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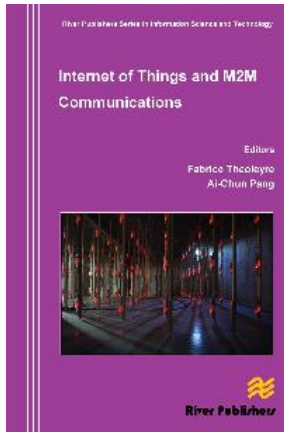
Internet of Things and M2M Communications

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ISBN: 9788792982483

Available From: May 2013

Price: € 90.00



Description:

The Internet of Things is the emerging technology which interconnects smart objects using wireless communications. After having been extensively studied in academic labs, the Internet of Things is now widely applied in the industrial world (e.g. domestic automation, smart metering, smart cities).

Internet of Things and M2M Communications presents the key concepts used in the Internet of Things. In particular, Machine to Machine (M2M) communications have to be energy efficient so that all the smart objects may operate for years on a single battery. Besides, whilst constructing an efficient global digital world combining personal/private and external/general data, security and privacy issues have also to be covered adequately.

Contents:

Part I. Energy Constrained IoT

Effect of Data Aggregation in M2M Networks

OR-AHad: An Opportunistic Routing Algorithm for Energy Harvesting WSN

An Off-line Tool for Accurately Estimating the Lifetime of a Wireless Mote

Part II. Transmission Scheduling

Delay-Constrained Scheduling in Wireless Sensor Networks

Distributed Scheduling for Cooperative Tracking in Hierarchical Wireless Sensor Networks

Time Synchronization on Cognitive Radio Ad Hoc Networks: A Bio-Inspired Approach

Part III. Security & Tests

Secure Access Control and Authority Delegation Based on Capability and Context Awareness for Federated IoT

Jamming and Physical Layer Security for Cooperative Wireless Communication Performance Modeling and Simulation of Machine-to-Machine (M2M) Systems

Keywords: Internet of Things, protocols, security, green networking, Wireless Sensor Networks

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