DCOSS

1st IEEE International Conference on Distributed Computing in Sensor Systems

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Distributed sensor systems have become a highly active research area due to their potential for providing diverse new capabilities. Such systems allow intelligent dense monitoring of physical environments, which makes them immensely useful for data collection and analysis. While much ongoing research has addressed networking, communication and low-level self-configuration issues in such systems, there are also significant challenges pertaining to systematic design, algorithm development and analysis, and abstract modeling in order to achieve efficient and robust realizations of large-scale distributed sensor systems. The large number of sensor devices involved, severe power, computational and memory limitations, resource heterogeneity, dense deployment and frequent failures pose novel challenges to design, algorithms, analysis and implementation.

The focus of the conference is on distributed computing issues in large-scale networked sensor systems (including systematic design techniques and tools, algorithms, and applications), but networking-related contributions that support high level abstractions are also welcome. Topics of interest include but are not limited to:

- Computation and programming models
- Energy models, minimization, awareness
- Distributed algorithms for configuration and collaborative information processing
- Theoretical performance analysis: complexity, correctness, scalability, fault-tolerance
- Abstractions for modular design
- Languages, operating systems
- Task allocation, reprogramming and reconfiguration
- Dynamic resource management
- Scalable, heterogeneous architectures (node and system-level)
- Communication and processing primitives
- Middleware interfaces
- Design, simulation and optimization tools for deployment and operation
- Design automation and application synthesis techniques
- Case studies: lessons from real world deployments

Authors are invited to submit original unpublished manuscripts that demonstrate current research on computational aspects of distributed sensor systems. Submitted manuscripts may not exceed *14 single-spaced pages using 12-point size font* on 8.5x11 inch pages, including figures and tables. References may be included in addition to the 14 pages. Authors need to make sure that the electronically submitted files are formatted for 8.5x11 inch paper. Submissions will be judged on correctness, originality, technical strength, significance, quality of presentation, and interest and relevance to the conference attendees. Submitted papers may not have appeared in or be under consideration for another conference or a journal.

IMPORTANT DATES

January 10, 2005	Conference Submission Due
March 15, 2005	Notification of Acceptance/Rejection
April 15, 2005	Camera-Ready Paper Due

Sponsored by
IEEE Computer Society Technical Committee on Parallel Processing (TCPP)
IEEE Computer Society Technical Committee on Distributed Processing (TCDP)
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Held in co-operation with
ACM SIGARCH, ACM SIGBED, European Association for Theoretical Computer Science (EATCS), IFIP WG 10.3