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UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA

Dipartimento di Ingegneria "Enzo Ferrari"

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SEMINAR ANNOUNCEMENT

PhD Information and Communication Technologies

WEDNESDAY 18th May 2022

9:00 am

First floor meeting room MO-27

Space-time diversity techniques in wireless communications

Pablo Corral González, PhD

Associate Professor

Miguel Hernández University (Elche, Spain)

Abstract:

The constant evolution of techniques applied in the transmission media in Wireless communications of all types is an obvious fact with a considerable increase in recent years. This seminar deals, in the first place, with the quantitative evaluation of the improvements that can be achieved using Spatial diversity techniques in more or less complex wireless network environments. First aspect that is reasonable to consider is the improvement achieved, simulation techniques to determine the profit obtained. These tests are performed for different types of networks in terms of your coverage area. It also discusses other improvements, using mixed techniques, in the space-time domain to modulate the weight that the different signals received on the different parameters and restrictions to consider, when determining the optimal communication alternative with or without channel state information. The seminar will address these topics and different propagation models used in Wireless communications from a practical point of view.



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Telecommunications Engineer specializing in Communications from the Polytechnic Universitat of Valencia and Ph.D. in Industrial and Telecommunications Technologies from the Miguel Hernández University of Elche. His field of research during his thesis focused on improving signal reception in wireless networks by applying filtering and/or diversity techniques in critical environments. Since 2002 he has developed his teaching and research work as an associate professor in the Department of Communications Engineering at the UMH. Since 2021 he joined Organic and hybrid (POLYmer-NANOparticles) optoelectronic devices Research Group working in communications related to visible light communications systems using organic photodetectors.