CALL FOR Special Sessions

16TH IFAC SYMPOSIUM ON ANALYSIS, DESIGN AND EVALUATION OF HUMAN-MACHINE SYSTEMS

IFAC HMS 2025

Beijing, China
November 18th to 21st

Special Sessions Aim

Special Sessions aim to provide a platform for in-depth discussions on cutting-edge research and interdisciplinary collaboration in human-machine systems. Researchers can showcase their latest findings, foster academia-industry interactions, and drive technological innovation. These sessions enrich the conference program and offer opportunities to engage with leading experts, addressing current challenges and exploring future directions.

Highlights of IFAC HMS 2025

- **Keynote Speeches:** Delivered by renowned experts in the field.
- **Industry Participation:** Featuring leading companies such as Baidu, Huawei, and Xiaomi.
- **Technical Workshops:** Focused sessions on topics like brain-computer interfaces and healthcare robotics.
- **IFAC Young Author Award:** Encouraging young researchers to submit high-quality papers.

Potential Scopes

S1. Human-AI Collaboration and Teaming
- Trust and transparency in human-AI decision-making;
- Adaptive interfaces for human-AI interaction;
- Cognitive load and mental models in AI-assisted tasks;

S2. Human-Robot Partnership and Teaming
- Collaborative robotics (Cobots) in industrial and service settings;
- Emotional intelligence in human-robot interaction;
- Shared autonomy and control in human-robot teams;

S3. Decision Making and Cognitive Processes in AI Systems
- Explainable AI (XAI) for human-centric decision support;
- Cognitive modeling of human-AI collaborative workflows;
- Bias detection and mitigation in AI-driven decision systems;

S4. AI-Assisted Human Performance Enhancement
- AI for Cognitive Augmentation and Decision Support;
- Human-Machine Synergy in Skill Development and Training;
- Adaptive Systems for Real-Time Performance Optimization;

S5. Multi-Agent Systems for Human-AI Collaboration
- Collaborative Multi-Agent Systems for Complex Task Solutions;
- Coordination and Communication Protocols for Human-AI Teams;
- Distributed Problem Solving in Human-AI Teams;

S6. Design and Evaluation Methodologies for AI and Robotics
- User-centered design principles for AI and robotic systems;
- Usability testing and evaluation of human-AI interfaces;
- Metrics for assessing human-robot team effectiveness;

Submission Guidelines

Proposals for Special Sessions should include:
1. Title and brief description (max. 500 words).
2. Organizer details: Name, affiliation, and contact information.
3. Expected number of papers: Typically 4-6 papers per session.
4. List of potential contributors (if available).

Submission Deadline: June 10, 2025
Submission Method: Via the conference website or email to
yinzhong@usst.edu.cn

Contact Information

Session Secretariat:
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Conference Website:
https://conferences.ifac-control.org/hms2025