

# CALL FOR PAPERS

## International Workshop on Theoretical and Algorithmic Aspects of Sensor and Ad-hoc Networks (WTASA'07)

<http://web.eng.fiu.edu/wtasa07>

Hyatt Regency Hotel, Miami, Florida

June 28-29, 2007

Wireless sensor networks have attracted much attention due to potential applications ranging from habitat monitoring to disaster recovery. Much work has been done in protocol design for data communication and data collection, simulation, and experimental study. The theoretical research, however, falls short of the expectation of the future sensor network deployment. People working in hardware, systems, and experiments have collected much data and accrued much experience, but the effort in answering how the experience helps to push the theoretical research in sensor networks forward for a deeper understanding about this new network is still in its inception.

To that end, the International Workshop on Theoretical and Algorithmic Aspects of Sensor Networks will bring together leading researchers and developers in this field to study the special problems and challenges of the algorithmic aspects of sensor and ad-hoc networks. The goal of the workshop is also to foster communication not only between the different sensor and ad-hoc communities, but also between those communities and the distributed systems and information systems communities.

### SCOPE OF THE WORKSHOP

The objective of the workshop is to define and establish a common infrastructure of the discipline and to develop a consensus-based document that will provide a foundation for implementation, standardization, and further research. The workshop will identify and define fundamental concepts and techniques, resolve conflicts between certain approaches in the area and provide a common ground for advanced research and development in algorithmic aspects of sensor and ad-hoc networks, concentrating on the special challenges of the sensor and mobile and wireless environments. The topics that will be addressed include, but are not limited to, the following, all as they pertain to the sensors and mobile environment:

- Theoretical and algorithmic methods/tools: optimization, modeling, computational geometry, graph theory, and combinatorics.
- Energy-aware sensor network topology control, routing algorithms, data collection, congestion control, and resource management.
- Sensor network test-beds, field experiments, trial and measurements.

- Optimal resource management, bandwidth management, power control, mobility management.
- Sensor network static and dynamic planning.
- Location-dependent applications and protocols including localization and object tracking.
- Data aggregation and dissemination, data query.
- MAC (Media Access Control) algorithms and protocols, including contention-based and collision-free methods.
- Security and its trade-off with other factors such as energy, delay, computation complexity.
- Scalability design, e.g., clustering architectures.
- Distributed and localized solutions.
- Flow and error control, implementations and performance analysis.
- Admission control, QoS (Quality of Service), Fault-tolerance.
- Specific application design, multimedia over sensor networks.
- Inter-connection between sensor networks and other types of networks such as cellular networks, the Internet.

## IMPORTANT DATES

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Paper submission deadline	Feb. 23, 2007
Notification of Acceptance	Apr. 06, 2007
Camera Ready Due	May 11, 2007
Workshop	Jun. 28-29, 2007

## WORKSHOP FORMAT

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The workshop format will encourage productive interaction among participants. It will consist of the presentation of papers and invited papers on new developments and current trends, with ample time allocated for group discussions. This format should provide a forum for collaborations to develop among members of the different research and development communities. Attendance will be limited and attendants will be asked to contribute to a consensus-based paper on algorithmic aspects of sensor and ad-hoc networks to be published after the workshop.

## SUBMISSION

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Authors are invited to submit papers discussing issues in algorithmic aspects of sensor and ad-hoc networks that must be addressed to achieve consensus. Position papers that challenge existing ideas in algorithmic aspects of sensor and ad-hoc networks with new research, technologies and visionary applications are also encouraged. Papers could be up to 25 pages in length, and should include the title, author(s), authors' affiliation and an abstract. Submitters should also indicate their willingness to contribute to the final report. Electronic submission is strongly encouraged at the EasyChair System (<http://www.easychair.org/WTASA07>). If you haven't used this online system before, you will be required to register first. If electronic submission is not possible, please send your paper via e-mail to the contact information provided below.

Please note that simultaneous submission of papers to any other conference with published proceedings or submitting previously published papers is not allowed. Submitted papers must be unpublished and must not be currently under review for any other publication. Authors of accepted papers will need to present their paper at the conference. Before submitting your paper, please check the description of the workshop scope on the previous page. If you are unsure whether your work falls within the scope of the conference, you must contact the Program Co-Chairs. The accepted papers will be distributed to the participants prior to the workshop. Also, the papers of the workshop are projected to appear either in a book or in Springer's Lecture Notes in Computer Science.

## CONTACT INFORMATION

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## WORKSHOP ORGANIZING COMMITTEE

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