SocioAware 2011

First International Workshop on Socio-Aware Networked Computing Systems

at the 5th IEEE International Conference on Self-Adaptive and Self-Organizing Systems (SaSo)
Ann Arbor, MI, USA, October 3rd, 2011

Call for Papers

Social services and utilities pervade more and more aspects of our daily lives and will conceivably become an integral part of future software systems. While it is common and important to investigate how the associated gradual convergence of social and technical systems influences individuals and society, the fact that this influence is mutual is far less explored. Networked computing infrastructures involving cloud computing, virtualization techniques, Peer-to-Peer technologies or other Internet-based applications are shaped not only by technological considerations but, increasingly, also by the social structures and processes into which they are embedded. The growing interconnectedness of users leads to highly correlated behavior and the emergence of collective phenomena which naturally retroact on the technical systems by which they are mediated. Content distribution technologies need to adapt to quickly changing user demand and respond to an increasingly fast, viral propagation of Internet phenomena. Likewise, the process of malware contagion in networked computing systems is crucially influenced by social processes. The popularity of micro-blogging services lastingly changes the way people communicate and new patterns of communication are being established. Finally, the availability of large-scale data on social structures and processes – partly in real-time – facilitates novel adaptation strategies as well as the modeling, simulation and operation of networked systems.

This workshop seeks to shed light on the question how the increasing pervasion of technical infrastructures with social aspects affects the engineering of reliable and scalable networked computing systems. A particular focus will be laid upon the question how the ongoing trend towards a rigorous mathematical modeling of self-organization processes in social systems (for instance in the language of complex networks, dynamical systems and random matrix theory) can influence and inspire the design of distributed algorithms, network topologies and communication protocols, resulting in what may be called *socio-aware networked computing systems*.

Topic Areas

This workshop intends to address the above general questions in the context of a variety of different networked computing systems. The workshop's focus includes but is not limited to the following topics:

- Socio-aware overlay topologies
- Modeling of information spreading and opinion formation phenomena
- Predictability of Internet meme evolution
- Socio-awareness in scalable content distribution
- Real-time monitoring of and (self-)adaptation to collective user dynamics
- Social adaptation of application-layer protocols
- Use of social aspects in the design of future Internet technologies
- Simulation and evaluation of interactive networked computing systems making use of socio-aware behavioral models
- Distributed detection of user communities in networked computing systems
- Topologies and protocols for distributed implementations of social networks
- Employing social structures in the provision of distributed virtual environments
- Socio-inspired, self-organizing structures in mobile computing applications
- Use of social structures in application-level routing schemes for Peer-to-Peer, wireless ad-hoc or delay tolerant networks
- Socially-inspired algorithms and network topologies for distributed search and consensus, collective decision-making, gossiping, information spreading, etc.

We particularly solicit interdisciplinary work that demonstrates how data, results and research questions from different scientific disciplines can be combined in a way that facilitates the engineering of reliable networked computing systems.

Important Dates

Submission Deadline	**July 11th, 2011**
Acceptance Notification	July 25th, 2011
Camera-ready Deadline	August 25th, 2011
Workshop	October 3rd, 2011

Organizers

Ingo Scholtes, Peter Sturm
University of Trier, Germany

Jean Botev, Markus Esch
University of Luxembourg, Luxembourg

Bernd Klasen
SES Astra TechCom, Luxembourg

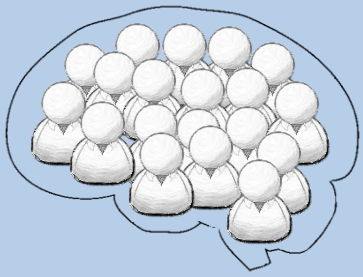
Tobias Hoßfeld
University of Würzburg, Germany

Paper Submission

The organizers welcome the submission of papers of up to 6 IEEE two-column pages describing original work previously unpublished and currently not under review elsewhere. Position and work-in-progress papers are highly welcome. All submissions will be blindly reviewed by at least three members of the program committee.

Contact

For more information visit the workshop website at **http://www.socioaware.net** or directly contact the organizers at **info@socioaware.net**.



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