COMES

Autumn School on Complexity Management in Embedded Systems
16 - 20 November, 2009 - Lugano, Switzerland - http://www.alari.ch/comes/

Description

Systems envisioned within the Nano-Tera framework are quite often intrinsically very complex: beyond that, they are in most instances (as made clear in the Nano-Tera Technical Scope) devised to interact with the physical world, facing challenges that go from the modelling aspects of the phenomena they should deal with to intrinsic non-determinism of such phenomena. The overall problem of complexity management for embedded systems is clearly of such extension as to deserve more than one Autumn School in order to cover its various aspects; this aims at preparing a strong basis, considering different viewpoints and presenting challenges and solutions of specific relevance to Nano-Tera: on such background one can envision creating in the future more specialized schools targeting, e.g., the challenges of software for complex distributed systems or of reliability.

Lectures

- **Randomisation in embedded systems design: dealing with computational Complexity**
  Dealing with uncertainty. Introducing the concept of probably approximately correct computation in embedded systems design.
  Prof. C. Alippi, Politecnico di Milano, Italy.

- **Intelligent Adaptive Systems For Control**
  How do we control very complex systems containing sensors and actuators.
  Prof. M. M. Polycarpou, University of Cyprus, Cyprus.

- **Tackling the complexity problem in controller design and implementation**
  Managing the design of very complex automatic systems.
  Prof. S. Balemi, SUPSI, Switzerland.

- **Complex Distributed Systems**
  Managing very complex distributed systems with real-time constraints.
  Prof. L. Thiele, ETH, Zurich.

- **Testing Complexity**
  Dealing with complexity in advanced distributed test software systems.
  Prof. Pezze, USI, Switzerland.

- **Dealing with complexity when simulating the physical world**
  Designing very complex digital systems on chip.
  Prof. R. Krause, USI, Switzerland

- **SoC Complexity**
  Designing very complex digital systems on chip.
  Prof. R. Leupers, RWTH-Achen, Germany.

- **Case Studies**
  Leading experts from the industrial world may be invited, in particular for introducing and discussing case studies.