

Preface

The **Austrian Robotics Workshop (ARW)** is Austria's central annual platform for exchanging ideas and presenting innovations in the field of robotics. Since its beginnings in 2006, ARW has evolved into a vibrant event that connects researchers, students, professionals, and industry representatives from across Austria and beyond. It fosters collaboration, sparks new ideas, and showcases the latest developments in robotic systems, intelligent automation, and human-machine interaction.

The **2025 edition of ARW** is hosted by the **Department of Information Technologies and Digitalisation at Salzburg University of Applied Sciences**. Nested in a vibrant region of innovative robotics and automation industry, this year's workshop brings together a broad and dynamic community to discuss current research, share experiences, and explore future trends.

This year's **call for papers** covered a wide range of topics in robotics and automation, including:

- **Mechatronic Design, Kinematics & Dynamics, and Embedded Systems**
- **Control and Machine Learning, Planning, Reasoning & AI**
- **Robot Perception, Computer Vision, Navigation & Manipulation**
- **Cybersecurity, Safety & Resilience, and Systems Engineering**
- **Human-Robot Interaction, Collaborative Robotics, Ethics & Sustainability**
- **Field Robotics, UAVs, UGVs, and Agricultural/Rescue Robots**
- and novel **Robotic Applications in Real-World Environments**

The accepted contributions reflect this diversity, ranging from Sim2Real transfer for grasp verification and low-cost real-time communication, to drone-based perception in agriculture, autonomous navigation, and inclusive workstations for industrial collaboration. A dedicated student session provides young researchers with a platform to present early ideas and engage in interdisciplinary discussions with peers and experts.

The **Austrian Robotics Workshop is organized under the auspices of GMAR** – Gesellschaft für Mess-, Automatisierungs- und Robotertechnik – and is supported by the **Austrian Electrotechnical Association (OVE)** and the **Austrian Research Promotion Agency (FFG)**. Their contributions and continuous support are instrumental in ensuring the ongoing success and development of ARW.

We sincerely thank all authors, reviewers, speakers, and attendees for their valuable input and engagement. Our special thanks go to the local organizing committee at FH Salzburg and to all partners who have helped shape this year's event.

We wish all participants an inspiring workshop, meaningful discussions, and a wonderful stay in Salzburg!

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