

ETFA 2022

27th INTERNATIONAL CONFERENCE
ON EMERGING TECHNOLOGIES
AND FACTORY AUTOMATION

STUTTGART, GERMANY

SEPTEMBER 6th-9th 2022

Call for Papers

CLONAR – Cloud Native Real-Time Systems

Organized and Co-Chaired by

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❖ **FOCUS.** The incorporation of cloud services has been regarded for the realization and evolution of Industry 4.0 systems. One such cloud-based evolutionary example is the deployment of industrial processes and systems not as a virtualized translation of that system into cloud computing, but instead being built from scratch to be operated over the cloud. These are dubbed cloud-native applications, which embody the main principles of cloud operations, ranging from availability, distribution, scalability, resiliency, and other aspects of equal importance to the industrial domain. The challenge lies when the cloud and factory domains “collide”, and complex engineering solutions need to provide the intended benefits, without incurring drawbacks. One of such examples lies with real-time communications, particularly in scope of hard real-time communications, where the shared infrastructure environments and distributed locality of information pose stringent requirements and complexity for a cloud-native solution.

❖ TOPICS

- ❖ Native Cloud mechanisms applied to Networking
- ❖ Real-time Networks and Cloud interactions
- ❖ Security for cloud-based industrial automation systems, applications and deployment
- ❖ Virtualization, Softwarization and other innovative aspects for Industrial Automation
- ❖ Cloud-native software development and software paradigms for industrial deployment
- ❖ Cloud-based industrial operations and automation functions
- ❖ Cloud-based industrial plant supervision and control
- ❖ Cloud-based adaptive and flexible industrial production systems
- ❖ Adaptive and reconfigurable networks in cloud-based architectures
- ❖ Middleware for real-time networks
- ❖ Real-time containers and orchestrations

❖ **AIM.** CLONAR will be a place where R&D solutions involving cloud native and real-time systems will be manifested and shared. The objective is to attract works focusing on either advancements from the industrial sphere or the cloud sphere (or both), in order to achieve groundbreaking innovative systems for industry automation. Theoretical, experimental, trials or lessons learned will allow the experts communities of both areas to witness the deployment capability of the state of the art, or to pave the way for further evolutions.

❖ **WORKSHOP FORMAT.** CLONAR will be held on the first day of the conference, Sept. 6, 2020. Papers are limited to 8 double column pages; they must comply with ETFA guidelines regarding formatting and must be submitted electronically in PDF format through the conference submission system. Accepted papers must be presented at the workshop in order to be included in the ETFA conference proceedings available at IEEEExplore.

❖ AUTHOR'S SCHEDULE (2022)

❖ Regular and special sessions papers

Submission deadline May 13
Acceptance notification June 10
Deadline for final manuscripts June 24

Workshop: September 6, 2022

Workshop Program Committee

- ❖ Luis Almeida, FEUP, Portugal
- ❖ Matthias Becker, KTH Royal Institute of Technology, Sweden
- ❖ Moris Behnam, Mälardalen University, Sweden
- ❖ Carlos Bernardos, Universidad Carlos III de Madrid, Spain
- ❖ Victor Casamayor, TU Wien, Austria
- ❖ Tommaso Cucinotta, Scuola Superiore Sant'Anna, Italy
- ❖ Luis Lino Ferreira, ISEP, Portugal
- ❖ Hossein Fotouhi, Mälardalen University, Sweden
- ❖ Voica Gavriliuț, Comcores, Denmark
- ❖ Carlos Gonçalves, Red Hat
- ❖ Maria Kihl, Lund University, Sweden
- ❖ Joanna Kosińska, AGH University of Science and Technology
- ❖ Josep Mangués-Bafalluy, CTTC, Spain
- ❖ Geoffrey Nelissen, TU/e, The Netherlands
- ❖ Augusto Neto, UFRGN, Brazil
- ❖ Flávio Silva, UFU, Brazil
- ❖ Luis Silva, Bosch-Ovar, Portugal
- ❖ Antonio de la Oliva, Universidad Carlos III de Madrid, Spain