

COMPUTER NETWORKS

Special Issue on “**Interdisciplinary Paradigms for Networking**”

Many recent fundamental results in communications and in networking have been obtained by means of tools developed within other branches of sciences: statistical physics methodologies have been used in detection in CDMA; the understanding of phase transitions in loss networks has enabled the design of trunk reservation solutions for efficient routing in telephony; techniques from percolation and from random graph theory have been useful for understanding connectivity and coverage in ad hoc networks; equilibria concepts from game theory represent now a commonly used tool for analyzing interactions in distributed systems and devising efficient pricing mechanisms. Based on these recent developments, it is clear that there are many other potentially useful tools and techniques developed in different scientific fields that the networking community is not aware of.

With this Special Issue of Computer Networks, we aim to bring to the attention of researchers and practitioners novel interdisciplinary tools that can be successfully applied to the analysis and design of computer and communication networks. We solicit papers that innovatively use tools from other scientific disciplines in the service of understanding, analyzing, and optimizing computer and communication networks. A limited number of invited survey papers, presenting relevant tools and techniques from other disciplines, will also be considered for publication. Manuscripts should be clearly organized, written in good English and describe original research not published, nor currently under review by other journals or conferences. Papers that have substantially new material with respect to previous conference versions will however be considered. For such submissions, the authors are requested to mention the original conference and specify the changes.

We are particularly interested in paradigms that build on results and techniques developed in the context of:

- Biology
- Physics
- Road traffic engineering
- Utility Network Engineering
- Economics and Social Systems

The list is not restrictive - authors are encouraged to contact the editors before submitting a paper to determine whether the proposed submission is within the scope of the Special Issue.

Prospective authors should prepare their manuscripts according to the guidelines in the Guide for Authors, found at <http://www.elsevier.com/locate/comnet>, and submit them to the online submission and reviewing tool, at <http://www.editorialmanager.com/comnet>, choosing the Article Type: SI-Networking Paradigms.

Important Dates

Paper Submission Deadline:	October 1 st , 2008
First Round of Review due:	January 10, 2009
Second round of reviews due:	June 10, 2009
Final version due:	October 1 st , 2009
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Guest Editors

Eitan Altman, INRIA, France (eitan.altman@sophia.inria.fr)
Tamer Basar, UIUC, USA (tbasar@control.csl.uiuc.edu)
Emma Hart, Napier University, UK (e.hart@napier.ac.uk)
Daniele Miorandi, CREATE-NET, Italy (daniele.miorandi@create-net.org)
Aris Moustakas, University of Athens, Greece (arism@phys.uoa.gr)
Stavros Toumpis, University of Cyprus, Cyprus (toumpis@ucy.ac.cy)