



# PRO-VE 2025

26th IFIP/SOCOLNET Working Conference on Virtual Enterprises  
Hybrid Human-AI Collaborative Networks

## PRO-VE 2025 Special Session

### Multi-Agent Systems for Hybrid Human-AI Collaboration in Industry

#### Scope

While Multi-Agent Systems are a decades-old field of research, new interest was generated with the advent of LLMs and LLM-based agents. By using LLMs as the foundation of agents, many of its initially projected properties are now viable, including autonomy, proactivity, reasoning, and planning, or social abilities. However, these increased abilities also raise challenges in the interaction between agents and humans, including balancing usefulness vs. intrusiveness vs. information/interaction overload; ensuring transparency, human oversight, and control; ensuring factual accuracy and grounded reasoning processes; promoting collaboration and augmentation; or efficiently leveraging human latent knowledge. In industrial application domains, where collaboration is a core pillar of innovation, these challenges are made even more significant by the confluence of business, technical, and social considerations.

This special session will explore the potential of agent-based approaches to enhance collaboration in hybrid human-AI networks, through a realistic lens in which these and other challenges are addressed in the industrial context. The session aims to bring together researchers and practitioners from relevant fields, to discuss novel methods for leveraging agentic models to develop distributed, intelligent frameworks for seamless human-AI interactions.

We invite contributions that present theoretical advancements, empirical studies, or real-world applications, demonstrating how multi-agent systems can transform collaborative networks and bridge the gap between human expertise and AI capabilities. Interdisciplinary approaches drawing from computer science, social sciences, and industrial engineering are highly encouraged.

#### Session Organizers

- Davide Rua Carneiro, INESC TEC, [davide.r.carneiro@inesctec.pt](mailto:davide.r.carneiro@inesctec.pt)
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#### Topics/ Keywords

- Collaboration in Multi-agent Systems
- Sociotechnical and interaction design for MAS
- Large Language Models and collaboration
- Hybrid Human-AI Collaboration
- Reasoning and Planning in MAS
- Ethics, Transparency, and Human Oversight
- Distributed Intelligence Frameworks
- Information and knowledge management in Collaborative AI Systems
- Decision-making in Hybrid Networks
- Industrial applications

#### Submission procedure

Special sessions are included in the main Conference and follow the same reviewing process.

1 Mar 2025 - Special session proposal  
11 Apr 2025 - Abstract submission (optional)  
9 May 2025 - Full paper submission  
20 Jun 2025 - Results notification  
4 Jul 2025 - Camera-ready version  
27-29 October, 2025 - Conference

Acceptance of papers is based on the **full paper** (up to **16** pages). Each paper will be evaluated by three members of the International Program Committee.

When submitting on the web site, you have to indicate the name of the special session.

Submission procedure via EasyChair available on: <http://www.pro-ve.org>, with copy by email to the chairs of the special session.