



## Call for Papers

ERF 2025 | European Robotics Forum

### »BOOSTING THE SYNERGIES BETWEEN ROBOTICS AND AI FOR A STRONGER EUROPE«

On behalf of the ERF Programme Committee and the ERF Scientific Board, we invite you to contribute to the 16<sup>th</sup> edition of the European Robotics Forum, to be held from **25-27 March 2025** in Stuttgart, Germany.

#### Introduction

The European Robotics Forum is the most influential meeting of the robotics community in Europe, spanning academia, industry and society. It aims to foster communication and knowledge transfer and covers technology, application and impact of robotics. The ERF provides a podium to discuss recent and future advances in robotics in context of applications, societal impact, ethical and legal considerations. Robotics includes aspects such as mechatronics, control, perception, and cognition, as well as current themes like AI and data in relation to robotics.

Research on the applications of Robotics and AI to the industrial scenario is leading to a very fast-growing innovation in Europe. Thus, it is more and more important to foster the discussion between researchers and industry to create a synergy that will drive the future of research and industrial innovation.

At the ERF 2024 in Rimini, Italy, an industrial scientific track for strengthening the scientific component of ERF was introduced. Thanks to the success of the scientific track, it will be continued at the ERF 2025.

The scientific track is composed of peer-reviewed papers, which will subsequently be published in a Springer book. To foster the discussion between researcher and industry, the contributions of the scientific track will be presented in an “oral” or a “pitch and poster” format, depending on the content of the paper.



### Subject Areas of the Scientific Track

The scientific track has two subject areas: Robotics subject area and AI for Robotics subject area.

**Robotics Subject Area:** This subject area focuses on classical robotics topics, including but not limited to:

- Autonomous navigation
- Robotic manipulation and control
- Sensor integration and perception
- Mobile robotics and navigation
- Human-robot interaction
- Collaborative Robotics
- Robotics in manufacturing and automation
- Robot kinematics and dynamics
- Mechatronics
- Soft robotics
- Safety and standardization
- Application domains like industry and manufacturing, agriculture and food, maintenance and inspection, healthcare, logistics and transportation, just to name a few.

**AI for Robotics Subject Area:** This subject area addresses AI solutions specifically designed for robotics applications, covering areas such as:

- Machine learning and deep learning for robotics
- Foundation models and generative AI for robotics
- Autonomous decision making and planning
- Computer vision and image processing
- Natural language processing for robotics
- Reinforcement learning and adaptive systems
- AI-driven robot collaboration and coordination
- Dependable and safe AI systems
- Hybrid and informed AI for robotics



### **Paper Preparation**

We invite you to submit contributions (maximum 6 pages including references, single-column, in PDF format). Contributions must be assigned to one subject area during submission. Please be aware that the ERF Scientific Board reserves the right to assign accepted contributions to another subject area if this seems to fit better content-wise.

Contributions will be peer-reviewed in single-blind fashion. Accepted contributions will be published in the indexed [Springer Proceedings in Advanced Robotics \(SPAR\)](#) with Series Editors: Bruno Siciliano, Oussama Khatib.

Please prepare your contribution in standard Springer Proceedings in Advanced Robotics (SPAR) format, which is available at this [link](#) with the Latex and Word templates. The authors' guidelines for the preparation of contributions come with templates.

### **Submission and Important Dates**

- Contributions for the Scientific Track can be submitted here (registration on Microsoft CMT necessary):  
<https://cmt3.research.microsoft.com/ERF2025>
- Deadline for contribution submission: 1 November 2024 (1:11:59 M CET)
- Notification of Acceptance: 15 December 2024
- Final Submission: 15 January 2025

### **We are looking forward to your contribution to the ERF 2025**

Dr. Werner Kraus – General Chair, Fraunhofer IPA, Germany

Rebecca Reisch – General Co-Chair, Cyber Valley, Germany

Dr. Matthias Peissner – General Co-Chair, Fraunhofer IAO, Germany

Prof. Dr. Alexander Verl – Scientific Track Chair, University of Stuttgart, Germany

Prof. Dr. Marco Huber – Scientific Track Chair, University of Stuttgart & Fraunhofer IPA, Germany