

Call for Papers

5th Workshop on Self-Awareness in Cyber-Physical Systems (SelPhyS)

Description

Inspired by biological examples, self-awareness has become a hot research topic in a variety of disciplines and its applicability has been explored in various application domains. The topic owes its attractiveness to its promise to facilitate highly resilient, adaptive and outstandingly efficient behaviors. Thus, self-awareness holds the promise to promote dependability in all types of smart gadgets and artificial agents in the interconnected world.

The main purpose of this workshop is to strengthen and extend the community and to try to develop a shared and communal understanding of the main concepts underlying self-awareness with respect to CPS. Currently, self-awareness is studied in a range of different communities, where the underlying assumptions, definitions, and goals differ significantly. This workshop will provide a forum for reflections and in-depth discussions of the pivotal concepts of this field which will serve as a basis for building an integrated scientific community and for developing future research projects.

One topic of particular interest in this edition is “resilience in autonomous cyber-physical systems,” and how self-awareness principles can enable systems to achieve their goals in the face of adversity.

We seek previously published or unpublished contributions for oral and/or poster presentations on research relevant to self-awareness in cyber-physical systems on, but not limited to, the following topics and application areas.

Topics

- Self-awareness in resource-constrained distributed systems
- Self-awareness in HW, Operating System, and applications
- Self-awareness facilitating autonomous, adaptive, or resilient behavior
- Architectures and Design methods
- Systems with other Self-* properties
- Demonstration, Measurement, or Quantification of Self-awareness

Application Areas

- Sensor Networks
- Internet of Things
- Transportation
- Robotics
- Healthcare
- Industry 4.0
- System-on-Chip
- Machine-to-machine Communication

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Submission

Workshop submissions (one page extended abstract, IEEE Conference A4 format) must be sent as PDF only. Organizers will sort the abstracts according to their relevance and expected impact to the workshop outcome. The number of presentation time-slots is limited. We will inform the authors of accepted submissions about the decision and proposed presentation format by the selection deadline. Authors of accepted submissions will have the opportunity to make their work public at the workshop website, but there will be no obligation to do so.

Please send submissions to Bryan Donyanavard: bdonyanavard@sdsu.edu

Deadline for extended abstracts: December 1, 2023

Decision of selection: December 18, 2023

Important Info

The workshop will take place February 22-23, 2024 at San Diego State University, San Diego, CA.

Workshop Organizers

Bryan Donyanavard, Nikil Dutt, Lukas Esterle, Andreas Herkersdorf, Axel Jantsch, Peter Lewis, Nima TaheriNejad, Kalle Tammemäe

Workshop Website

<http://selphys.ict.tuwien.ac.at/>

