Call for Papers
Special Issue on Trends in Mobile Radio Channels: Modeling, Analysis, and Simulation

IEEE Vehicular Technology Magazine

The ever growing demand for multimedia services, high mobility, and global connectivity has resulted in recent years in an explosion of new technologies for wireless communication systems. All components of a wireless communication system ranging from digital modulation schemes over channel coding techniques up to higher layer protocols are influenced by the characteristics of the mobile radio channel. A thorough understanding of the mobile radio channel is therefore crucial for the development, performance optimization, and test of present as well as next generation mobile radio systems. This is the reason why exploring the mobile radio channel has always been a key research topic from the very beginning of mobile communications until today. Currently, the research on mobile fading channels involves a variety of challenging topics such as the modeling of car-to-car channels, MIMO channels, cooperative channels, and ultra wideband channels, only to name a few. The objective of this special issue is to identify upcoming trends in the fascinating world of mobile radio channels and to make recent research results readily comprehensible to a wide readership.

The articles in this special issue will report on the state-of-art research in mobile fading channels. The topics of interest include, but are not limited to:

- Channel models for 3G and 4G wireless communication systems
- Channel models for multiple-input multiple-output (MIMO) systems
- Advances in indoor, outdoor, and indoor-to-outdoor channel modeling
- Channel models for mobile-to-mobile cooperative communication systems
- Channel models for vehicle-to-vehicle (V2V), vehicle-to-infrastructure (V2I), and vehicle-to-person (V2P) wireless communications
- Ultra wideband channels
- Channel models for satellite communications
- Channel models for underwater wireless communication networks
- Advanced ray tracing techniques
- Channel sounding techniques
- Propagation and path loss models
- High-performance and efficient simulation techniques for mobile radio channels
- Characterization of stationary and non-stationary mobile radio channels
- Modeling and analysis of non-isotropic scattering environments
- Hardware and software channel simulators
- Information theoretic aspects of mobile radio channels
- Characterization and modeling of real-world mobile radio channels
- Channel parameter estimation techniques

Submitted papers should contain state-of-the-art research material presented in a tutorial style. The manuscript length is limited to 8 pages in VTM magazine format and including references and up to 10 figures. Authors must follow the IEEE Vehicular Technology Magazine guidelines regarding the manuscript format. For further information, please refer to the IEEE Vehicular Technology Magazine website at http://www.ieeevtc.org/vtmagazine/. All papers should be submitted online using TrackChair: http://channel2010vtm.trackchair.com/

Important Dates

Manuscript submission due:	November 30, 2010
Acceptance notification:	February 1, 2011
Final manuscript due:	March 1, 2011
Publication:	June, 2011

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