TUESDAY, DECEMBER 10, 2019

EU ROS UPDATES

11:00 Introduction to the ROS-Industrial Conference
Thilo Zimmermann, Fraunhofer IPA

11:10 Welcome presentation & market statistics from latest IFR World Robotics Report
Werner Kraus, Fraunhofer IPA

11:40 ROSIN: advancing ROS in Europe
Carlos Hernandez Corbato, TU Delft

12:00 Training and education activities supported in Europe by ROSIN
Stephan Kallweit, FH Aachen

12:20 Highlights of ROS in Agricultural Domain
Andreas Linz, Universität Osnabrück

12:40 Lunch

14:10 [Reactive] Programming with [Rx]ROS
Andrzej Wąsowski, ITU Copenhagen

14:30 ROS-I for architecture and digital fabrication
Gonzalo Casas, ETH Zurich

14:40 Commercial exploitation with ROS-Industrial and introduction into FTP session
Jon Azpiazu Lozano

15:40 Pros and cons of using ROS to transfer robotics components from laboratory to industry
Olivier Stasse, LAAS-CNRS

16:00 Coffee break

16:30 Metacontrol for ROS2 systems
Carlos Hernandez Corbato, TU Delft

16:50 Modeling and Tooling for Robotics Software Development
Dennis Stampfer, HS Ulm

17:10 SeRoNet: Challenges in defining a community platform top-down
Björn Kahl, Fraunhofer IPA

17:30 RoboPORT – co-creation & engineering community
Maik Siee, Fraunhofer IPA

17:50 Conclusion of the day incl. announcement of evening program
Thilo Zimmermann, Fraunhofer IPA

18:00 End of Session (bus transfer or walking)

18:30 Welcome reception and demos, ARENA2036

19:00 Demonstrations and EP poster session

WEDNESDAY, DECEMBER 11, 2019

SOFTWARE AND SYSTEM INTEGRATION (1/2)

9:00 ROS2 Robot Dev Kit feat. Navigation2 Overview
Matt Hansen, Intel
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker/Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:30</td>
<td>ROS 2 Tracing: Performance Analysis and Execution Monitoring</td>
<td>Ingo Lütkebohle, Bosch CR</td>
</tr>
<tr>
<td>9:50</td>
<td>drag&amp;bot as a software platform for development of ROS-based industrial applications</td>
<td>Pablo Quilez, drag&amp;bot</td>
</tr>
<tr>
<td>10:10</td>
<td>cartesian_controllers: Motion, Force and Compliance Control for Robotic Manipulators</td>
<td>Arne Rönnau, FZI Karlsruhe</td>
</tr>
<tr>
<td>10:30</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>11:00</td>
<td>Open Robotics 2020: ROS2 Eloquent and Ignition Citadel</td>
<td>Steven Peters, Open Robotics</td>
</tr>
<tr>
<td>11:30</td>
<td>pcg_gazebo_pkgs: A Python library for scripting and rapid-prototyping of simulated Gazebo models and worlds</td>
<td>Musa Morena Marcusso Manhães, Bosch CR</td>
</tr>
<tr>
<td>11:50</td>
<td>ROS Model</td>
<td>Nadia Hammoudeh Garcia, Fraunhofer IPA</td>
</tr>
<tr>
<td>12:10</td>
<td>Bridging ROS with MATLAB and Simulink: From Algorithms to Deployment</td>
<td>Shashank Sharma, Mathworks</td>
</tr>
<tr>
<td>12:30</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>13:00</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>14:00</td>
<td>The Robotic Edge</td>
<td>Roger Barga, AWS</td>
</tr>
<tr>
<td>14:30</td>
<td>ROS2 on VxWorks - Challenges in porting a modern, software framework to RTOS</td>
<td>Andrei Kholodnyi, Windriver</td>
</tr>
<tr>
<td>14:50</td>
<td>How to maintain a robot that outlives its support</td>
<td>Rhys Davies, Canonical</td>
</tr>
<tr>
<td>15:10</td>
<td>eProsima Fast RTPS, the most complete open source DDS for ROS2</td>
<td>Jaime Martin Losa, eProsima</td>
</tr>
<tr>
<td>15:30</td>
<td>Coffee break</td>
<td></td>
</tr>
<tr>
<td>16:00</td>
<td>ROS for Windows: develop ROS apps with Visual Studio Code &amp; Azure</td>
<td>Gunter Logemann, Microsoft</td>
</tr>
<tr>
<td>16:20</td>
<td>Defensive and offensive Robot security</td>
<td>Endika Gil Uriarte / Victor Mayoral, Alias Robotics</td>
</tr>
<tr>
<td>16:50</td>
<td>Eclipse Cyclone DDS Makes ROS 2 Easier, Smaller, Faster</td>
<td>Joe Speed, ADLINK Technology</td>
</tr>
<tr>
<td>17:10</td>
<td>Analytics for Autonomous Driving: Large-scale sensor data processing</td>
<td>Jan Wiegelmann, Autovia AI</td>
</tr>
<tr>
<td>17:30</td>
<td>AgROBOfood</td>
<td>Ting-Chia Chang, TU Delft</td>
</tr>
<tr>
<td>17:45</td>
<td>Transport from Fraunhofer IPA to Fernsehturm Stuttgart</td>
<td></td>
</tr>
<tr>
<td>18:00</td>
<td>Dinner</td>
<td></td>
</tr>
</tbody>
</table>
THURSDAY, DECEMBER 12, 2019

HARDWARE AND APPLICATION HIGHLIGHTS (1/2)

9:00  ROS-Industrial North America updates & SwRI application highlights
      Paul Evans, SwRI

9:30  SAM|XL: Leveraging ROS for Aerospace Manufacturing Processes
      Rik Tonnaer, SAM|XL (a TU Delft Foundation)

9:50  Mobile Manipulation with a KUKA KMR and ROS
      Thomas Ruehr, KUKA

10:10 Towards Industrial-grade robot control in ROS
      Anders Billesø Beck, UR

10:40 Coffee break

HARDWARE AND APPLICATION HIGHLIGHTS (2/2)

11:10 ROS-Industrial Asia Pacific updates & ARTC application highlights
      Erik Unemyr, A*STAR ARTC

11:40 Towards plug&play solutions for autonomous navigation of mobile robots and AGVs
      Stefan Dörr, Fraunhofer IPA

12:00 Safety Certified ROS-native Industrial Manipulator
      Manuel Schön, Pilz

12:20 REFILL: robotic depalletization in retail markets
      Jonathan Cacace / Jonas Reiling, UniNa & dm-drogeriemarkt GmbH

12:40 Lunch

PLATFORMS & COMMUNITY

14:10 Enabling the future of Manufacturing with Robotics
      Simon Schneider, Jungle

14:30 Performance Testing Platform for ROS2
      Benjamin Goldschmidt, Silexica

14:50 Why Robotics needs Open Source Communities
      Philippe Krief, Eclipse Foundation Europe

15:10 Closing Remarks & Discussion
      Christoph Hellmann / Thilo Zimmermann, Fraunhofer IPA

CONTACT

Dipl.-Kfm. Thilo Zimmermann
ROS-Industrial Consortium Europe Manager
Phone: +49 711 970-1240
thilo.zimmermann@ipa.fraunhofer.de

Fraunhofer Institute for Manufacturing Engineering and Automation IPA
Department Robot and Assistive Systems
Nobelstrasse 12 | 70569 Stuttgart | Germany

https://www.ipa.fraunhofer.de/en.html
https://rosindustrial.org/