

Title: **Distributed Compressed Estimation Based on Compressive Sensing Applied to Wireless Sensor Networks**

Speaker:

Prof. Rodrigo C. de Lamare,

Pontifical Catholic University of Rio de Janeiro (PUC-Rio), Brazil and the University of York, United Kingdom

Abstract:

In this talk, we will describe a novel distributed compressed estimation scheme for sparse signals and systems based on compressive sensing techniques. The proposed scheme consists of compression and decompression modules inspired by compressive sensing to perform distributed compressed estimation. A design procedure is also presented and an algorithm is developed to optimize measurement matrices, which can further improve the performance of the proposed distributed compressed estimation scheme. Simulations for a wireless sensor network illustrate the advantages of the proposed scheme and algorithm in terms of convergence rate and mean square error performance. This work is a collaboration between PUC-Rio, the University of York and Princeton University.

Biography:

Rodrigo C. de Lamare was born in Rio de Janeiro, Brazil, in 1975. He received his Diploma in electronic engineering from Federal University of Rio de Janeiro (UFRJ) in 1998 and the MSc and PhD degrees in electrical engineering from the Pontifical Catholic University of Rio de Janeiro (PUC-RIO) in 2001 and 2004, respectively. 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.