

QUALITY ASSURANCE FOR SELF-ADAPTIVE, SELF-ORGANISING SYSTEMS

IEEE Workshop co-located with the IEEE International Conferences on Foundations and Applications of Self-* Systems 2016, QA4SASO, Augsburg, Germany, September 12, 2016

CALL FOR PAPERS

Developing self-adaptive, self-organising systems (SASO) that fulfil the requirements of different stakeholders is no simple matter. Quality assurance is required at each phase of the entire development process, starting from requirements elicitation, system architecture design, agent design, and finally in the implementation of the system. The quality of the artefacts from each development phase affects the rest of the system, since all parts are closely related to each other. Furthermore, the shift of adaption decisions from design-time to run-time – necessitated by the need of the systems to adapt to changing circumstances – makes it difficult, but even more essential, to assure high quality standards in these kind of systems. Accordingly, the analysis and evaluation of these self-* systems has to take into account the specific operational context to achieve high quality standards. The necessity to investigate this field has already been recognized and addressed in different communities but there exists so far no platform to bring all these communities together. Therefore, the workshop provides within its third edition an established open stage for discussions about the different aspects of quality assurance for self-adaptive, self-organising systems. Examples for topics of interest are :

Modelling and verification

- formal models and modelling languages such as automata, state machines, process algebras, logics, HOL, Markov-chains, UML
- run-time verification and validation in self-adaptive, self-organising systems

Empirical evaluation

- measurement and evaluation of resilience, security, safety, performance, reliability, and cost in self-adaptive, self-organising systems
- benchmarking of self-adaptive, self-organising systems

Test-centred development

- test derivation, test selection, test coverage, test implementation and execution, test result analysis, test oracles, test management, and monitoring
- automated support of any of the testing activities, rigid testing processes, test driven development

Case studies, industrial applications, and experience reports

SUBMISSIONS

The workshop organisers solicit original research papers on the topics outlined in the description with a maximum length of 6 pages. Submitted research papers must not have been previously published or submitted elsewhere.

Beyond, submissions of fast abstracts are welcome which are not exceeding 2 pages. We encourage the submission of fast abstracts presenting important challenges to future research or position statements on the topics outlined in the description. Fast abstract may also sum-up and present already published work to the workshop community.

At least two members of the program committee will review each submission in a single-blind process. The decision will be based on the motivation of the topic, the clarity of the contribution, the relevance of the research to the domain of quality assurance for self-adaptive, self-organising systems, its evaluation, and the thoroughness of the related work comparison.

PUBLICATION

The proceedings of the workshop will be published as a bundle within the FAS*W proceedings, presumably by IEEE Computer Society Press.

IMPORTANT DATES

Paper submission:	July 4, 2016
Acceptance notification:	July 17, 2016
Camera-ready version:	July 22, 2016
Workshop:	September 12, 2016

WEBSITE

More information can be found at <http://qa4saso.isse.de>

WORKSHOP ORGANISATION

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PAPER FORMAT

Maximum of 6 pages, formatted according to the IEEE Computer Society Press proceedings style guide.