Message from the Program Committee Chairs

SASO 2011

We welcome you to the fifth edition of SASO, the IEEE International Conference on Self-Adaptive and Self-Organizing Systems. SASO 2010 is held in Ann Arbor, Michigan (USA) from October 3-7, 2011.

This year we received 97 submissions, an increase on last year’s figure and the Technical Program Committee matched this challenge with high engagement and enthusiasm. After zealous discussion we accepted 21 full papers, resulting in an acceptance rate of just fewer than 22%.

The subject of SASO system stability has emerged as a dominant theme for the 2011 program. Here we see papers that explore the issues and means to obtain stability as well as understanding how this can be maintained under fluctuating conditions. Specifically we have seen a meta-level adaptation system aiming to control the self-adaptation processes while consolidating interactions to reach global goals, and another looking at strategic analysis techniques that assess the risks associated with certain rules. Spatial Computing remains an important subject with work showing how neighbourhoods impact areas such as spatial publish-subscribe load provisioning, self-stabilisation to provide service guarantees under non-convergence, and comparisons of Newtonian force-based and potential energy approaches to distributed self-organisation. The social dynamics of such systems have been studied. Ostrom's socio-economic principles for building enduring sustainable systems have been shown to be a successful way to understand resource allocation problems in a more formal way. Further the impact of a neighbourhood’s normative information evolution and exogenously-driven opinion dynamics on SASO systems has been explored.

In continuing the notion of stability, monitoring mechanisms have been presented to increase stability and more effective self-organization in cooperative SASO systems. While mechanisms that characterise or measure emergent phenomena and system coherence where perturbations arise, have also been examined. Additionally, the transformation of conditional safety certification mechanisms has shown that they can localise faults in SASO systems. Alternative ways to build such systems, such as chemically-inspired architectures and formalisms that facilitate better systems engineering is presented. Further, SASO approaches are being used to alleviate the complexity and intractableness of planning & resource allocation placement of tasks for both embedded and sensor network systems for both bottom-up and middleware level planning.

Applications of SASO systems also span a wide arena from robotics, to dynamic pickup and delivery applications, tracking systems, automotive systems etc. We believe this is a positive trend for the SASO community, and a symbol of both its growth and applicability. Besides full papers, this year’s program also features a diverse group of workshops, several informative tutorials, poster sessions and keynotes.

We would like to thank everyone who contributed to SASO and its organization this year. We express our sincere gratefulness to the entire Technical Program Committee for their commitment and passion throughout the reviewing and discussion phases. We also thank the Steering Committee, the Advisory Committee and the chairs of previous SASO’s for their feedback and help along the way. We thank the General Chairs, Sven Brueckner, and Kurt Geihs, for their diligent and untiring support.

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SASO 2010 Program Committee Chairs