HÖGSKOLAN
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Professor Christoph Mecklenbräuker on

"Vehicular Channel Characterization for Dependable Intelligent Transport Systems"

Abstract:

To make transportation safer, more efficient, and cleaner, intelligent transport services are currently being intensely investigated and developed. Such services require dependable wireless vehicle-to-infrastructure and vehicle-to-vehicle communications providing robust connectivity at moderate data rates. Key characteristics of vehicular channels are shadowing by other vehicles, high Doppler shifts, and inherent non-stationarity. All have major impact on the data packet transmission reliability and latency. This talk provides an overview of key characteristics in a variety of vehicular environments. Finally, we discuss the implications for wireless system design with a strong focus on IEEE 802.11p.

About:

C. F. Mecklenbräuker received the Dipl.-Ing. degree in electrical engineering from Technische Universität Wien, Austria, in 1992 and the Dr.-Ing. degree from Ruhr-Universität Bochum, Germany, in 1998. His doctoral dissertation received the Gert-Massenberg Prize in 1998. He was with Siemens, Vienna, from 1997 to 2000. From 2000 to 2006, he was senior researcher with the Forschungszentrum Telekommunikation Wien (FTW), Austria. In 2006, he joined the Institute of Telecommunications as full professor with the Technische Universität Wien, Austria. Since 2009 he leads the Christian Doppler Laboratory for Wireless Technologies for Sustainable Mobility. His research interests include waves, sparsity, vehicular connectivity, ultrawideband radio, and MIMO-techniques. Dr. Mecklenbräuker is a member of the IEEE Signal Processing, Antennas and Propagation, and Vehicular Technology Societies, VDE and EURASIP.