



# 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 is expected to promote dependability in all types of smart gadgets and artificial agents in the interconnected world of future.

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.

**We seek previously published or unpublished contributions for oral and/or poster presentations on research relevant to self-awareness in cyber-physical systems on, but not limited to, the topics and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

## Submission

The workshop submissions (one page extended abstract, IEEE Conference format, PDF only) has to be sent to workshop organizers (contact below). Organizers will sort the abstracts according to their relevance and expected impact to the workshop outcome. 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 opportunity to make their work public at the workshop website, but there will be no obligation to do so. Selected contributions will be invited to submit an extended version of their work to a special issue of a reputable journal and/or an edited book.

- Deadline for extended abstracts: 15 January 2020
- Decision of selection: 1 February 2020
- Event Date: 16-17 April 2020

**Submit to:** Lukas Esterle, [lukas.esterle@eng.au.dk](mailto:lukas.esterle@eng.au.dk)

## 5th Edition

Thursday & Friday  
April 16-17, 2020  
UC Irvine, CA, USA

### 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 & Design methods
- ✓ Systems with other Self-\* properties
- ✓ Quantifying Self-Awareness
- ✓ Benchmarks for Self-awareness

### APPLICATION AREAS:

- ✓ Sensor Networks
- ✓ Internet of Things
- ✓ Automotive
- ✓ Robotics
- ✓ Health Monitoring
- ✓ Industrial Automation
- ✓ Smart Transportation
- ✓ System-on-Chip
- ✓ Smart Grids
- ✓ ...

**Organizers:** F. Kurdahi & A. Rahmani (Local Organizers), L. Esterle (TPC Chair) Dutt, Herkersdorf, Jantsch, Lewis, TaheriNejad, Tammemäe  
<http://selphys.ict.tuwien.ac.at/>