CONTROLO'2022

15TH APCA INTERNATIONAL CONFERENCE ON AUTOMATIC CONTROL AND SOFT COMPUTING

JULY 6-8, 2022, CAPARICA, LISBON REGION, PORTUGAL

Special Session on
"Big-data and Advanced Analytics in Critical Infrastructures' Applications"

Organized by

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Call for Papers

Brief description of the theme. Modern Critical Infrastructures (CI) – in sectors such as energy, water, manufacturing, transportation, healthcare, public safety, or others – are increasingly turning into distributed, complex Cyber-Physical Systems. To an effective, secure, and sustainable monitoring and management of Critical Infrastructures systems, it is required to employ advanced digital technologies with a special emphasis on big-data techniques and related technologies. This includes aspects such as big-data analytics, advanced data analytics, AI/ML techniques, distributed digital twins, advanced visualisation technologies, and much more. This special session invites submissions that present innovative ideas, proof of concepts, use cases, and results from a variety of topics relevant to Big-data and Advanced Analytics in Critical Infrastructures.

Topics of interest include, but are not limited to:

- Big-data, advanced/extreme data analytics applications in critical infrastructures' systems
- Distributed sensors systems for data collection in critical infrastructures' systems
- Artificial Intelligence, Machine learning, advanced statistics in critical infrastructures' applications
- Industrial IoT, Edge IoT, Edge AI, Far-Edge, Cloud in critical infrastructures' systems
- Advanced critical infrastructures' systems' modelling using data analytics
- Data in supervision and control applications for critical infrastructures' systems
- Distributed, Complex Cyber-Physical Systems (CPS) in critical infrastructures
- Digital twins, Hybrid twins, Cognitive digital twins in critical infrastructures' systems
- Big-data classification and clustering in critical infrastructures' systems
- Real-time data infrastructures for critical infrastructures' systems'
- Extreme visualisation approaches for critical infrastructures' systems' data
- Industry 4.0
- Digital transformation in critical infrastructures' systems
- Industrial Metaverse for critical infrastructures' applications