

**Call for papers for
*Ad-hoc and Sensor Networks Symposium (AHSN)***

Symposium Track Co-Chairs

Shibo He Zhejiang University, China
Adlen Ksentini University of Rennes, France
Cheng Li Memorial University of Newfoundland, Canada

**Submissions must be done through EDAS at: <https://edas.info/newPaper.php?c=22630&track=81044>
The paper submission deadline is October 14, 2016.**

Scope and Motivation

An ad-hoc network is a system of wireless nodes dynamically self-organizing in arbitrary and temporary network topologies. Nodes in an ad-hoc network can communicate without a pre-existing communication infrastructure. In recent years, ad-hoc networks have been attracting increased attention from the research and engineering communities, motivated by applications like digital battlefield, asset tracking, air-borne safety, situational awareness, and border protection. Such networks are designed to operate in widely varying environments. Therefore, dynamic topologies, bandwidth constraints, energy-constrained operations, wireless vulnerabilities, and limited physical security are among the characteristics that differentiate mobile ad-hoc networks from fixed multi-hop networks.

A Wireless Sensor Network (WSN) is a wireless network consisting of large populations of spatially distributed sensor nodes to cooperatively monitor physical or environmental conditions. Wireless sensor networks have many useful applications such as hostile environment surveillance, industrial process monitoring, environment and habitat monitoring, healthcare applications, home automation, and traffic control. Recently, we have experienced an immense growth of interest on exciting concepts such as the Internet of Things (IoT), the Smart Cities and the Machine-to-Machine Communications (M2M) mainly focused on the 5th Generation (5G) Mobile Systems.

Both ad-hoc and sensor networks are characterized by their dynamic nature, which requires them to be adaptive to changes in the application environment, task objectives, and topological changes, among others. There is a growing number of real applications using wireless ad-hoc and sensor networks, and these applications are being taken seriously by the industries. As a result, the last few years have witnessed the development of many innovative solutions for ad-hoc and sensor networks that are maturing to the level of commercialization and standardization. However, numerous challenges remain for the implementation of practical solutions that operate robustly, securely, and efficiently.

The Ad-hoc and Sensor Networks Symposium of the 2017 IEEE International Communications Conference (ICC'17) aims at providing a forum for sharing ideas among researchers and practitioners working on state-of-the-art solutions related to ad-hoc and sensor networks

Main Topics of Interest

The Ad-hoc and Sensor Networks Symposium of ICC 2017 is soliciting papers that describe original and unpublished contributions. Topics of interest include, but are not limited to:

- Wireless sensor and actuator networks
- New and unconventional applications of ad-hoc and sensor networks
- Novel paradigms, architectures and operation models of ad-hoc and sensor networks
- Protocols, architectures and applications for the Internet of Things
- Machine-to-Machine (M2M) communications in ad hoc networks
- Wireless multimedia and 3-D sensor networks
- Underwater and underground sensor networks
- Body Area sensor networks
- Cognitive radio networks in multi-hop environments
- Multi-hop wireless mesh and community networks
- Wireless PANS

- Pervasive and wearable computing
- RFID systems
- Delay-tolerant ad-hoc networks
- Self-organization and autonomic networking
- Vehicular ad hoc networks
- Co-existence issues of hybrid networks
- Wireless, ad-hoc, and sensor devices
- Ultra-wide band technology for ad-hoc and sensor networks
- MAC protocols for ad-hoc and sensor networks
- Frequency and channel allocation algorithms for ad-hoc and sensor networks
- Quality of Service provision and management in ad-hoc and sensor networks
- Standardization activities for ad-hoc and sensor networks
- Energy saving and power control protocols for ad-hoc and sensor networks
- Energy scavenging technologies
- Service discovery in ad-hoc and sensor networks
- Location and context aware services in ad-hoc and sensor networks
- Scheduling and resource management algorithms in ad-hoc and sensor networks
- Deployment and coverage analysis of sensor networks
- Localization in ad-hoc networks
- Routing and multicasting protocols in ad-hoc and sensor networks
- Topology control and management
- Sensor fusion and synergy
- In-network processing and data storage
- Fault-tolerance and traffic reliability issues in ad-hoc and sensor networks
- Cross-layer design and optimization in ad-hoc and sensor networks
- Mobility management and modeling in ad-hoc and sensor networks
- Synchronization and coordination techniques in ad-hoc and sensor networks
- Security for ad-hoc and sensor networks
- Participatory and public sensing systems
- Performance evaluation and modeling in ad-hoc and sensor networks
- Simulation methodologies and tools for wireless ad-hoc and sensor networks
- Integrated simulation and measurement based evaluation for ad-hoc and sensor networks
- Experimental prototypes and testbeds for ad-hoc and sensor networks
- Decentralized combinatorial optimization in ad-hoc and sensor networks

Biographies

Shibo He received the Ph.D. degree in control science and engineering from Zhejiang University, Hangzhou, China, in 2012. From Nov. 2010 to Nov. 2011, he was a visiting scholar with the University of Waterloo, Waterloo, ON, Canada. He was an Associate Research Scientist from March 2014 to May 2014, and a postdoctoral scholar from May 2012 to February 2014, with Arizona State University, Tempe, AZ, USA.

He is currently a Professor at Zhejiang University. His research interests include wireless sensor networks, crowdsensing and big data analysis. Dr. He has published more than 50 papers, most of them in prestigious journals and conferences. He is the recipient of 1000 young talents program in China and the best paper award at IEEE PIMRC 2012. He serves on the editorial board of IEEE Transactions on Vehicular Technology, KSII transactions Internet and Information Systems, Springer Peer-to-Peer Networking and Application, and is a guest editor of Elsevier Computer Communications and Hindawi International Journal of Distributed Sensor Networks. He served as Publicity Co-chair for IEEE SECON 2016, Finance & Registration chair for ACM MobiHoc 2015, TPC Co-chair for IEEE ScalCom 2014, TPC Vice Co-chair for ANT 2013-2014, Track Co-chair for the Pervasive Algorithms, Protocols, and Networks of EUSPN 2013, Web Co-Chair for IEEE MASS 2013, and Publicity Co-chair for IEEE WISARN 2010 and FCN 2014.

Adlen Ksentini - TBA

Cheng Li received the B. Eng. and M. Eng. degrees from Harbin Institute of Technology, Harbin, P. R. China, in 1992 and 1995, respectively, and the Ph.D. degree in Electrical and Computer Engineering from Memorial University, St. John's, Canada, in 2004.

He is currently a Full Professor at the Department of Electrical and Computer Engineering, Faculty of Engineering and Applied Science of Memorial University, St. John's, Canada. His research interests include mobile ad hoc and wireless sensor networks, wireless communications, switching and routing, and broadband communication networks. Dr. Li has published over 180 research papers in wireless communications and networking in reputed international journals and conferences, including a paper received the *Best Paper Award* at the 2010 IEEE *International Communications Conference (ICC'10)* in Cape Town, South Africa. He is an editorial board member of Wiley Wireless Communications and Mobile Computing, Journal of Networks, and KSII Transactions on Internet and Information Systems, and an associate editor of Wiley Security and Communication Networks.

He has served as a technical program committee (TPC) co-chair for the ACM MSWiM'14, MSWiM'13, IEEE WiMob'11 and QBSC'10. He has served as a co-chair for various technical symposia of many international conferences, including the IEEE GLOBECOM, ICC, and WCNC. He has served on the organization committee of many other international conferences and as the TPC member for many international conferences, including the IEEE ICC, GLOBECOM, WCNC, and PIMRC. Dr. Li is a registered Professional Engineer (P.Eng.) in Canada, current Vice Chair of the IEEE Communications Society Ad-hoc and Sensor Networks Technical Committee, Chair of the IEEE Canada Newfoundland and Labrador Section (2012-13), and a senior member of the IEEE and its Communications Society, Computer Society, Ocean Engineering Society, and Vehicular Technology Society..