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Advanced Signal Processing for Coherent Optical Transmission Systems

Dr. Fernando Guiomar

*Senior Researcher at Instituto de Telecomunicações (IT)
Aveiro, Portugal*

Tuesday May 7th 2024 - 2:00 pm

Sala Shannon (meeting room in front of Classroom 12)

Dr. Guiomar will present his latest research and results in the area of advanced Digital Signal Processing for coherent optical transmission systems.

The talk will address the use of artificial intelligence algorithms to drive the optimization of digital modulation and signal processing subsystems, targeting different applications such as improved carrier-phase recovery in digital subcarrier signals and enhanced SNR performance in unamplified coherent optical systems.

Fernando P. Guiomar (guiomar@av.it.pt) received the M.Sc. and Ph.D. degrees in Electronics and Telecommunications Engineering from University of Aveiro, Portugal, in 2009 and 2015, respectively. From 2015 to 2017 he was a post-doctoral researcher at Politecnico di Torino, Italy, under the framework of a Marie Skłodowska-Curie individual fellowship, jointly hosted by PoliTo and CISCO Optical GmbH, Nuremberg. He is currently a senior researcher at Instituto de Telecomunicações – Aveiro, where his main research interests are focused within the area of fiber-based and free-space optical communication systems, including the development of digital signal processing algorithms, advanced modulation and coding, constellation shaping and nonlinear modelling and mitigation. Fernando Guiomar is an IEEE and OSA member and he has (co-)authored more than 150 scientific publications in leading international journals and conferences.

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