

International Workshop on the Cloud-Edge-IoT Continuum for Hyper-Distributed Applications and Services (CEICO)



Co-located with the 16th IEEE/ACM International Conference on Utility and Cloud Computing (UCC 2023), 4-7 December, Taormina, Italy

Scope of the workshop

The advent of the Cloud-Edge-IoT computing paradigm is revolutionizing the provisioning of hyper-distributed applications leveraging ecosystems of “smart” and highly heterogeneous Internet of Things (IoT) devices (e.g., sensors, robots, cameras). Unprecedented services are expected to be provided based on the pervasive interaction with and between smart things in a Cloud-Edge-IoT continuum. Robotics, healthcare, logistics, and energy management, among others, are use-case domains that will strongly benefit from this paradigm. However, an inherent need for novel architectural approaches, able to support by design a full convergence and integration among existing and evolving IoT and edge computing technologies into the continuum is strongly felt. Efficient management of extremely heterogeneous Cloud, Edge and IoT resources is a high concern in real-world implementations. In parallel, data processing and analytics are foreseen to rapidly shift towards edge computing facilities to foster data locality. To efficiently manage data management and analysis over such distributed environments, novel hyper-distributed applications are even more embracing microservices-based and cloud-native computing technologies, while distributed computing principles are deeply evolving their lifecycle orchestration paradigms to efficiently exploit resources in the continuum. The aim of this workshop is to offer researchers and practitioners from academia and industry, in the related areas of Cloud, Edge, Fog, Big Data, Grid, and Cluster Computing communities, a venue on the recent advances in ecosystems and environments based on the Cloud-Edge-IoT continuum paradigm. Submitted papers are expected to focus on the recent advances in theory, application, standardization, and implementation in the Cloud-Edge-IoT continuum domain.

Topics of interest are (but not limited to)

- Clouds federation and interoperability
- Cloud-Edge-IoT programming
- Cloud-Edge-IoT computing standards
- Cloud-Edge-IoT Orchestration and Automation
- Cloud and Fog robotics in the continuum
- Energy efficiency in Cloud-Edge-IoT
- Cloud-Edge-IoT middleware
- AI-assisted solutions for the Cloud continuum
- Federated learning and AI models in the continuum
- Cloud-Edge-IoT security
- Semantic models for the Cloud-Edge-IoT continuum
- Intent-based orchestration
- Time-Sensitive Networking (TSN) for the continuum
- SDN and NFV in beyond 5G networks
- Self-organising and self-healing solutions for 5G and 6G networks
- Testbed development and real-world deployment in the continuum

Important Dates

Paper submission: (**Deadline extended**) September 20, 2023

Notification to authors: October 15, 2023 (updated)

Camera ready submission: October 31, 2023 (updated)

Submission Guidelines

Paper submission is **double-blind** electronic only. Submitted manuscripts must represent original unpublished research that is not currently under review for any other conference or journal. Manuscripts are submitted in PDF format and may not exceed **6 ACM-formatted double-column pages** (+2 for

additional fee), including figures, tables, and references. All manuscripts will be reviewed and judged on correctness, originality, technical strength, rigour in analysis, quality of results, quality of presentation, and interest and relevance to the workshop attendees. At least one author of each accepted paper must attend the workshop and must register for a full (non-student, non-workshop) rate. All other workshop participants must register under the UCC 2023 workshop day registration fee or the conference fee. The conference proceedings will be published by the ACM and made available online via the IEEE Xplore Digital Library and ACM Digital Library. Authors are invited to submit papers electronically through the following link <https://cmt3.research.microsoft.com/CEICO2023>.

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