

4th Stuttgart ROS Meet-Up

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Agenda



- Introduction
- Short Welcome by [ROS-Industrial Consortium Europe](#)
- Presentation by by Jacob Perron ([Open Robotics](#)) on what's new in [Eloquent](#) and forthcoming in [Foxy](#) & discussion
- Ad-hoc Presentation or Lightning Talks by the audience
- Networking [Coffee & Code]

- Time 13:30 – 15:00

Fraunhofer IPA

Technology consultant and innovation driver since 1959



- One of the largest institutes of the Fraunhofer-Gesellschaft
- 70.8 mil EUR budget, 25.8 from industry
- More than 1,000 employees



New technical center "Gebäude D" in Stuttgart

Note: key figures for 2016; IPA Stuttgart including locations in Rostock, Mannheim, Bayreuth and Vienna



Application Center Industrie 4.0



Motion laboratory



BioPoLis



Biomanufacturing laboratory



Factory planning cockpit



Electroplating laboratory



Intervention room



Coating technology center



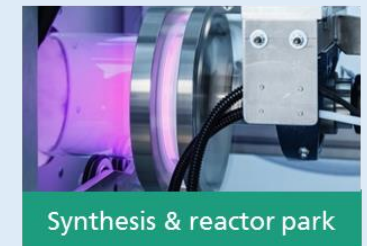
Production laboratory



Cleanrooms & cleanliness rooms



Robotics experimentation area



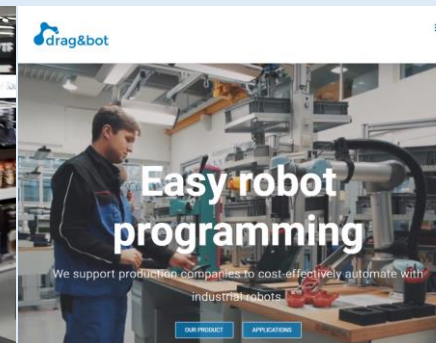
Synthesis & reactor park

Fraunhofer IPA

Robot and Assistive Systems



- Department (320 - Dr. Werner Kraus) 70 researcher in 7 groups, with focus on:
 - Handling and Intralogistics (321 – Richard Bormann)
 - Welding and machining (322 – Johannes Stoll)
 - Mobile Robotics (323 – Dr. Kai Pfeiffer)
 - Service Robotics (324 – Dr. Birgit Graf)
 - Robot Control (325 – Frank Nägele)
 - Software Eng. and System Int. (326 – Christoph Hellmann)
 - Assembly Automation (327 – Ramez Awad)
- And a number of spin-offs, established and in the making, incl. Mojin Robotics and drag&bot



www.mojin-robotics.de

www.dragandbot.com

Tech transfer in industrial robotics: ex. robot end-effector developments since 1973 (>150)



→ "Milestones of robotics"
exhibition at IPA



ROS-Industrial from 2012 - 2019



Relevant audience

- Piloting with SwRI the ROS-Industrial concept (2012)
- Managing ROS-I EU (~80 organizations worldwide)



rosindustrial.org

T-Systems

What is  ?

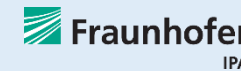
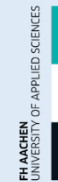
rosin-project.eu



- Horizon2020 EU-project ROSIN supports EU's strong role within ROS-Industrial
- Fostering Europe's expertise in advanced manufacturing
- **4 years, ~ 8 million EUR funding (01.01.2017 – 31.12.2020)**
 - Builds upon what exists; sustainable results after its completion
 - Key actions to make ROS **better**, business **friendlier**, more **accessible**
 - (Extra goal:) cluster other publicly funded activities using ROS like RobMoSys, OFERA, or SeRoNet



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Key actions to make ROS:



better

Software Quality

ROS-I best practices and tools: continuous integration, unit testing, code reviews

ROSIN further improves on them with code scanning, automated test generation, model-in-the-loop testing

[rosin-project.eu/
software-quality-assurance](https://rosin-project.eu/software-quality-assurance)

business friendlier

New components + path for exploitation

**3.5 Million € available to
third parties for
ROS-Industrial development**

Develop missing components
or improve existing ones

Commercial release template
(licensing, etc)

rosin-project.eu/ftps

more accessible

Education

Educate students:
summer schools

Train professionals:
ROS-I academy

Open Call to fund your
ROS education initiative

[rosin-project.eu/
education](https://rosin-project.eu/education)

3rd Stuttgart ROS Meet-Up

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