## **CALL FOR PAPERS - SPECIAL SESSION**

# "Artificial Intelligence-based models and methods for smart logistics, manufacturing and healthcare"

for CODIT 2025

July 15-18, 2025 • Split, Croatia

### **Session Co-Chairs:**

Maria Pia Fanti, Polytechnic University of Bari, Italy - (email: <a href="mariapia.fanti@poliba.it">mariapia.fanti@poliba.it</a>)
Agostino Marcello Mangini, Polytechnic University of Bari, Italy - (email: agostinomarcello.mangini@poliba.it)

Michele Roccotelli, Polytechnic University of Bari, Italy - (email: <a href="michele.roccotelli@poliba.it">michele.roccotelli@poliba.it</a>)
Mengchu Zhou, New Jersey Institute of Technology, USA (email: zhou@njit.edu)

#### **Session description:**

This special session deals with the problem of enhancing the control and management of smart logistics, manufacturing and healthcare systems by using Artificial Intelligence (AI). All is the current trend in different research fields and its applicability must be further investigated in several engineering sectors to ensure safe and accurate decision processes.

The goal of this session is to present Al-based approaches and models that can improve the efficiency and safety of logistics and manufacturing operations and support the human decisions and diagnosis in healthcare.

Smart logistics involves the optimization of the flow of goods and services. It can be enhanced by AI technologies to improve efficiency, reduce costs, and enhance customer satisfaction. Route optimization, supply chain optimization, demand forecasting, predictive maintenance are some of the issues that can be addressed more efficiently via AI.

All for smart manufacturing focuses on improving productivity, quality, and flexibility in the production process. The integration of Al is part of the broader concept of Industry 4.0/5.0, where automation, data exchange, and smart systems play a key role. All can be used for supply chain management, process optimization, predictive quality control, and Digital Twins design.

In healthcare, AI can be used to improve diagnosis, personalize treatments, manage healthcare operations and predict patient health outcomes. In this context, AI-based methods can allow for enhancing medical imaging analysis, clinical decision support, personalized medicine, robotic surgery, virtual healthcare assistants, etc.

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

• Route optimization

- Supply chain optimization
- Electric and autonomous fleet management
- Demand forecasting in logistics
- Process optimization
- Predictive maintenance
- Automation in manufacturing and logistics
- Digital Twins in manufacturing and logistics
- Medical diagnosis
- Medical imaging analysis
- Clinical decision support
- Virtual healthcare assistance

#### **SUBMISSION**

Papers must be submitted electronically for peer review through PaperCept by February 07, 2025: <a href="http://controls.papercept.net/conferences/scripts/start.pl">http://controls.papercept.net/conferences/scripts/start.pl</a>. In PaperCept, click on the CoDIT 2025 link "Submit a Contribution to CoDIT 2025" 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 07, 2025: deadline for paper submission April 27, 2025: notification of acceptance/reject May 17, 2025: deadline for final paper and registration