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**Local Arrangement Chair**

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**Marwa Afnouch**, CES Lab, Sfax, Tunisia

**Registration:**

**Student/Researcher: 150 TND HT (179.5 TTC)**  
**Industrial: 250 TND HT(297.5 TTC)**

Order form in the name of: **Tunisian Association  
of Scientific Research (ATRS)**

**Registration Deadline: 27/05/2023**

**Link of Registration :**



For more details please visit our website on:

<http://ceslab.org/TWESD2023/>

Contact : [twesd2023@gmail.com](mailto:twesd2023@gmail.com)

**Trainers :**

**Mariem Turki**, ISIMG, Tunisia  
**Mohamed Dhouioui**, CES lab, Tunisia  
**Olfa Gaddour**, ENIS, Sfax, Tunisia

**June 17, 2023**

**El-Mouradi Hotel  
Mahdia, Tunisia**

**CALL FOR TRAINING  
Embedded Artificial Intelligence**

The main objective of this training is to familiarize participants with the embedding concept of machine learning algorithms, in particular deep learning models on edge devices. This training includes software programming as well as Hardware implementation on an embedded platform. The training will be conducted over three sessions with hands on lab.

**Objectives:**

- Learn how to train and convert machine learning models to TensorFlow lite format
- Master how to apply transfer learning techniques on TensorFlow lite models.
- Empower participants to develop and implement their own embedded AI projects

**Detailed Program**

- **Session 1 (8:30-10:30): Design and build models**
  - Data preparation
  - Model building (TF/Keras)
  - Model training (custom dataset)
  - Model conversion (TF lite)
  - Comparative evaluation (Quantization/ Pruning/...etc)
- **Session 2 (10:45-12:45): Transfer learning**
  - Data preparation
  - Pre-trained model retrieval
  - Transfer learning
- **Session 3 (14:00-16:30): RaspberryPi implementation**
  - Setting up a development environment on the RaspberryPi.
  - TF lite model implementation
  - Performance evaluation

