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Nota di contenuto	Medium Access Control -- Physical Model Based Interference Classification and Analysis -- Dynamic Parameter Adjustment in CSMA/ECA -- A Test-Based Scheduling Protocol (TBSP) for Periodic Data Gathering in Wireless Sensor Networks -- Multiuser Detection and Advanced Coding Techniques -- Adaptive Minimum Conditional Bit-Error-Rate Linear Multiuser Detection for STBC-MC-CDMA Systems

Transmitting over Mobile Radio Channels -- On the Performance of Single LDGM Codes for Iterative Data Fusion over the Multiple Access Channel -- Preliminary Results on the Adoption of De Bruijn Binary Sequences in DS-CDMA Systems -- Queueing Systems -- Analysis of Different Channel Sharing Strategies in Cognitive Radio Networks -- A Queueing Model for SDMA Downlink Transmissions -- Queueing System with Alternating Service Rates for Free Space Optics-Radio Hybrid Channel -- An Efficient Method for Proportional Differentiated Admission Control Implementation -- A Geo m /G/1/n Queueing System with LIFO Discipline, Service Interruptions and Repeat Again Service, and Restrictions on the Total Volume of Demands -- Retrial Queueing Model MMAP/M 2/1 with Two Orbits -- Laws of Conservation in the Queueing Theory -- Wireless Mesh Networks and WIMAX -- Intra-flow Interference Study in IEEE 802.11s Mesh Networks -- Simulation Study of VoIP Performance in IEEE 802.11 Wireless Mesh Networks -- Modeling the Influence of the Real-Time Traffic on the Delay of the Non Real-Time Traffic in IEEE 802.16 Network -- Advanced Topics in Wireless Networks -- Cross-Layer Channel-Aware Approaches for Modern Wireless Networks -- On the Probabilistic Description of an Asynchronous DHA FH OFDMA System with Threshold Noncoherent Reception -- Adaptive Channel Estimation for STBC-OFDM Systems Based on Nature-Inspired Optimization Strategies -- Fractional Frequency Reuse Scheme in Cooperative Relaying For Multi-cell OFDMA Systems -- Static Inter-Cell Interference Coordination Techniques for LTE Networks: A Fair Performance Assessment -- A Two-Users Transmission Game in OFDM Wireless Networks with Resource Cost -- QoS-Driven Radio Resource Allocation for OFDMA Networks Based on a Game Theoretical Approach -- Mobile Ad-Hoc Networks -- Using Agent-Oriented Simulation System AGNES for Evaluation of Sensor Networks -- Multiple Metrics in MANET with End-to-End QoS Support for Unicast and Multicast Traffic -- Performance of MAC Protocols in Beaconing Mobile Ad-Hoc Multibroadcast Networks -- Quality of Service Oriented Analysis of Cross-Layer Design in Wireless Ad Hoc Networks.

Sommario/riassunto

It is our great pleasure to present the proceedings of the Third International Workshop on Multiple Access Communications (MACOM) that was held in Barcelona during September 13–14, 2010. In 1961, Claude Shannon established the foundation for the discipline now known as “multi-user information theory” in his pioneering paper “Two-way Communication Channels,” and later Norman Abramson published his paper “The Aloha System—Another Alternative for Computer Communications” in 1970 which introduced the concept of multiple access using a shared common channel. Thereafter, for more than 40 years of study, numerous elegant theories and algorithms have been developed for multiple-access communications. During the 1980s and 1990s the evolution of multiple-access techniques p- ceeded in conjunction with the evolution of wireless networks. Novel multiple access techniques like code division multiple access (CDMA) and orthogonal frequency division multiple access (OFDMA) provided increased spectral - ?ciency, dynamicity and ?exibility in radio resource allocation with intrinsic anti-multipath and anti-interference features. In this ?rst decade of the 21st century,multiple-accesstechniques, derivedfromadvancedwirelesstransmission methodologiesbasedonthediversityconcept(e. g. ,MC-CDMA,MIMO-OFDMA and SC-FDMA), opened the road to a renewed idea of multiple access. Today multiple-access communications involve many challenging aspects not only l- ited (like in the past) to physical layer design. Medium access control (MAC) techniques play a crucial role in

managing the radio resources that users will exploit to transmit their data streams. Recent developments in software radios and cognitive radios have led to a signi?cant impact also on spectrum m- agement and access paradigms.