



Call for Papers for *Ad Hoc and Sensor Networks Symposium*

Scope and Motivation:

As wireless networks nodes proliferate and as applications using Internet become familiar to a wider class of customers, those customers will expect to use networking applications even in situations where the Internet itself is not available. The basic solution to meet such requirements is to allow mobile computer users with (compatible) wireless communication devices to set up a (possibly) short-lived network just for the communication needs of the moment- in other words, an ad-hoc network. A mobile ad hoc network (Manet) is a system of wireless mobile nodes dynamically self organizing in arbitrary and temporary network topologies. People and vehicles can thus be internetworked in areas without a pre-existing communication infrastructure, or when the use of such infrastructure requires wireless extension. Therefore, such networks are designed to operate in widely varying environments, from military networks (with hundreds of nodes) to low-power sensor networks and other embedded systems. 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.

The field of ad hoc, sensor and mesh networking is re-emerging amid unprecedented growth in the scale and diversity of computer networking. Wireless mesh networks (WMNs) are considered as a key technology for next-generation wireless networking. Wireless mesh networks often consist of mesh clients, mesh routers and gateways, where mesh routers have minimal mobility and form the backbone of WMNs. Mesh clients can be either stationary or

mobile, and can form a client mesh network among themselves and with mesh routers. The gateway and mesh routers are utilized to provide the internetworking of WMNs with other networks such as the Internet, IEEE 802.11, IEEE 802.15, IEEE 802.16, cellular networks, wireless sensor networks, or combinations of several types of networks. Because of the many advantages, WMNs are undergoing rapid development and inspiring numerous deployments. 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, such as temperature, sound, vibration, pressure, motion or pollutants, at different locations. A sensor node is an autonomous device which is capable of computation, communication, and sensing. 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.

This symposium aims at providing a forum for sharing ideas among researchers and practitioners working on state-of-the-art solutions to the challenges above. We are seeking papers that describe original and unpublished contributions addressing various aspects of ad hoc, sensor and mesh networks.

Topic of Interest:

The Ad Hoc, Sensor, and Mesh Networking Symposium of ICC'2012 aims at providing a forum for sharing ideas among researchers and practitioners working on state-of-the-art solutions Related to Ad Hoc, Sensor, and Mesh Networks. We are seeking papers that describe original and unpublished contributions addressing various aspects of the topics listed below (but not limited to):

- Applications and Evolutions of Ad Hoc, Sensor, and Mesh Networks
- Autonomic Networking
- Wireless, Ad Hoc, and Sensor Devices
- Physical Layer Design of Ad Hoc, Sensor and Mesh Networks
- Frequency and Channel Allocation Algorithms
- Topology Control and Management
- Algorithms and Modeling for Localization, Target Tracking, and Mobility Management
- Architectures of Wireless Communication and Mobile Computing in Ad Hoc, Sensor and Mesh Networks
- MAC Protocols for Ad Hoc, Sensor, and Mesh Networks
- QoS Provisioning in Medium Access Control and Routing for Ad Hoc and Mesh Networks
- Analytical, Mobility, and Validation Models for Ad Hoc, Sensor, and Mesh Networks
- Performance Evaluation and Modeling of Mobile, Ad Hoc, Sensor, and Mesh Networks
- Integrated Simulation and Measurement based Evaluation of Ad Hoc and Sensor Systems
- New Simulation Languages, Methodologies, and Tools for Wireless Systems in Ad Hoc, Sensor and Mesh Networks
- Analysis of Correctness and Efficiency of Protocols
- Data Management, Data Aggregation, Data Dissemination, and Query Processing
- Distributed Algorithms in Ad Hoc, Sensor and Mesh Networks
- Pricing Modeling and Solutions
- Pervasive and Wearable Computing
- Co-existence Issues of Hybrid Networks
- Energy Saving and Power Control Protocols for Ad Hoc, Sensor, and Mesh Networks
- Resource Management Algorithms in Mobile, wireless Ad Hoc and Mesh Networks

- Synchronization and Scheduling Issues in Mobile and Ad Hoc Networks
- Service Discovery for Wireless Ad Hoc, Mesh, and Sensor Networks
- Cross-layer Design and Interactions in Ad Hoc, Sensor and Mesh Networks
- Mobile Service and QoS Management for Ad Hoc and Sensor Networks
- Survivability and Reliability Evaluation and Modeling for Ad Hoc, Sensor, and Mesh Networks
- Ubiquitous and Mobile Access for Wireless Mesh Networks
- Security and Privacy Issues in Wireless Ad Hoc, Mesh, and Sensor Networks