

6th International Conference in Electronic Engineering & Information Technology

June 4-6, 2025

Chania - Crete, Greece

<https://eeite.hmu.gr>

Technical co-sponsored by
IEEE Greece Section



Welcome to EEITE 2025



Special session: “**Recent advancements in robotic perception, learning, interaction, communication and control technologies**”

Scope

Over the recent years the tremendous advancements in the software, hardware and communication scientific fields have resulted into transformative effect in robotics technology, pushing the levels of the achieved outcomes to new frontiers. In particular, recent breakthroughs in sensors, artificial intelligence, material science and human-robot collaboration (among others) have enhanced nowadays robotic platforms with unprecedented capabilities to accurately perceive their surroundings, to navigate in unstructured environments, to perform tasks with unprecedented precision/autonomy, to realize advanced/complex decision-making, to reason about their actions and to interact with humans in a multi-modal/sophisticated way. In parallel, developments in networking technologies and edge computing enable/facilitate real-time processing and decision-making, by leveraging distributed computational resources, reducing latency, and enhancing robotic systems’ responsiveness and scalability.

The goal of this special session is to showcase the latest advancements and innovations in the robotics field, as well as the enabling technologies that have resulted in this remarkable progress. Specifically, this session aims to investigate the latest developments in robotic perception, learning, interaction, communication and control technologies, as well as associated research areas.

The special session is supported by the EU RnD projects **TRIFFID, TORNADO, SOPRANO, NANCY, TALON and INTACT**.

Special session format

The session will consist of research work/paper presentations, followed by a roundtable discussion.

Expected contributions

Papers to be presented in the special session cover topics related, but not limited, to:

- (Dynamic/adaptive) robot task/mission planning
- Autonomous robot navigation
- (Multi-)robot manipulation
- Safety monitoring
- Fault recovery
- Robot communications
- Robot visual perception
- Non-visual data analysis
- Information fusion
- Human-robot interaction schemes
- Human behavior analysis and anticipation
- Human factors analysis for efficient interaction with humans
- Socio-technical robot integration
- Middleware development
- (Dynamic) semantic SLAM
- Robot-to-cloud continuum
- Robot Learning-from-Demonstration
- Sound analysis and verbal communication
- Human-agent teaming/collaboration
- Edge computing
- Cybersecurity risks mitigation

Concept note papers of relevant RnD projects are also applicable.

Paper format and submission guidelines

<https://eeite.hmu.gr/registration-submission/>

Important dates

Paper submission deadline: February 9, 2025 (**provisional**)

Notification of acceptance: March 30, 2025

Camera-ready submission: May 4, 2025

Organizing committee

Ass. Prof. Evangelos Markakis, Hellenic Mediterranean University, Greece

Ass. Prof. Angel Santamaria Navarro, Universitat Politècnica de Catalunya, Spain

Dr. AndreA Orlandini, National Research Council of Italy, Italy

Dr. George Margetis, Foundation for Research and Technology – Hellas, Greece

Dr. Spyros Evangelatos, Netcompany-Intrasoft, Greece

Dr. George Bravos, ITML, Greece

Prof. Panagiotis Sarigiannidis, University of Western Macedonia, Greece

Prof. Iraklis Varlamis, Harokopio University of Athens, Greece

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