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Algorithmic Aspects of Wireless Sensor Networks

Third International Workshop, ALGOSENSORS 2007

Wrocław, Poland, July 14, 2007

Revised Selected Papers



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Preface

Wireless ad-hoc sensor networks have recently become a very active research subject due to their high potential of providing diverse services to numerous important applications, including remote monitoring and tracking in environmental applications and low-maintenance ambient intelligence in everyday life. The effective and efficient realization of such large-scale, complex ad-hoc networking environments requires intensive, coordinated technical research and development efforts, especially in power-aware, scalable, robust, wireless distributed protocols, due to the unusual application requirements and the severe resource constraints of the sensor devices.

On the other hand, a solid foundational background seems necessary for sensor networks to achieve their full potential. It is a challenge for abstract modeling, algorithmic design and analysis to achieve provably efficient, scalable and fault-tolerant realizations of such huge, highly dynamic, complex, non-conventional networks. Various features, including the extremely large number of sensor devices in the network, the severe power, computing and memory limitations, their dense, random deployment and frequent failures, pose new interesting abstract modeling, algorithmic design, analysis and implementation challenges of great practical impact.

This workshop aimed to bring together research contributions related to diverse algorithmic and complexity theoretic aspects of wireless sensor networks. This was the third event in the series. ALGOSENSORS 2004 was held in Turku, Finland, ALGOSENSORS 2006 was held in Venice, Italy. Since its beginning, ALGOSENSORS has been collocated with ICALP.

The Third International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS 2007) was organized by Wrocław University of Technology. The workshop was held on July 14, 2007, in conjunction with ICALP 2007. After a careful review by the Program Committee of 25 submissions, 11 regular papers were accepted to ALGOSENSORS 2007. Apart from the regular talks, two keynote speeches were given at the workshop.

October 2007

Mirosław Kutylowski
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