

52nd International Symposium on Robotics – ISR 2020 | June 17–18, 2020

Welcome address by the Chair of the ISR 2020

Robotics in the dawning era of digitalization and artificial intelligence! After two years, the 52nd International Symposium on Robotics – ISR 2020 will be held again in Munich, Germany (17–18 June, 2020). This international conference is jointly organized by the Mechanical Engineering Industry Association (VDMA) and the Information Technology Society (ITG) within VDE. The ISR 2020 is organized as customary parallel to the automatica, the leading exhibition for smart automation and robotics. With almost 900 exhibitors and more than 45,000 visitors from all over the world, automatica established itself as the leading marketplace for automated production. As the fair will start one day before ISR 2020, there will be enough possibility and time for all conference participants to visit automatica.

In two conference tracks and a poster session over two days, the ISR 2020 will offer an insight into the latest state-of-the-art robot technologies to participants from both industry and research. Sessions will be held on relevant topics such as Modeling, Planning and Control, as well as Components and Technologies. Developments from the area of Robotics in Production and Industrial Robots will also be addressed, as well as Service and Mobile Robotics. Additionally, we are planning sessions on Robotics in New Markets & Applications, as well as Human-robot-collaboration / Future of Work. And additional Business Track will offer guest speakers from the industry the opportunity to present their current products and developments. The special session for the IERA Award finalists will round up the conference program.

Presentations of the final nominees for the Joseph F. Engelberger Award and the IERA Award will be the highlight of the ISR 2020 Gala Banquet on the evening of June 17th.

We cordially invite researchers and experts from the field of robotics to submit their abstracts, as we are confident that we can provide an exciting conference program in June 2020.



**We are looking forward to receiving
your abstracts!**

Deadline for abstracts: January 13, 2020

**Univ.-Prof. Dr.-Ing.
Dr. h.c. mult. Alexander Verl**

Chair of ISR 2020 on behalf of International
Federation of Robotics (IFR)

The Place to be for Robotics

The 52nd International Symposium on Robotics (ISR 2020) by IFR (International Federation of Robotics) will take place at Messe München Entrance East, Munich, Germany from June 17–18, 2020. The conference is organized in conjunction with automatica, the leading exhibition for smart automation and robotics.

automatica, June 16–19, 2020

automatica is the leading marketplace for automated production. It features the world's largest range of robotics, assembly solutions, machine vision systems and components. It gives companies from all branches of industry access to innovations, knowledge and trends with a great deal of business relevance. As the digital shift continues, automatica ensures market transparency and provides orientation with a clear objective: Being able to manufacture higher-quality products with greater efficiency.

Professional service robotics will again be presented with its own exhibition sector. Here, manufacturers of service robots, service robotics components and turnkey products as well as renowned research organizations will present marketable products and innovative developments.



ISR 2020 is organized by

- The Information Technology Society in the VDE (ITG)
- VDMA Robotics + Automation
- IFR International Federation of Robotics

Contact

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Venue

Messe Munich Fairground
Press Center East (East Entrance)
Messegelände
81829 München

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Abstract Submission

The official language of the ISR 2020 is English. Prospective authors can submit an extended abstract in pdf-format (two pages DIN A4). For extended abstract submission and more information please visit our website: www.isr-robotics.org

All submitted abstracts should include:

- Title of the paper
- Keywords
- Speaker's name
- Phone and e-mail

Important dates

- Deadline for abstracts: January 13, 2020
- Notification of acceptance: February 21, 2020
- Deadline for full paper: March 30, 2020

Symposium Topics

Contributions related, but not limited, to the following topics of interest are welcome.

Business Track

For the first time in 2020, an additional Business Track will offer speakers from the industry the opportunity to present their current products and developments. Paper submissions for the Business Track will be only upon invitation.

If you are interested in presenting in this session, please contact the Organizing Committee.

Possible Topics of Technical Track

1. Modeling, Planning and Control

- Mechanisms and kinematics
- Calibration and identification
- Theoretical foundations

2. Components and Technologies

- Vision / tactile / auditory sensors
- Visual serving and tracking
- Actuators and controllers
- Virtual Commissioning
- Robot end-effectors / robot infrastructure

3. Robotics in Production / Industrial Robots

- Assembly, handling, painting, machining, processing, logistics etc.
- Robot programming and languages
- Intelligent manufacturing systems
- New applications
- Matrix Production
- Digital Twin
- Open Source Software
- OPC UA

4. Robotics in Service / Mobile Robotics

- Home and office robotics
- Service robotics for professional services
- Rescue / surveillance / security / defence robotics
- Assistance / rehabilitation / medical robotics
- Educational and entertainment robotics
- Exploration / space / aerial / underwater robotics

5. Robotics in New Markets & Applications

- Food / pharmaceutical / biology robotics
- Micro / nano robotics
- Cognitive robotics / learning and adaptive systems / network and ubiquitous robotics
- Biologically inspired robotics: humanoids / biomimetics / legged robots
- Platform economy

6. Human-robot-collaboration / Future of work

- Standards / safety / profitability / ergonomics / socio-economics / industrial engineering
- Industrial papers related to applications and case studies are welcome
- Safe human-robot-collaboration

7. AI in Robotics – Robotic Applications that use AI

- Autonomous Robots, Machine Vision, Mobile Robotics
- Probabilistic Reasoning, Estimation, Decision Making & Planning