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Workshop on interdisciplinary systems approach in performance evaluation and design of computer & communications systems



# Inter-Perf

[www.inter-perf.org](http://www.inter-perf.org)

October 14, 2006, Pisa, Italy



Co-located with ValueTools, [www.valuetools.org](http://www.valuetools.org) (First International Conference on Performance Evaluation Methodologies and Tools, October 11-13, 2006, Pisa, Italy)

## Call for Papers

The area of communication networks has become increasingly diverse over the past decade. This diversity has been driven by a wide range of application scenarios including for example sensor networks, mobile networks, ad hoc networks, and various application layer networks. A great deal of current research focuses on the networking aspect of interacting computer systems, moving beyond problems of isolated point-to-point communications. Many of today's and future networking systems are large scale in computer end systems and users; some are closely coupled to the spatial environment of their deployment; some may be dense, and their operation may often be required to be self-organized. Operational principles of these computer-networking systems may exhibit great similarity with systems found in other sciences, at least at an appropriate level of abstraction. The features listed above naturally suggest using models and techniques that are standard in other sciences to evaluate and understand the performance of existing communication systems and also to drive design of new ones.

This workshop aims to bring together interdisciplinary approaches for performance evaluation and design of computer & communication systems. It is envisaged that these approaches may include insights and techniques from, for example, biological systems, economics, epidemiology, physics, and the social sciences. The workshop will provide a forum of researchers and practitioners from diverse areas to present their contributions applicable to performance evaluation and design of computer & communication systems.

Topics of interest include:

Bayesian belief propagation  
Bio-inspired systems  
Chemical-reaction type models  
Electromagnetism-inspired models  
Artificial immune systems  
Interacting particle systems  
Mathematics of epidemiology and infectious diseases  
Microeconomics of networks

Percolation  
Population dynamics  
Random graphs  
Reaction-diffusion models  
Reinforced random walks in networks  
Replicator dynamics, Lotka-Volterra systems  
Self-organization  
Statistical physics models

### Keynote speakers

Laurent Massoulié  
*Microsoft Research, UK*  
Stavros Toumpis  
*University of Cyprus, Cyprus*

### Important dates

Submission deadline: April 10, 2006  
Acceptance notification: June 10, 2006  
Camera Ready: July 10, 2006

### Paper Submission Instructions

Paper length should be no more than 20 pages, single column, double spaced, including tables and figures, and no less than 11pt font single or double sided. All paper submissions should be through the web-site: <http://cocus.info/>. Authors should prepare a PostScript or Portable Document Format (PDF) version of their paper.

**Accepted papers will be published in a proceedings by IEEE and made available through IEEE Xplore.**

At least one listed author on the final paper must register for and attend the workshop to present his/her paper.