectively, and the B.E. degree in electronic engineering from Tsinghua University in 2005. He is an Associate Professor with the Department of Electronic Engineering at Tsinghua University. Prior to that, he was a research assistant and then postdoctoral associate with the Laboratory for Information and Decision Systems (LIDS) at MIT in 2005-2014. His research interests include statistical inference, network science, signal processing, communication theory, and information theory. His current research focuses on network localization and navigation, resource allocation, inference techniques, and intrinsic wireless secrecy. He was a recipient of the Qiushi Outstanding Young Scholar Award (2015), the China's Youth 1000-Talent Program (2014), and the Marconi Society Young Scholar Award (2010). His paper has received the IEEE Communications Society Fred W. Ellersick Prize, and various Best Paper Awards from IEEE conferences. Dr. Shen is the elected Secretary (2015–2017) for the IEEE Communications Society Radio Communications Committee and has served in the technical program committee (TPC) of various international conferences. He is serving as an Editor for the IEEE Communications Letters, Guest-Editor for the International Journal of Distributed Sensor Networks (2015), a TPC symposium co-chair for Globecom (2016), and a TPC track co-chair for EUSIPCO (2016).