

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

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(paper submission deadline: Jan 23, 2007)

Dear Colleagues and Friends:

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\*\*\* We apologize if you received multiple copies of this posting.

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Please notice that the deadline for submission to WTASA 2007 is only a week away.

Please feel free to distribute it to those who might be interested.  
TPC members are also welcome to submit papers for publication.

The proceedings will be published as Lecture Notes in Computer Science.

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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

Paper submission deadline: Jan 23, 2007  
Notification of acceptance: April 06, 2007  
Camera ready due: May 11, 2007  
Workshop: June 28–29, 2007

### Workshop Format

The workshop format will encourage productive interaction among participants. It will consist of the presentation of selected 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

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 should be between 10 and 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. If electronic submission is not possible, five (5) hard copies of the paper should be sent. Contact information for both forms of submission is provided below. The accepted papers will be distributed to the participants prior to the workshop and also the papers of the workshop projected to appear either in a book or in Springer's Lecture Notes in Computer Science.

### Workshop Organizer

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#### Honorary Chairs

Ding-Zhu Du, University of Minnesota  
Niki Pissinou, Florida International University

#### General Co-Chairs

Kia Makki, Florida International University  
Xiaohua Jia, City University of Hong Kong

#### Technical Program Co-Chairs

Xiang–Yang Li, Illinois Institute of Technology  
S. Kami Makki, University of Toledo

Program Committee

Basagni, Stefano, Northeastern University  
Burmester, Mike, Florida State University  
Busovaca, Senad, California State University, Sacramento  
Cao, Jiannong, Hong Kong Polytechnic University, Hong Kong  
Chen, Guihai, Nanjing University, China  
Chu, Xiaowen, Hong Kong Baptist University, Hong Kong  
Douligeris, Christos, University of Piraeus, Greece  
Eidenbenz, Stephan, Los Alamos National Laboratory  
Frieder, Ophir, Illinois Institute of Technology  
Gao, Jie, State University of New York at Stony Brook  
Guizani, Mohsen, Western Michigan University  
Ghosh, Tirthankar, St. Cloud State University  
Hass, Zygmunt, Cornell University  
He, Tian, University of Minnesota  
Hou, Jennifer, University of Illinois at Urbana–Champaign  
Krunz, Marwan, University of Arizona  
Kuhn, Fabian, Microsoft Research  
Li, Baochun, University of Toronto, Canada  
Li, Erran, Bell Laboratories  
Li, Jinbao, Heilongjiang University, China  
Li, Qun, College of William & Marry  
Liu, Benyuan, University of Massachusetts Lowell  
Liu, Yunhao, Hong Kong University of Science And  
Lu, Chenyang, Washington University In St. Louis  
Moscibroda, Thomas, Microsoft Research  
Nandagopal, Thyaga, Bell Laboratories  
Peng, Wuxu, Texas State University  
Ravindran, Kaliappa, City University of New York  
Santi, Paolo, Institute of Informatics & Telematics (IIT–CNR), Italy  
Sarkar, Saswati, University of Pennsylvania  
Shen, Sherman, University of Waterloo, Canada  
Song, Wenzhan, Washington State University at Vancouver  
Stojmenovic, Ivan, University of Ottawa, Canada  
Wan, Peng–Jun, Illinois Institute of Technology  
Wang, Weizhao, Google Inc.  
Wang, Yu, University of North Carolina at Charlotte  
Xiao, Yang, University of Alabama  
Xue, Guoliang, Arizona State University  
Xue, Yuan, Vanderbilt University  
Zheng, Haitao, University of California at Santa Barbara  
Zheng, Rong, University of Houston  
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Best,

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