Training School

This Training School addresses the challenges for electromagnetic compatibility (EMC) in future highly integrated systems. It discusses emerging methodologies and experimental techniques to characterize stochastic electromagnetic (EM) fields. This includes multiprobe time-domain near field scanning techniques for noisy EM fields as well as advances in modeling and characterization of stochastic fields in reverberation chambers.

Students (including PhD), early career investigators, educators, and practitioners are welcome to participate.

Travel Grants for Trainees

Trainee grants are available for attendees providing full funding for travel and subsistence (within COST rules). Write us about your interest in the training, your professional background, and apply!

Registration

Participation in the training school is free of charge. Registration is required.

To register for the training school or to apply for travel grants, please write to Ms. Dorrit Tyack (dorrit.tyack@nottingham.ac.uk).

Venue

Holiday Inn Prague Congress Centre
Na Pankráci 15/1684, 140 21 Prague 4, Czech Republic

How to get there...

http://www.cost-ic1407.eu/
What is COST?

- Founded in 1971, COST is an intergovernmental European framework for cooperation in the field of scientific and technical research. COST Actions cover basic and pre-competitive research as well as activities of public utility.
- COST has been successful in maximizing European research coordination and enhancing European integration.

Overview COST IC 1407 - ACCREDIT

The growth of Internet-enabled smart infrastructures underpinning virtually every sector of economic and social life requires complex, high performance and highly integrated electronic systems.

The electromagnetic interference (EMI) will increase with the anticipated increase of clock speeds, frequency of operation and circuit density. Immunity levels will also decrease due to lower supply voltages and lower signal power levels. Traditionally the potential EMI sources were assessed in the frequency domain assuming static emissions. This is not valid for multifunctional devices with many operating modes and wideband digital receivers. New approaches that fully account for time dependence and uncertainty are needed.

This COST Action fully addresses the challenges of the stochastic and broadband nature of EMI in current and future complex multi-functional systems through a coordinated international research programme specifically aimed at:

- modelling approaches to include efficient behavioural models, propagation and interaction of stochastic field distributions.
- experimental methods including wideband near field probes and efficient time or frequency domain EMI measurement.

ACCREDIT Structure

Chair of the Action:
Prof. David Thomas
dave.thomas@nottingham.ac.uk
University of Nottingham, U.K.

Vice Chair of the Action:
Prof. Damienne Bajon
damienne.bajon@isae.fr
ISAE-Université de Toulouse, France

Secretary:
Ms. Dorrit Tyack
dorrit.tyack@nottingham.ac.uk
University of Nottingham, U.K.

Working Groups:

WG1: Numerical methods for addressing the propagation of stochastic fields
WG Leader: PD Dr. Johannes Russer
jrusser@tum.de
Technische Universität München, Germany

WG2: Measurement of time domain stochastic near-field emissions
WG Leader: Prof. Davy Pissoort
davy.pissoort@kuleuven.be
KU Leuven Technologiecampus, Belgium

WG3: Equivalent models of noise sources
WG Leader: Dr. Sidina Wane
sidina.wane@ieee.org
eV-Technologies, France

WG4: Guidelines for the formulation of standards
WG Leader: Prof. Valter Mariani Primiani
valter.mariani@univpm.it
Università Politecnica delle Marche, Italy

Schedule

Monday, April 1
9:00 – 9:30 Registration
9:30 – 10:15 Stochastic emissions analysis based on measurements in near- and far-fields
Dr. Andrey Baev, Moscow Aviation Institute
10:15 – 10:45 Coffee Break
10:45 – 11:30 Cyclostationary characterization of radiated emissions
Prof. Yury Kuznetsov, Moscow Aviation Institute
11:30 – 12:15 Reverberation chambers for testing wireless devices and systems
Prof. Valter Mariani, Università Politecnica delle Marche
11:30 – 12:15 Lunch Break
12:15 – 14:00 FDTD on high power computing
Prof. Franco Moglie, Università Politecnica delle Marche
14:00 – 15:30 Contemporary distributed and shared memory processing models and cloud computing
Prof. Marjan Gushev, University Sis Cyril and Methodius, Skopje
15:30 – 16:00 Coffee Break
16:00 – 16:45 Where, how, and when to offload data processing to public clouds?
Dr. Saško Ristov, University of Innsbruck

Tuesday, April 2
9:30 – 10:15 Measurement and modelling of noisy EM fields
Dr. Johannes Russer, Technische Universität München
10:15 – 10:45 Coffee Break
10:45 – 11:30 Interconnected wireless world, a major challenge for EMC-coexistence
Prof. Frank Leferink, University of Twente
11:30 – 12:15 Simultaneous/multichannel measurements
Nick Moonen, University of Twente
12:15 – 14:00 Lunch Break
14:00 – 14:45 Statistical view on shielding effectiveness and large system EMI evaluation
Dr. Robert Vogt, University of Twente
14:45 – 15:30 Cable modelling using SPICE
Prof. Dave Thomas, University of Nottingham
15:30 – 16:00 Coffee Break
16:00 – 16:45 Complexity in electromagnetic models
Prof. Christos Christopoulos, University of Nottingham