
Call for Posters and Student Research Competition

International Workshop on Self-Organizing Systems (IWSOS 2011)
KIT, Karlsruhe, Germany, February 23-24, 2011
Deadline: January 24, 2011
http://iwsos2011.tm.kit.edu

IWSOS 2011 is the fifth workshop in a series of multidisciplinary events dedicated to self-organization in networks and networked systems.

IWSOS 2011 solicits submissions for the poster session to be held during the workshop. Proposals for poster presentations featuring early research work, preliminary results, out-of-the-box ideas, or project or thesis descriptions are strongly encouraged. The poster session will provide a special opportunity for PhD students to obtain feedback on their work.

Posters with a student as main presenter will participate in the student research competition. A winner will be elected by the conference chairs and be officially awarded at the conference banquet. The award includes a book price sponsored by Wiley.

Posters should be submitted as a single PDF file to "tm-iwsos2011 <at> tm.uka.de". The submission should be formatted as a large poster or extended abstract (maximum 2 pages). The submission must include the names of the authors, affiliations and email addresses as well as the status (student/non-student) of the main author.

Dates: Submissions are due on January 24, 2011. Acceptance notifications will be sent on January 31, 2011.

Topics include, but are not limited to, the following:

* Design and analysis of self-organizing and self-managing systems
* Techniques and tools for modeling self-organizing systems
* Robustness and adaptation in self-organizing systems, including self-protection, diagnosis, and healing
* Self-configuration and self-optimization
* Self-organizing group and pattern formation
* Self-organizing synchronization
* Self-organizing resource allocation
* Self-organizing mechanisms for task allocation and coordination
* Self-organizing information dissemination and content search
* Security and safety in self-organizing networked systems
* Structure and dynamics of self-organizing networks
* Risks and limits of self-organization
* The human in the loop of self-organizing networks
* User and operator-related aspects of human-made self-organizing systems
* Applications of self-organizing networks and networked systems
* Peer-to-peer networks, vehicular networks, zeroconfiguration protocols
* Autonomous traffic lights, self-organized cruise control
* Decentralized power management in the smart grid
* Collaborative unmanned ground or aerial vehicles, mobile sensor networks

Conference Description

The concept of self-organization is becoming increasingly popular in various branches of technology. A self-organizing system may be characterized by global, coordinated activity arising spontaneously from local interactions between the system's components. This activity is distributed over all components, without a central controller

supervising or directing the behavior. Self-organization relates the behavior of the individual components (the microscopic level) to the resulting structure and functionality of the overall system (the macroscopic level). Simple interactions at the microscopic level may give rise to complex, adaptive, and robust behavior at the macroscopic level.

The necessity of self-organization in networks and networked systems is caused by the growing scale, complexity, and dynamics of future networked systems. This is because traditional methods tend to be reductionistic, i.e., they neglect the effect of interactions between components. However, in complex networked systems, interactions cannot be ignored, since they are relevant for the future state of the system. In this sense, self-organization becomes a useful approach for dealing with the complexity inherent in networked systems.

The workshop addresses self-organization different types of technological networks.

Chairs

General chairs:

* Martina Zitterbart, KIT, Germany
* Hermann de Meer, University of Passau, Germany

Program chairs:

* Christian Bettstetter, University of Klagenfurt & Lakeside Labs, Austria
* Carlos Gershenson, Universidad Nacional Autónoma de México

Keynote Speakers:

* Hermann Haken, prof. em., University of Stuttgart, founder of synergetics
* Hod Lipson, associate prof., Cornell, Computational Synthesis Lab