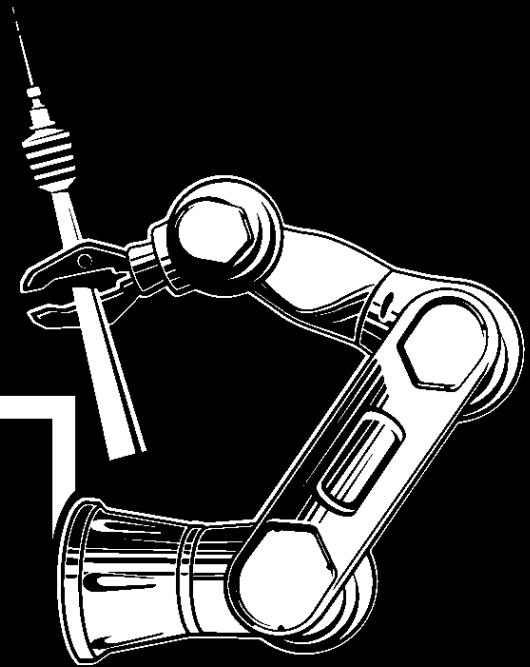# Virtual
ROS-I
CONFERENCE
2021

Agenda

Event Description:
With ROS 2 on the rise, the robot operating system is more industry-friendly than ever and thousands of mobile and stationary robots deployed in industry use ROS. The conference brings together the ROS-Industrial Community to discuss new development topics as well as give newcomers and interested parties an overview of the software, activities and benefits.

This year's conference event consist of two days. The first day will focus on more high-level, business related aspects of ROS and is perfect for newcomers and interested parties. The second day is dedicated to the community to present, explore and exchange about new developments and planning the community's roadmap.

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Session
Welcome
13:30 – 14:00 CET

Description
An introduction to ROS-Industrial, the Consortium and its mission and objectives as well as news about the consortium's development and new policies.

Christoph Hellmann Santos, *Program Manager @ ROS-Industrial Europe*

Session
Applications & Business Models I
14:00 – 15:30 CET

Description
The organisations drag & bot GmbH, NODE Robotics GmbH and IRT Jules Vernes will present their industrial applications or business models built arround ROS.

Martin Naumann, *CTO @ drag & bot GmbH*
Dr. Benyamine Allouche, *R&T Engineer @ IRT Jules Vernes*
Stefan Dörr, *CEO @ Node Robotics GmbH*

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Session
Applications & Business Models II
15:45 – 17:45 CET

Description
The organisations Southwest Research Insitute, PickNick Robotics, Canonical and Alias Robotics will present their industrial applications or business models built arround ROS.

Matt Robinson, *Program Manager @ ROS-Industrial Consortium Americas*
Dave Coleman, *CEO @ PickNik Inc.*
Gabriel Noury, *Robotics Product Manager @ Cannonical,*
Endika Gil Uriarte, *CTO @ Alias Robotics*

Session

New Developments for Industry

09:00 – 10:30 Uhr CET

Description

Details about new developments for industrial use cases including hardware and software componentts.

Bainian Chen, *Robotics Engineer @ ROS-Industrial Asia & Pacific*
Rune Søe-Knudsen, *Principal Innovation Researcher @ Universal Robots*
Felix Exner, *Research Scientist @ FZI*
Christian Henkel, *Research Engineer @ Pilz*

Session

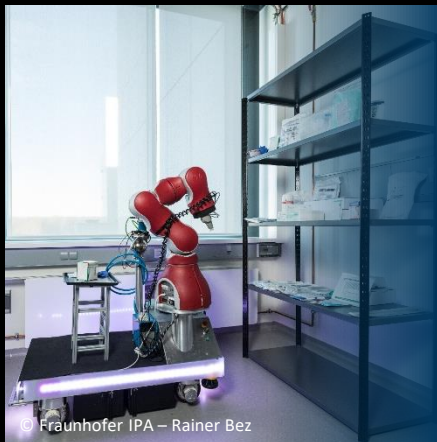## System Quality and Security

10:45 – 12:15 CET

Description

Tools and strategies to achieve system quality and secure robot sytems.

Nadia Hammoudeh Garcia, Senior Research *@ Fraunhofer IPA*
Federico Maggi, *Senior Threat Researcher @ Trend Micro*
Florencia Cabral Berenfus, *Robotics Security Engineer @ Cannonical*

Session

ROS2 new technologies

14:00 – 15:30 CET

Description

An overview over new technologies that are enabling ROS2 usage in industrial use cases.

Andrei Kholodnyi, *Principal Technologist @ Wind River*
Jaime Martin Losa, *CTO @ eProsima*
Víctor Mayoral-Vilches, *Systems architect @ Xilinx*

Session

ROS2 new features

15:45 – 17:15 CET

Description

An intro to the new features available in ROS2 and how to use them in applications.
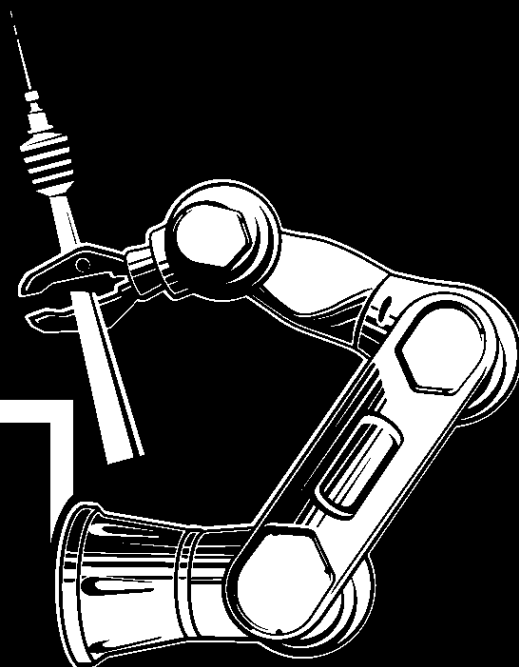
Henning Kayser, *Software Developer @ PickNik*
Katherine Scott, *Developer Advocate @ Open Robotics*

Virtual ROS-I

CONFERENCE 2021

Introduction (13:30 - 14:00 CET):

"Welcome to ROS-Industrial Conference in 2021"
Christoph Hellmann Santos, Program Manager, ROS-Industrial Consortium Europe

Applications & Business Models I (14:30 - 15:30 CET):

"drag&bot - a robot operating system based on ROS"
Martin Naumann, CEO, drag & bot GmbH

"A ROS based lightweight welding manipulator: from the requirement to application in a year"
Dr. Benyamine Allouche, R&T Engineer, IRT Jules Vernes

"Highly flexible intralogistics through collaborative AMR fleets"
Stefan Dörr, CEO, node robotics GmbH

Applications & Business Models II (15:45 - 17:45 CET):

"Building New Capability for Industry in ROS 2"
Matt Robinson, Porgam Manager, ROS-Industrial Consortium Americas

"Supervised Autonomy for Space Robotics using MoveIt and ROS"
Dave Coleman, CEO, PickNik

"From security to operational expenses - facilitating robotics deployments with Ubuntu"
Gabriel Noury, Robotics Product Manager, Cannonical

"Securing robots; from research to the shoopfloor"
Endika Gil Uriarte, CTO, Alias Robotics

Virtual ROS-Industrial Conference

Agenda Day 12, 02.12.2021

New Developments for Industry (09:00 - 10:30 CET)

"Advanced laser scanner data from PSENscan used for mobile robot navigation integrated in ROS"
Christian Henkel, Research Engineer, Pilz

"EMD: Real-Time Collision Free Motion in a Dynamic Environment"
Chen Bainian, Robotics Engineer, ROS-Industrial Consortium APAC

"Extensions for ROS control -- Cartesian, Speed scaling and passthrough interfaces (not only) for the ur_robot_driver"
Felix Exner, FZI & Rune Søe-Knudsen, Universal Robots

System Quality and Security (10:45 - 12:15 CET)

"ROS model: Towards Model Driven Robotics Development"
Nadia Hammoudeh Garcia, Research Engineer, Fraunhofer IPA

"Cybersecurity challenge - securing ROS robotics platforms"
Florencia Cabral Berenfus, Robotics security engineer, Cannonical

"Breaking ROS 2 security assumptions: Targeting the top 6 DDS implementations"
Federico Maggi, Senior Threat Researcher, Trend Micro

ROS2 new technologies (14:00 - 15:30 CET)

"Towards Easy 5GS Integration in ROS2"
Jaime Martin Losa, CEO, eProsima and Ananya Muddukrishna, Senior Researcher, Ericsson

"Tune ROS2 for real-time"
Andrei Kholodnyi, Principal Technologist, Wind River

"Hardware Acceleration in ROS 2"
Víctor Mayoral-Vilches, Systems architect, Xilinx

ROS2 new features (15:45 - 17:15 CET)

"MoveIt 2 Rolling towards Humble - Latest Features and Roadmap Updates"
Henning Kayser, Chief Architect, PickNik

"ROS2 new features"
Katherine Scott, Developer Advocate, Open Robotics