



Call for Papers

Track 09 – Industrial Real-Time and Networked Embedded System, IoT Technologies

- **Focus** – Real-time systems bring significant challenges and opportunities in embedded computing techniques to speed up industrial and commercial services. The emergence of Internet-of-Things (IoT) – a smart high-level concept of progressing the world through connecting and integrating all things into a huge network – has also been improving the communication efficiency for these services. A networked embedded computing has thus gradually been drawing developers' attention to be widely applied in abundant applications. This track focuses on models, techniques, methods, analysis and applications that are related to real-time and embedded computing and IoT based networking and technologies.

■ Topics

- Innovations in real-time capable networks
- Software Defined Networks (SDN) and Time-Sensitive Networking (TSN)
- Deterministic IoT technologies
- Hard Real-time SOA and RESTful industrial communication
- Real-time issues of distributed control in industrial cyber-physical systems
- Industrial IoT protocols (OPC UA, DDS, MQTT, AMQP, COAP, IEEE 11073 SDC, ...)
- Real-time analysis of location-based systems
- Verification and validation of distributed embedded applications
- Security verification of real-time (operating) systems and industrial automation systems
- Factors influencing latencies in emerging industrial communication systems
- Combining legacy real-time networks (e.g. CAN) with emerging real-time IP-based networks (TSN)
- Blockchain and distributed ledger technologies in networked embedded systems and IoT applications
- Deep learning technologies for distributed real-time embedded systems
- Performance analysis (of distributed real-time systems)
- Emerging real-time operating systems and real-time hypervisors
- Hard real-time services in edge and cloud
- Timing and resource analysis of (distributed) resource-constrained AI
- 5G for industrial applications and Wireless TSN
- Modeling and digital twins for network simulation

- **Aim & Scope** – IEEE INDIN is a flagship conference of IEEE Industrial Electronics Society providing a forum for presentation and discussion of the state-of-art and future perspectives of industrial information technologies.

■ Solicited Papers

- Regular research papers reporting on new developments in technological sciences
- Special Session papers to stimulate in-depth discussions in special areas relevant to the conference theme
- Industry and development papers reporting on actual developments of technology, products, systems and solutions
- Tutorials

Track Chairs

Gaetano Patti, University of Catania, Italy

Axel Sikora, Offenburg University of Applied Sciences, Germany

Alin Tisan, Royal Holloway University of London, UK

Track Program Committee

Achim Rettberg, Hamm-Lippstadt, University of Applied Sciences, Germany
Alexander Viehl, FZI Research Center for Information Technology, Germany

Andreas Kassler, Karlsruher Univ. Germany
Dave Cavalcanti, Intel Corp. USA
Florian Frick, Stuttgart Univ. Germany
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Lucia Lo Bello, Univ. of Catania, Italy
Marisol García Valls, Universidad Politécnica de Valencia, Spain

Mohammad Ashjaei, Mälardalen University, Sweden

Peter Danielis, Univ. of Rostock, Germany
Roman Obermaier, Univ. of Siegen, Germany

Rafia Inam, Ericsson AB, Royal Institute of Technology, Sweden

Shen Chao, Carleton University, Canada
Yang Feisheng, Northwestern Polytechnical University, China

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Important Dates

Submission of papers (regular, special sessions)

March, 01, 2023 – March, 31, 2023

Notification of acceptance

April, 15, 2023 – May, 15, 2023

Submission of final manuscript

June, 05, 2023