



## COST IC 1407 Workshop Techniques for Measurement and Characterisation of complex multi-functional (digital) systems

ACCREDIT COST action IC1407 training school

## Bratislava 5th - 6th April 2017 Bratislava, Slovakia

Wednesday 5 <sup>th</sup> April 2017 at Pan-European University, Tematinska 10, Bratislava, Room Aula Magna	
13:30 – 14:50	Evolutionary Optimization in Electromagnetics  Dr. Petr Kadlec, Brno University of Technology, Czech Republic  The lecture will cover both single-objective and multi-objective optimization fundamentals. The formulation of an optimization task will be demonstrated on problems from computational electromagnetics. FOPS (Fast Optimization ProcedureS) software will be available for demonstration purposes.
15:00 – 16:30	Stochastic Electromagnetic Fields  Dr. Johannes Russer, Technical University of Munich, Germany  Accurate characterization and modeling of noisy electromagnetic fields is important to protect electronic devices and systems from critical levels of electromagnetic interference. Stochastic electromagnetic fields can be described by consideration of the field auto and cross-correlations. Characterization techniques for stationary stochastic electromagnetic fields originating from noise sources with Gaussian probability distribution and for cyclostationary problems, as encountered frequently in high speed digital circuits, is discussed in this tutorial.

	oril 2017 rsity of Technology, FEI STU, Ilkovicova 3, Room B704 International Seminar on Mobile Communications
10:30 - 11:30	5G myths and realities
	Dr. Matus Turcsany from Ericsson Slovakia In the talk we will discuss the drivers and expectations behind 5G. We will also touch the economics of the mobile industry, the role of LTE in the 5G ecosystem and talk about the different approaches the operators are taking to introduce 5G with a special attention to the comparison of Europe versus rest of the world.
11:30 – 13:00	Guide for Near-field Characterization of Unintentional Stochastic Radiators  Prof. Dave Thomas, University of Nottingham, UK  Traditional techniques for characterizing the electromagnetic spectrum assume it is composed of stationary waves with constant and measurable phase. Due to the time dependent nature of intentional and unintentional emissions from modern digital electronics and communications, ambient electromagnetic fields often do not exhibit a stationary phase. A new approach and new standards are needed to quantify these fields which essentially behave in a stochastic way.

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