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Nota di contenuto	Tutorials -- Data Management in Sensor Networks -- Algorithms for Wireless Sensor Networks -- Invited Talk -- Unleashing the Power of Wireless Networks Through Information Sharing in the Sensor Internet -- Query Systems -- Semantic Streams: A Framework for Composable Semantic Interpretation of Sensor Data -- PAQ: Time Series Forecasting for Approximate Query Answering in Sensor Networks -- Proactive Context-Aware Sensor Networks -- Sensor Network Services -- Constraint-Based Distance Estimation in Ad-Hoc Wireless Sensor Networks -- Sensor Density for Complete Information Coverage in Wireless Sensor Networks -- Hierarchical Grid-Based Pairwise Key Predistribution Scheme for Wireless Sensor Networks -- Routing -- Generic Routing Metric and Policies for WSNs -- On the Scalability of Routing Integrated Time Synchronization -- Distributed Dynamic Shared Tree for Minimum Energy Data Aggregation of Multiple Mobile Sinks in Wireless Sensor Networks -- Localization -- Constrained Tracking on a Road Network -- Range-Based Localization in Mobile Sensor Networks -- Hierarchical Localization Algorithm Based on Inverse Delaunay Tessellation -- Platforms and Development -- Power Management for Bluetooth Sensor Networks -- FlexCup: A Flexible and

Efficient Code Update Mechanism for Sensor Networks -- Transforming Protocol Specifications for Wireless Sensor Networks into Efficient Embedded System Implementations -- Medium Access Control -- Extending Network Lifetime Using an Automatically Tuned Energy-Aware MAC Protocol -- Sift: A MAC Protocol for Event-Driven Wireless Sensor Networks -- f-MAC: A Deterministic Media Access Control Protocol Without Time Synchronization -- Measurements -- A Measurement-Based Analysis of the Interaction Between Network Layers in TinyOS -- Results of Bit Error Measurements with Sensor Nodes and Casuistic Consequences for Design of Energy-Efficient Error Control Schemes -- An Empirical Characterization of Radio Signal Strength Variability in 3-D IEEE 802.15.4 Networks Using Monopole Antennas.

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## Sommario/riassunto

This volume contains the proceedings of EWSN 2006, the third in a series of European workshops on wireless sensor networks. The workshop took place at ETH Zurich from February 13 to 15, 2006. Its objective was to present, discuss, and explore the latest technical developments in the field of wireless sensor networks, as well as potential future directions. Wireless sensor networks provide a bridge between traditional information systems and the physical world, with collections of wirelessly networked sensor nodes being deployed in our physical environment to cooperatively monitor real-world phenomena, but also to control aspects of the physical world. In contrast to traditional computing systems which are mostly decoupled from the real world,

wireless sensor networks are inherently and closely integrated with the real world, with data about the physical environment being captured and processed automatically, online, and in real time. This paradigmatic change comes with a number of conceptual and technical challenges involving a wide range of disciplines in computer science and electrical engineering, but also material sciences, MEMS technology, and power engineering, thus making wireless sensor networks a multidisciplinary area of research. This workshop series aims at providing a high-level scientific forum to implement the cross-disciplinary exchange of ideas and results that is essential for this type of research area.

While based in Europe, the workshop serves as a truly international forum with 40% of the submissions originating from Europe, 38% from Asia and Australia, 20% from the Americas, and 2% from Africa. Wireless sensor networks has become an active and popular research area, which is witnessed by the 133 submissions we received from authors all over the world.

The Program Committee chose 21 papers for inclusion in the workshop.

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