Guest Lecture

HAEC

Interference mitigation with constant modulus algorithms: design, algorithms and applications

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University of York

Monday, April 20, 2015
11:00 am - 12:00 am
Room: BAR I 15

Abstract: In this seminar, we will describe interference mitigation techniques based on constant modulus algorithms. A review of early work on constant modulus algorithms along with their main features will be presented. We will then explore design principles of constant modulus algorithms using constraints and analyze their advantages as compared to standard approaches. A detailed procedure to develop adaptive algorithms based on the constrained constant modulus criterion will be described. We will subsequently consider dimensionality reduction techniques which are suitable for interference mitigation problems with large dimensions. Applications to equalization, spread spectrum and multiuser multiple-antenna systems will be examined.

Bio: Rodrigo C. de Lamare was born in Rio de Janeiro, Brazil, in 1975. He currently lives in Ipanema, Rio de Janeiro, and spends two months per year in Europe. He received his Diploma in electronic engineering from the Federal University of Rio de Janeiro (UFRJ) in 1998, the MSc and PhD degrees in electrical engineering from the Pontifical Catholic University of Rio de Janeiro (PUC-RIO) in 2001 and 2004, respectively, and the Habilitation from the University of York in 2008. Since January 2006, he has been with the Communications Group, Department of Electronics, University of York, United Kingdom, where he is a Professor. Since April 2013, he has also been a Professor at PUC-RIO. Dr de Lamare has participated in numerous projects funded by government agencies and industrial companies. He received a number of awards for his research work and currently serves as an associate editor for the EURASIP Journal on Wireless Communications and Networking and for the IEEE Signal Processing Letters. He is a Senior Member of the IEEE and an elected member of the IEEE Signal Processing Theory and Methods Technical Committee. His research interests lie in communications and signal processing, areas in which he has published over 300 papers in international journals and conferences.

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