

# 22<sup>nd</sup> International Conference on Networking, Sensing and Control

October 1-3, 2025, Oulu, Finland



**Sponsors: Biomimetics and Intelligent Systems Group (BISG), University of Oulu, Jishou University, China**  
**Technical Co-sponsors: IEEE SMC Society, IEEE Finland Section**

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## Theme: Autonomous Intelligent Systems

The 2025 IEEE International Conference on Networking, Sensing and Control will be held in Oulu, a multi-cultural metropolis with both modern and traditional features in North Finland. It will feature plenary speeches, panel sessions, tutorials, workshops, interactive sessions, and invited/special sessions. Contributions are expected from academia, industry, and management agencies. **The conference theme is: Autonomous Intelligent Systems.**

Technical topics of the conference include but are not limited to:

Adaptive systems	Heterogeneous wireless networks	Digital health innovation
Autonomous agents and multi-agent	Human/computer interface	Novel Sensors and Bioinformatics
Automobile control and sensor systems	Imbalanced classification	Medical Sensing
Big Data analytics	Intelligent vehicle highway systems	Resilient control systems
Causal learning & Interpretability	Internet of things	Reinforcement Learning
Collaborative systems	Large-scale global optimization	Sensor design, integration and fusion
Complex system management	Medical and patient monitoring	Sensor networks
Continual learning	Wireless Technologies and Medical Devices	Smart car and vehicle control
Control of networks	Micro/nano, electro-mechanical sensor systems	Smart and green building
Cyber-physical systems	Multi-network integration	Smart grids
Discrete event systems	Multi-objective optimization	Smart civil aviation and aerospace
Distributed intelligent systems	Multi-task optimization	Smart vision and image processing
Digital twin	Model predictive control	Social networking
Edge computing	Network security	Soft sensing
Emergency planning	Network-based computing systems	Intelligent healthcare
Fuzzy and neural systems	Networked control systems	Swarm intelligence
Federated Learning	Objective detection	Transfer learning
Heterogeneity and decision making	Quantum cybernetics	Wearable computing

## Call for Special Sessions/ Workshop

Interested attendees are encouraged to propose special sessions/workshops, each of which consists of five papers providing a focused discussion of new or innovative topics. Each proposal must include the session/workshop title, description, organizers and affiliations. Proposals should be sent to the workshop chairs or special session chairs with the following emails.

## Web Site and Contact Email for Inquires

**Web:** <https://www.oulu.fi/icnsc2025/>

**Email:** [juha.roning@oulu.fi](mailto:juha.roning@oulu.fi)

Special Session Chair email: [ameer-hamz.khan@polyu.edu.hk](mailto:ameer-hamz.khan@polyu.edu.hk)

Special session papers will undergo the same intense review process and submission is not a guarantee for acceptance. Special session papers must be clearly indicated when submitted with a copy sent to the designated special session organizer.

## Paper Submission

Complete manuscripts must be electronically submitted through the conference website

<https://easychair.org/conferences?conf=icnsc2025>

Submitted manuscripts should be within six (6) pages in IEEE two-column format, including figures, tables, and references. Please use the templates at [Manuscript Templates for IEEE Conference Proceedings](#) from the conference website to prepare your paper. All submissions MUST be in PDF format.

## Important Dates

May 15, 2025	Workshop and Special session proposals deadline
June 1, 2025	Full paper submission due
June 30, 2025	Paper submission due (only for special session)
August 15, 2025	Notification of acceptance
September 15, 2025	Camera-ready copy due
October 1-3, 2025	Conference