UNIVERSITÄT PASSAU

Computer Networks & Communications
Prof. Hermann de Meer

IWSOS 2006
euroNGI
NETWORK OF EXCELLENCE

EuroNGI IA.8.2 - New Trends in Network Architectures and Services: 1st International Workshop on Self-Organizing Systems (IWSOS 2006)

September 18 - 20, 2006
University of Passau, Germany
http://www.fmi.uni-passau.de/iwsos

Overview

The evolution of the Internet reveals surprising turns and obstacles. Centralized approaches of introducing new services and architectures consistently failed to materialize at large scale. Quality of Service, group communication, or mobility support are only some examples for the difficulty with orchestrated approaches. The success story of the Internet, on the other hand, is strongly linked to decentralization.

Robustness to failures or flexibility in introducing new applications such as the World Wide Web or Peer-to-Peer systems have been key momentum to technological advancements and economics. Future networks are envisioned to be highly complex and difficult to manage due to heterogeneity of networks, spontaneous set-up of networks, and the envisioned number of interconnected devices, appliances, and artifacts. The question that poses itself is whether self-organization can be exploited to a larger scale for solving some of the pending problems for such future networks. Self-organization may even play a key architectural role of the future Internet for enhanced flexibility and evolvability.

It is the goal of this workshop to bring together leading international and multi-disciplinary researchers to create a visionary forum for investigating the potentials in self-organization and the means to achieve it.

Key Topics

The key topics of the workshop include but are not restricted to:

- Self-organization, self-management, self-configuration, and self-optimization
- Self-protection, self-diagnosis, and self-healing
- Autonomic networking
- Emergence and related theoretical concepts
- Networks for pervasive and ubiquitous computing
- Sensor and ad-hoc networks, e.g.: smart dust
- Peer-to-peer networks
- Self-organizing satellite networks
- Group forming networks
- Networks and organic computing

- GRID computing and Web Services
- Application domains: the autonomic and self-organizing home network
- Security and self-organization
- Quality of service / service level agreement and self-organization
- The role of self-organization in heterogeneous network convergence
- The evolutionary principles of the Internet
- Self-configuring place-and-play mobile networks
- Accountability and self-organization
- Self-organization of over- and underlays and in cross layering

- Self-organization in role-based and multilevel systems
- The human in the loop of self-organizing networks
- Inspiring models of self-organizing in nature and society
- Robustness and fault tolerance
- Risks in self-organization
- The (un-)controllability of self-organizing or emergent systems

Important Dates:

- Paper submission deadline (extended): **April 7th 2006, 11:59pm CET**
- Notification of acceptance: **May 18th 2006**
- Camera-ready papers due: **June 7th 2006, 11:59pm CET**
- Author registration deadline: **June 7th 2006, 11:59 CET**
- Early registration deadline: **August 1st, 2006**
- Hotel reservation cut-off date: **August 15th, 2006**
- Workshop reception and welcome party: **September 17th 2006**
- Workshop dates: **September 18th - 20th 2006**

Full Paper Submission

IWSOS invites submission of manuscripts that present original research results, and that have not been previously published or are currently under review by another conference or journal. Any previous or simultaneous publication of related material should be explicitly noted in the submission. Submissions should be full-length papers that are no longer than 20 double-spaced single-column pages with font sizes of 11 or larger, including all figures and references, and must include an abstract of 100 -- 150 words. All papers must be submitted in PDF format, and no other formats are accepted. At least one of the authors of each accepted paper must present the paper at IWSOS 2006.

Short Paper Submission - Position Papers for Industry Session and Works in Progress

The short papers are limited to four double-spaced, single-column pages. Accepted papers will be presented in a 10-15 minute time period, and will be included in the conference proceedings.

Steering Committee:

- Hermann de Meer, University of Passau, Germany
- David Hutchison, Lancaster University, UK
- Bernhard Plattner, ETH Zurich, Switzerland
- James Sterbenz, University of Kansas, USA

Program Chairs

Hermann De Meer	James Sterbenz
University of Passau	University of Kansas
Passau, Germany	Lawrence, KS, USA

To reach both Program Chairs, please send a message to this email address: iwsos(at)fmi.uni-passau.de