



10<sup>th</sup> International Conference on Control,  
Decision and Information Technologies

July 01- 04, 2024

Valletta, Malta

## CALL FOR PAPERS - SPECIAL SESSION

# “Efficient Training Paradigms for Edge Devices: Balancing Memory and Time Constraints”

for **CODIT 2024**

**July 01-04, 2023** ▪ Valletta, Malta

### Session Co-Chairs:

Dr. David Moloney, Ubotica Technologies, Ireland - (email: [david.moloney@ubotica.com](mailto:david.moloney@ubotica.com))

Dr. Imen Jegham, University of Sousse, Tunisia - (email: [imen.Jegham@isitc.u-sousse.tn](mailto:imen.Jegham@isitc.u-sousse.tn))

Dr. Jinen Daghri, University of Tunis, Tunisia - (email: [jinen.daghri@ubotica.com](mailto:jinen.daghri@ubotica.com))

Mrs. Basma Guesmi, Ubotica Technologies, Ireland - (email: [besma.guesmi@ubotica.com](mailto:besma.guesmi@ubotica.com))

### Session description:

With the advancement of technologies and the huge integration of Artificial Intelligence in many domain applications, the world has witnessed a revolutionary stage. In this era of intelligent systems, the ability to conduct on-device training is pivotal. It not only aligns with the growing demand for real-time, responsive AI but also addresses pressing concerns related to data privacy and the limitations of centralized computing. This special session aims to delve into the forefront of efficient training paradigms for edge devices, addressing challenges posed by memory and time constraints. It deals with the problem of optimizing training methodologies in the era of Edge AI. As the world embraces artificial intelligence across diverse applications, the need for efficient computing on edge devices has become paramount.

The goal is to provide a comprehensive understanding of the latest developments in on-device training, resource optimization strategies, and insights into overcoming challenges posed by memory and time constraints in edge computing.

The topics of interest include, but are not limited to:

- Lightweight model architectures
- Memory-efficient training algorithms
- Real-world applications of on-device training
- Edge computing and resource optimization techniques
- Federated learning for edge devices
- Edge-to-cloud collaboration in training models
- Cross-device model transfer and adaptation
- Security and privacy considerations in on-device training
- Edge-native model interpretability and explainability
- Novel hardware designs for memory-constrained edge devices
- Edge-based transfer learning and domain adaptation

---

## SUBMISSION

Papers must be submitted electronically for peer review through PaperCept by **February 03, 2024**:  
<http://controls.paperecept.net/conferences/scripts/start.pl>.

In PaperCept, click on the **CoDIT 2024** link “Submit a Contribution to CoDIT 2024” and follow the steps.

**IMPORTANT:** All papers must be written in English and should describe original work. The length of the paper is limited to a maximum of 6 pages (in the standard IEEE conference double column format).

## DEADLINES

February 03, 2024: deadline for paper submission

April 14, 2024: notification of acceptance/reject

May 10, 2024: deadline for final paper and registration