

2nd FoCAS Workshop on Fundamentals of Collective Adaptive Systems

Monday 8th September @ SASO 2014, London, UK

CFP

Collective Adaptive Systems (CAS) is a broad term that describes large scale systems that comprise of many units/nodes, each of which may have their own individual properties, objectives and actions. Decision-making in such a system is distributed and possibly highly dispersed, and interaction between the units may lead to the emergence of unexpected phenomena. CASs are open, in that nodes may enter or leave the collective at any time, and boundaries between CASs are fluid. The units can be highly heterogeneous (computers, robots, agents, devices, biological entities, etc.), each operating at different temporal and spatial scales, and having different (potentially conflicting) objectives and goals, even if often the system has a global goal that is pursued by means of collective actions. Our society increasingly depends on such systems, in which collections of heterogeneous 'technological' nodes are tightly entangled with human and social structures to form 'artificial societies'. Yet, to properly exploit them, we need to develop a deeper scientific understanding of the principles by which they operate, in order to better design them. This workshop solicits papers that address new methodologies, theories and principles that can be used in order to develop a better understanding of the fundamental factors underpinning the operation of such systems, so that we can better design, build, and analyse such systems.

We welcome inter-disciplinary approaches.

Suggested Topics (but not limited to)

- Novel theories relating to operating principles of CAS
Novel design principles for building CAS systems
- Insights into the short and long term adaptation of CAS systems
- Insights into Emergent Properties of CAS
Insights into general properties of large scale, distributed CAS
- Methodologies for studying, analysing and building CAS
- Frameworks for analysing or developing CAS Case studies
- Scenarios that can be used to investigate CAS properties

Invited contributions from the workshop will be published in a **Special Issue of the Journal of Scalable Computing: Practice and Experience**: <http://scpe.org/>

Submission deadline is 11 July 2014

FoCAS Best Student Paper Award

The FoCAS Coordination Action is also presenting a best student paper award. The prize is worth **500 EUR** to reimburse travel and accommodation costs associated with attending the workshop. This Best Student Paper Award is open to any student who is first author of a paper submitted to the FoCAS workshop at SASO 2014. Winning announcements will be made on 8 September at the workshop and posted at www.focas.eu. The **submission deadline is 11 July 2014**.

Program Chairs

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Full workshop details are available at: www.focas.eu/saso-2014