

Open Invited Track on:

Cyber-Physical Control Systems & Control of Cyber-Physical Systems

Organizers:

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Abstract:

The design and development of Cyber-Physical Systems (CPS) in the industry can be considered a consolidated trend. Recent industry technologies (Industry 4.0) make intensive use of CPS. While many scientific disciplines (Model-Based, Real-Time, Operating Systems, Scheduling, etc.) have contributed to CPS development, the control community has been engaged in the development of theories, methods and practices for the design and operation of CPS.

The scope of the Open Invited Session is to bring together researchers and practitioners interested in control and computers to explore innovative ideas and experiences the construction and use of cyber-physical and embedded systems.

IFAC technical committee(s) for evaluation:

TC 3.1: Computer control systems

TC 3.2: Computational intelligence in control

TC 3.3: Telematics: control via communication networks

Detailed description

This open invited track is focused (but not limited) to the following subjects:

- Model based of CPS
- Hardware and software architectures for real-time control
- Control techniques to computer systems
- Model-driven paradigm and modeling languages
- Verification & validation and certification
- Execution platforms including multi-core
- Scheduling techniques
- Experiences and evaluation in safety critical applications as aerospace, automotive, industrial, ...