

COST Action IC0806: Intelligent Monitoring, Control, and Security of Critical Infrastructure Systems (IntelliCIS)

Second Training School: Simulation-based design of Complex Infrastructure Systems **Five-day intensive training school coupled with networking opportunities**

Date: 4-8 March 2013

Venue: Aachen, Germany

Aim of the school:

Critical infrastructures are large-scale, complex, interconnected, and distributed systems. Examples of such systems are electricity, telecommunication, transportation and water distribution networks. Such systems have many common characteristics and requirements, which naturally point to the need for a common methodological framework. They are large-scale, complex, spatially distributed and data-rich systems. Moreover, they are dynamic and their operation is subject to significant uncertainty, and of course, it is critical in modern societies that the operation of these systems is uninterrupted despite any component failures. The aim of the Second IntelliCIS Training School is to provide the trainees with a review of simulation approaches from different fields, such as Power, Communication, and Water Systems and the focus on the challenges related to critical infrastructure with particular reference to the design process.

The school will be hands on with the possibility of accessing different HW/SW simulation capabilities available at RWTH Aachen such as the Real-Time Digital Simulator (RTDS), a shared memory PC cluster, and MATLAB/Simulink.

About COST Action IC0806 (IntelliCIS):

COST IC0806 (IntelliCIS) is the Action on Intelligent Monitoring, Control and Security of Critical Infrastructure Systems and belongs to the ICT Domain. The main objective of the Action is to develop innovative intelligent monitoring, control and safety methodologies for critical infrastructure systems, such as electric power systems, telecommunication networks, and water distribution systems. A diverse network of researchers in various domains has come together in this Action, forming probably the largest team in the world working on critical infrastructure systems!

About COST:

COST is an intergovernmental framework for European Cooperation in the field of Scientific and Technical Research. It is organized into scientific and technical domains and its goal is to ensure that Europe holds a strong position in the field of scientific and technical research. COST is based on Actions, which are networks of research projects in fields of interest to participants coming from different COST and non-COST countries. The Actions are defined by a Memorandum of Understanding signed by the Governments of the COST states wishing to participate in the Action. In COST Actions, the initiative comes from the scientists and technical experts and from those with a direct interest in furthering international collaboration.

Important dates:

Application deadline for participation in the training school: 3 January 2013

Acceptance notification: 10 January 2013

Organizing Committee:

Antonello Monti, RWTH Aachen University, Germany (Management Committee Member, Local Organizer)

Avi Ostfeld, Technion - Israel Institute of Technology, Israel (Management Committee Member)

Mihaela Albu, Politehnica University of Bucharest, Romania (Management Committee Member)

Rasmus Løvenstein Olsen, Aalborg University, Denmark (Management Committee Member)

Elias Kyriakides, University of Cyprus, Cyprus (Action Chair)

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Training School Schedule

	Monday 4 March 2013	Tuesday 5 March 2013	Wednesday 6 March 2013	Thursday 7 March 2013	Friday 8 March 2013
09:00-12:30	Attend the morning session of the IntelliCIS IC0806 workshop	Water Distribution Systems: Theory and applications Lecturer: Avi Ostfeld, Technion	Power system simulation: challenges from future grids Lecturer: Ani Gole, University of Manitoba	IP based simulation and mapping to lower layers (part 2) Lecturer: Jimmy Nielsen, Aalborg University	Real time simulation and hardware in the loop Lecturer: Antonello Monti, RWTH Aachen
12:30-14:00	Lunch	Lunch	Lunch	Lunch	Lunch and closing ceremony
14:00-17:00	Requirement analysis for simulation of critical infrastructures Lecturer: Jose Martí, University of British Columbia	Trainee poster session	IP based simulation and mapping to lower layers (part 1) Lecturer: Rasmus Løvenstein Olsen, Aalborg University	Simulation for design: application in control Lecturer: Herb Ginn, University of South Carolina	Free evening
20:00	Dinner				