

## **NUMTA 2023 Special Session on**

### **Application of computational systems, AI, machine learning and classification methods in engineering**

#### **Special Session Organizers:**

- Patrizia Piro – University of Calabria, Italy, email: patrizia.piro (at) unical.it;
- Michele Turco – University of Calabria, Italy, email: michele.turco (at) unical.it;
- Behrouz Pirouz – University of Calabria, Italy, email: behrouz.pirouz (at) unical.it;
- Stefania Anna Palermo – University of Calabria, email: stefania.palermo (at) unical.it

#### **Goals of the Session:**

- Improvement and optimization of design;
- Acceleration in innovative design;
- Shorten the time of processes;
- Reduction of cost and failure risk in engineering projects.

#### **Objectives of the Session:**

- The role of computational systems and machine learning (AI, CFD, etc.) in engineering projects (water, construction, energy, mechanics, etc.);
- The role of classification methods (Single objective models/multi-objective models) in decreasing impacts of natural phenomena;
- Using multidisciplinary design to optimize projects efficiency;
- Using computational fluid dynamics (CFD) to optimize and improve engineering design.