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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 3121
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Soggetti	Computer communication systems Algorithms Data structures (Computer science) Computer science—Mathematics Computer Communication Networks Algorithm Analysis and Problem Complexity Data Structures Discrete Mathematics in Computer Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- Algorithm Design and Optimization for Sensor Systems -- Algorithmic and Foundational Aspects of Sensor Systems -- Contributed Papers -- On a Conjecture Related to Geometric Routing -- WiseMAC: An Ultra Low Power MAC Protocol for Multi-hop Wireless Sensor Networks -- On the Computational Complexity of Sensor Network Localization -- A Distributed TDMA Slot Assignment Algorithm for Wireless Sensor Networks -- Balanced Data Gathering in Energy-Constrained Sensor Networks -- Scale Free Aggregation in Sensor Networks -- The Expected Uncertainty of Range Free Localization Protocols in Sensor Networks -- Towards a Dynamical Model for Wireless Sensor Networks -- Efficient Delivery of Information in Sensor Networks Using Smart Antennas -- Neighborhood-Based Topology Recognition in Sensor Networks -- A Novel Fault Tolerant and Energy-Aware Based Algorithm for Wireless Sensor Networks -- Route

Discovery with Constant Memory in Oriented Planar Geometric Networks -- Probabilistic Model for Energy Estimation in Wireless Sensor Networks -- Multi: A Hybrid Adaptive Dissemination Protocol for Wireless Sensor Networks -- Constrained Flow Optimization with Applications to Data Gathering in Sensor Networks.

Sommario/riassunto

This volume contains the contributed papers and invited talks presented at the 1st International Workshop on Algorithmic Aspects of Wireless Sensor Networks (ALGOSENSORS 2004), which was held July 16, 2004, in Turku, Finland, - located with the 31st International Colloquium on Automata, Languages, and Programming (ICALP 2004). Wireless ad hoc sensor networks have become a very important research subject due to their potential to provide diverse services in numerous applications. The realization of sensor networks requires intensive technical research and development efforts, especially in power-aware scalable wireless ad hoc communications protocols, due to their unusual application requirements and severe constraints. On the other hand, a solid theoretical background seems necessary for sensor networks to achieve their full potential. It is an algorithmic challenge to achieve efficient and robust realizations of such large, highly dynamic, complex, n- conventional networking environments. Features, including the huge number of sensor devices involved, the severe power, computational and memory limitations, their dense deployment and frequent failures, pose new design, analysis and implementation challenges. This event is intended to provide a forum for researchers and practitioners to present their contributions related to all aspects of wireless sensor networks. Topics of interest for ALGOSENSORS 2004 were: – Modeling of specific sensor networks. – Methods for ad hoc deployment. – Algorithms for sensor localization and tracking of mobile users. – Dynamic sensor networks. – Hierarchical clustering architectures. – Attribute-based named networks. – Routing: implosion issues and resource management. – Communication protocols. – Media access control in sensor networks. – Simulators for sensor networks.
