

CALL FOR PAPERS SPECIAL SESSION ON

CONTROL TESTING AND MONITORING OF EMBEDDED SYSTEMS

Organized by Emmanuel SIMEU, TIMA Laboratory, Grenoble, France

for ICCAD'19, July 2-4, 2019, Grenoble-France

Special Session Chair:

Emmanuel SIMEU, TIMA Laboratory, Grenoble, France

Emmanuel.Simeu@univ-grenoble-alpes.fr

Session description:

Nowadays, Embedded systems are proliferating in various applications such as electrical and electronic devices as well as in more critical applications as transport (avionics, space, automotive, rail), energy distribution, automation, control or medical applications. The main attraction of embedded systems is that they allow complex functions to be implemented at low cost, which were unimaginable only a few years ago. As their sophistication increases, embedded systems are used in increasingly critical applications where their malfunction can generate nuisances, economic losses or unacceptable consequences, including the loss of human lives. This is the case, for example, for medical or transport applications where a failure can have a direct impact on human life. This is also the case for space, underground or underwater applications where failure can have serious consequences both in terms of safety and economics. This type of system must guarantee very high reliability and must be able to react in the event of a failure of one of its components.

Embedded systems generally operate in non-deterministic and often uncontrolled environmental conditions. They are exposed to environmental variations and other constraints likely to induce failures. Hence, there is the need to take into account changes in the characteristics of components according to environmental conditions and to integrate fault tolerance, self-test, monitoring and self-healing capabilities in their design phase.

This Special Session is a forum for presenting discuss various aspects, novel ideas and experimental data on the areas of testing, monitoring, robustness, self-healing, fault tolerance, ... of embedded systems.

The topics of interest include (but are not limited to) the following ones:

- Fail-Safe Architectures
- Embedded diagnosis systems
- Robust Automotive Electronics
- Online Testing and Self-healing
- Performances metrics assessment and control
- Reliable Analog Mixed Signal Systems
- Heterogeneous system modelling
- Fault-Tolerance in HW and SW

SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by: **April 15, 2019**

<https://easychair.org/my/conference.cgi?conf=iccad19>.

All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

DEADLINES

Submission deadline: **April 15, 2019** - Notification of acceptance: **April 25, 2019** - Camera-ready papers due: **May 10, 2019**
