

## DECSoS 2020 Workshop - Call for Papers:

### 15<sup>th</sup> International Workshop on Dependable Smart Embedded Cyber-Physical Systems and Systems-of-Systems (DECSoS)

This workshop at SAFECOMP follows already its own tradition since 2006. In the past, it focussed on the conventional type of “embedded systems”, covering all dependability properties. To emphasize more the relationship to physics, mechatronics and the interaction with a somehow unpredictable environment, the terminology changed to “cyber-physical systems”. A new focus is on trustworthiness of smart systems composed from cognitive CPS integrated into IoT infrastructure, challenging system dependability assurance. A key issue is “Digitalization”, particularly performing extensive V&V on “Digital Twins” to achieve confidence in these systems, and taking into account new paradigms of software- and systems engineering.

The impact on society as a whole is considerable - thus dependability (safety, reliability, availability, security, maintainability, etc.) evaluated in a holistic manner becomes an important issue, including resilience, robustness, and sustainability. Cognitive systems, CPSs and IoT are targeted research areas in Horizon 2020 and public-private partnerships such as ECSEL (Electronic Components and Systems for European Leadership), and in forthcoming Programmes of “Horizon Europe”.

Sessions are planned on

- Dependable and resilient embedded systems, systems of cyber-physical systems,
- Highly automated (autonomous) Systems and Robotics,
- Smart Anything Everywhere, IoT Internet of Things
- Digitalization of our world (Industry 4.0, Farming 4.0, Transportation 4.0, Digital Cities, Smart Health, Society 5.0, ...),

particularly addressing thematic topics such as

- Multi-core platforms and mixed criticality systems,
- Safety and security co-engineering, trustworthiness,
- Validation and Verification, multi-concern assurance,
- Domain-specific critical applications (industrial demonstrators)
- Standardization (interoperability, cyber-security aware safety) and certification,

covering aspects from concepts to deployment and maintenance. This is a workshop, and to be distinct from the SAFECOMP conference mainstream, it is aiming at reports on on-going “work in progress”, aiming at hopefully fruitful discussions and experience exchange.

***Reports on European or national research projects (as part of the required dissemination) as well as industrial experience reports from work in progress are welcome.***

**All papers will be reviewed by at least three reviewers. Workshop proceedings** will be provided as complementary book to the SAFECOMP Proceedings in **Springer LNCS**. Please keep your paper format according to SPRINGER LNCS style guidelines (<http://www.springer.com/computer/lncs?SGWID=0-164-6-793341-0>) (use Microsoft Word if possible).

**Papers (8 - 12 pages)** will be reviewed by at least three reviewers.

Submission is via EasyChair: <https://easychair.org/conferences/?conf=decsos2020>

Tentative Deadlines:

- **Full paper submission:** ~~11 May 2020~~ **15 May 2020**
- **Notification of acceptance:** ~~29 May 2020~~ **1 June 2020**
- **Camera-ready submission:** 10 June 2020
- **Workshop:** 15 September 2020 **(virtual – Web conference to be announced)**

The International Programme Committee is composed of selected EWICS and ERCIM members, led by the workshop organizers.

#### **Contacts (workshop and programme committee chairpersons):**

Erwin Schoitsch  
AIT Austrian Institute of Technology  
Giefinggasse 4  
A-1210 Vienna, Austria  
[Erwin.schoitsch@ait.ac.at](mailto:Erwin.schoitsch@ait.ac.at)

Amund Skavhaug  
The Norwegian Univ. of Science and Technology  
Department of Engineering Cybernetics  
Trondheim, Norway  
[Amund.skavhaug@ntnu.no](mailto:Amund.skavhaug@ntnu.no)