



# Workshop on Socio-Economics Inspiring Self-Managed Systems and Concepts (SEISMYC-2010)

## Organizing Committee

- ◆ *Prof. Maurice Mulvena*,  
University of Ulster, UK
- ◆ *Prof. Sven-Volker Rehm*  
WHU - Otto Beisheim School of  
Management, Germany
- ◆ *Dr. Kostas Stathis*  
Royal Holloway, University of  
London, UK
- ◆ *Dr. Edin Arnautovic*,  
Vienna University of  
Technology (TUW), Austria

## Program committee

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- Dr. Vasileios Karyotis, NTUA, Greece
- Dr. Mathieu Vallee, Vienna University of  
Technology, Austria
- Prof. Hermann Kaindl, Vienna University of  
Technology, Austria
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Science and Technology, United Arab Emirate,  
Research Affiliate, MIT, USA
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Studies in Engineering, University of Stuttgart,  
Germany
- Dr. Matthias Baumgarten, TRAIL Living Lab,  
University of Ulster, UK
- Dr. Antonis M. Hadjiantonis, KIOS Research  
Center, University of Cyprus, Cyprus
- Prof. George Ellinas, KIOS Research Center,  
University of Cyprus, Cyprus
- Dr. Pavel Vrba, Agent Technology Lab,  
Rockwell Automation Research Center  
Prague, Czech Republic
- Prof. Gauthier Picard, Laboratory for  
Information Science and Technology (LIST),  
ENS mines de Saint-Étienne, France
- Corrado Moiso, Telecom Italia Strategy and  
Innovation, Italy,
- Antonio Manzalini, Telecom Italia Strategy and  
Innovation, Italy
- Dr. Alexander Artikis, NCSR "Demokritos",  
Greece
- Dr. Jeremy Pitt, Imperial College London, UK
- Prof. George Vouros, University of the  
Aegean, Greece

## Description:

Today's complex systems are required to be able to adapt themselves (their internal structure or behavior), as well as to participate autonomously in larger, self-organizing systems. As a result they should be able to manage themselves without any human intervention – they should be self-managed (including the self-monitoring, self-healing, self-configuration, etc. — self-\*).

Analogously, in our world, enterprises, public institutions or other socio-economic systems manage themselves autonomously. They make decisions on how to adapt their structure and behavior, and how to organize with other entities in the environment, thus creating more complex, self-organizing systems. They are “aware” of their own identity on multiple levels of individuals, teams, organizations and networks, they recognize their capabilities and the status of their current parameters (e.g., financial data or inventory). and make decisions on how to act in a particular situation.

The goal of this workshop is to address the challenges of the development of Self-Managing Systems by making entities in such a system able to manage and adapt themselves inspired by how organizations manage and adapt themselves in a socio-economic system.

## Indicative list of topics of interest:

- Identification of concepts, principles, phenomena and key properties in the management of companies and other socio-economic systems that are the most likely to contribute to the development of self-managing systems;
- Architectures, models, algorithms, languages and control techniques for self-\* systems inspired by economics, management science, organizational theory, etc;
- Methods for transferring socio-economic concepts and principles to technical systems (knowledge-oriented approaches, trans-disciplinary research approaches, design science approaches, etc.);
- Modeling organization and dynamics of socio-economic systems with perspective on self-organization, self-adaptation, and global planning, e.g., adaptive organizational models;
- Knowledge monitoring and reasoning mechanisms for distributed systems based on socio-economic systems;
- Pervasive supervision, governance, identity, trust and reputation mechanisms for self-\* systems using socio-economic principles;
- Utility functions in the context of self-managing systems;
- Technical implementation and integration of socio-economic principles in self-managing systems, e.g., based on particular existing or new technologies as symbolic models, ontologies, reasoning, policies, etc.;and
- Integration of self-managing systems in society.

## Important Dates:

- July 12, 2010:** Deadline for submission of contributions to workshops  
**August 6, 2010:** Notification of acceptance  
**September 27th, 2010:** Workshop

## Format:

Papers should not be longer than 4 pages in standard IEEE two-column format,