



4G Wireless & Mobile Communications Technologies

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Description

Mobile and wireless communications are moving towards a new era that will be characterized by the seamless collaboration of heterogeneous systems, the need for high speed communications while on the move and for advanced services with quality guarantees. Recent market research studies show that most of the traffic in the future wireless networks will be produced by mobile multimedia services which are expected to proliferate by the year 2010. On the other hand mobile and wireless communications technology is becoming more and more important in developing countries where people demand fast deployment and low cost for broadband wireless internet services.

The objective of this volume is to gather research and development on topics shaping the fourth generation (4G) in mobile and wireless communications and reveal the key trends and enabling technologies for 4G. We envisage 4G wireless communication systems as IP based solution providing integrated services (voice, data, multimedia) regardless of time and end-users' location. 4G technologies will manifest the benefits of the wireless and wired technologies convergence, through enabling a wide range of innovative (both indoor and outdoor) applications. 4G applications will feature premium quality, high security and an affordable cost. The vision, though fantastic, is associated with a host of technical and technological challenges.

A great deal of the latter are discussed in the articles of this volume, which aims at providing insights on the research issues and solutions that are directly associated with leading edge 4G technologies and services.

Taking into account recent developments in the world of wireless communications we have given emphasis to cover all these technologies and aspects that are considered as cornerstones for achieving the goals set for 4G and that will further boost research and development of next-generation mobile communications.

Contents

Preface, Acknowledgement, Editorial

- Editorial
- Section 1 – Overview
 - Dynamic Channel Allocation in IEEE 802.11
 - An Overview of Peak-to-Average Power Ratio Reduction Techniques for OFDM Systems
 - Mobile Ad Hoc Networks: Challenges and Solutions for Providing Quality of Service Assurances
 - Adaptive Cell Sizing Scheme for Asymmetric Traffic Accommodation in CDMA/FDD Cellular Packet Systems
 - A Dynamically Self-organized Clustering Protocol for Mobile Ad Hoc Networks
 - Opportunistic Scheduling in Wireless Networks: A Feedback Load Perspective
 - OPTIMIZING AGGREGATE THROUGHPUT OF UPSTREAM TCP FLOWS OVER IEEE 802.11 WIRELESS LANS
 - Cooperative Communication for Energy Efficient Wireless Sensor Networks
 - Cross-Layer Optimization with Guaranteed QoS for Wireless Multiuser OFDM System



- Handover Handling Issues in DVB-H Systems
- Channel Modelling, MIMO and OFDM, (Section 2 – Overview)
 - Adaptive OFDMA Systems
 - Bounds and Algorithms for Data-Aided Channel Estimation in OFDM
 - Distributed Space-Time Block Coding for Large Set of Relay Terminals
 - A Comparison Between Parametric and Nonparametric Channel Estimation for Multipath Fading Channels
 - Envelope Correlation Analysis of MRC Signals in Correlated Rician Fading
 - Experimental Investigation of Channel Estimation for IEEE802.11b WLAN System
 - Hybrid -ARQ Techniques and its Application in 4G Wireless Systems
 - Multiuser Diversity in MIMO Systems: Theory and Performance
 - On MIMO Channel Characterization for Future Wireless Communication Systems
 - Modelling and Analysis of Capacity-Optimal Indoor MIMO Line-Of-Sight Wireless Channels
 - Design of Compact Antenna Arrays for MIMO Wireless Communications
 - Space-Time Error Correcting Codes and Iterative Decoding
 - Performance Evaluation of MIMO Multiuser Opportunistic Schemes under QoS Requirements
- Applications Services and Business Models (Section 3- Overview)
 - Metric Multidimensional Scaling for Localization and Tracking
 - Localization in Ad Hoc Networks for Mobile Ubiquitous Service Provisioning
 - Human body detection using UWB-IR indoor channel
 - An Overview of Wireless MAC Protocols for Vehicular Communications”
 - WiMedia UWB - Concept, Design and Implications
 - Signalling Model of Service Discovery in Heterogeneous Personal Networks
 - A Business Model for QoS Assessment in Mobile Wireless Networks

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