



Call for papers:

Self-organizing multi-agent systems: Technologies and applications Invited Session

8th International KES Conference on Agents and Multi-agent Systems – Technologies and Applications

<http://amsta-14.kesinternational.org/index.php>

Minoa Palace Resort & Spa, Chania, Greece, 18 - 20 June 2014

Theme:

Multi-agent systems are composed of multiple interacting software components also known as agents who are capable of cooperating to solve problems that are beyond the abilities of any of them individually. Moreover, for scale, distribution or reasons due to uncertain environments, interactions among agents need to be realized in a completely decentralized and autonomous way. We can achieve all of the aforementioned if modeling multi-agent systems as self-organizing systems. Namely, by its definition self-organization is a process in which a global behavior emerges from the local interaction between different entities without any centralized control.

Even though self-organizing systems have been widely applied and their potentials are strongly recognized in many different application areas (e.g., swarm robotics, sensor networks and network optimization), the engineering of self-organizing system is still in a very early stage. Analogously to the software applications in the 60's, nowadays self-organizing systems have to be built from scratch. However, firstly there is a lack of simulators and tools that allow developers to build their prototypes and validate their applications. Secondly, there is also a lack of execution models and new paradigms for carrying on computations among a set of entities with computational capabilities.

Therefore, this invited session aims to connect researchers interested in self-organizing systems engineering, providing them a place for presenting and discussing new ideas that could contribute to the better understanding of the self-organizing systems engineering and transferring that knowledge to the industrial applications.

Topics:

The subject areas will include, but are not limited to, the following:

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| <ul style="list-style-type: none">• Self-organizing design patterns• Execution models for self-organization• Architectural styles for self-organization• Bio-inspired self-organizing systems• Adaptation in self-organizing systems• Validation of self-organizing systems | <ul style="list-style-type: none">• Design and development of self-organizing systems• Tools and simulators for self-organizing systems engineering• Controlling emergent behavior in self-organizing systems• Self-organizing mechanisms in theory and practice• Methodologies for engineering self-organizing systems• Industrial applications of self-organizing systems |
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Important dates:

Submission Deadline: ~~3 February 2014~~ 10 February (Extended)

Notification of Acceptance: 10 March 2014

Camera-ready Submission: 17 March 2014

Submission Guidelines:

Prospective authors are invited to submit original technical papers—up to 10 pages of length, using the PROSE link: <http://amsta-14.kesinternational.org/prose.php>.

For more information, visit: <http://amsta-14.kesinternational.org/index.php>.

Program committee:

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