# **Expanding Horizons** with ROS-Industrial in Asia Pacific 2017

25 - 26 May











#### **ROS Industrial Asia Pacific Launch**

This event serves as a platform that facilitates interaction between representatives from industry and universities, enabling knowledge sharing and expertise on ROS related applications and development. Participants will be able to obtain information on new technologies, components, tools and recent trends in the ROS-Industrial community. We seek to create insightful discussions on ROS capabilities and how ROS can contribute to the Industry in Asia Pacific. A technical mapping session will be conducted to support the Asia community to address future needs and effort.

Participant Fee

Includes Day 1 Lunch, Dinner, Day 2 Lunch and an event polo



## **REGISTER NOW**

http://rosindustrial.org/rosi-asia-pacific-workshopregistration-2017

### **Key Speakers**



**Dr. Kimberly HAMBUCHEN Human Robotic Systems Deputy Project Manager, NASA Johnson Space** Centre

Topic: ROS and NASA



**Tully FOOTE ROS Platform Manager**, **OSRF** 

Topic: ROS and ROS2 Development



**Paul EVANS Director, Manufacturing Technologies, Southwest** Research Institute® (SwRI®)

Topic: ROS-I Consortium Americas Update - Highlighting 2016 Accomplishments And Future Direction



**Niels Jul JACOBSEN** CTO, Mobile Industrial Robots **ApS** 

Topic: Automatic Transportation Of Carts Using A Hook



Dr. Mirko BORDIGNON Senior Expert, ROS-Industrial **Europe Program Manager,** Fraunhofer IPA

Topic: Connecting Automation Stakeholders Through Open-Source Software



**Hai CHANG** Cofounder and Inside Director. **Blue Workforce Robotics (Asia** Pacific) Co. Ltd.

Topic: An Innovative Robotics Platform for Simplifying and Accelerating Deployments in the Food Industry

#### Location

Advanced Remanufacturing and Technology Centre (ARTC)

> 3 Cleantech Loop, CleanTech Two, #01-01, Singapore 637143



Dr. Toshio MORIYA Senior Chief Researcher, **Center for Technology** Innovation, Research and **Development Group, Hitachi,** 

Topic: Application System



## ROS - Industrial Asia Pacific Workshop - 2017 Program Agenda

## DAY 1 | 25 MAY 2017

| TIME               | TITLE                                                                                                                                           | PRESENTER                                                                              |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 8:00 AM            | Bus Transport pick up from Rendezvous Hotel to                                                                                                  | ARTC                                                                                   |
| 8:30 AM            | Registration, Coffee & Tea                                                                                                                      | Everyone                                                                               |
| 9:15 AM            | Kick off Launch                                                                                                                                 | Dr. David Low, Paul Evans,<br>Prof. I-Ming Chen                                        |
| 9:30 AM            | ROS Industrial Asia Pacific Consortium                                                                                                          | Min Ling Chan, ARTC                                                                    |
| 10:00 AM           | ROS-I Consortium Americas Update -<br>highlighting 2016 accomplishments and<br>future direction                                                 | Paul Evans, SwRI                                                                       |
| 10:30 AM           | Coffee Break                                                                                                                                    | Everyone                                                                               |
| 10:50 AM           | Looking forward to ROS2                                                                                                                         | Tully Foote, OSRF                                                                      |
| 11:20 AM           | An Innovative Robotics Platform for<br>Simplifying and Accelerating Deployments<br>in the Food Industry                                         | Hai Chang,<br>Blue Workforce Robotics<br>(Asia Pacific)                                |
| 11:50 AM           | Automatic transportation of carts using a Hook                                                                                                  | Niels Jacobsen,<br>Mobile Industrial Robots                                            |
| 12:20 PM           | Lunch                                                                                                                                           |                                                                                        |
| 1:00 PM<br>2:00 PM | Photo Taking and Demonstration at<br>Workshop (level 1), Exhibition                                                                             | Everyone                                                                               |
| 2:30 PM            | National Robotics Strategy for Singapore                                                                                                        | Rayner Ng, NRPO                                                                        |
| 2:45 PM            | Multi-platform Digital Twins for Cobots                                                                                                         | Dr. Steve Kerrison, ARTC                                                               |
| 3:00 PM            | Coffee Break                                                                                                                                    | Everyone                                                                               |
| 3:30 PM            | Virtual Fort Knox - an open cloud platform for smart manufacturing                                                                              | Christian Henkel,<br>Fraunhofer IPA                                                    |
| 4:00 PM            | ROS Technical Roadmapping Breakout Session: 1) Challenges with ROS 2) ROS-Industrial Roadmap and focus points 3) ROS-Industrial APAC challenges | Facilitators:<br>1) Tully Foote, OSRF<br>2) Paul Evans, SwRI<br>3) Min Ling Chan, ARTC |
| 5:00 PM            | Wrap up for Day 1                                                                                                                               | Nicholas Yeo, ARTC                                                                     |
| 5:15 PM            | Bus Transport from ARTC to Dinner                                                                                                               | Everyone                                                                               |
| 6:00 PM            | Networking Dinner at Spruce Restaurant                                                                                                          | Everyone                                                                               |
| 9:15 PM            | Bus Transport pick up from Spruce Restaurant to                                                                                                 | o Rendezvous Hotel                                                                     |

## DAY 2 | 26 MAY 2017

| TIME     | TITLE                                                                                | PRESENTER                                            |
|----------|--------------------------------------------------------------------------------------|------------------------------------------------------|
| 8:15 AM  | Bus Transport pick up from Rendezvous Hotel to ARTC                                  |                                                      |
| 9:00 AM  | ROS-Industrial: Strength in numbers for automation                                   | Dr. Mirko Bordignon,<br>Fraunhofer IPA               |
| 9:30 AM  | ROS and NASA                                                                         | Dr. Kimberly Hambuchen,<br>NASA Johnson Space Centre |
| 10:00 AM | Development of Warehouse Robots for<br>Efficient Flow of Various Materials           | Dr. Toshio Moriya, Hitachi                           |
| 10:30 AM | Coffee Break                                                                         | Everyone                                             |
| 10:50 AM | Wrapping ROS Industrial with a nice looking and intuitive graphical user interface   | Prof. Trygve Thomessen,<br>PPM AS                    |
| 11:20 AM | ROS for Mobile Robotics                                                              | Asadollah Norouzi,<br>Singapore Polytechnic          |
| 11:50 AM | Visual Marker-Guided Mobile Robot Solution for Automated Item Picking in A Warehouse | Reeve Chong, NTU                                     |
| 12:20 PM | Lunch                                                                                |                                                      |
| 1:00 PM  | Exhibition / Demonstration                                                           | Everyone                                             |
| 2:00 PM  | Lightning Talks                                                                      | 3mins each                                           |
| 2:30 PM  | Singapore's Industrial Robotics Program                                              | Dr. Marcello Ang, NUS                                |
| 3:00 PM  | Coffee Break                                                                         | Everyone                                             |
| 3:30 PM  | Development of an Open Software Structure for Collaborative Manipulator              | Prof. Tan Jindong,<br>Aubo Robotics                  |
| 4:00 PM  | Closing                                                                              | Nicholas Yeo, ARTC                                   |
| 4:30 PM  | Bus Transport pick up from ARTC to Rendezvous Hotel                                  |                                                      |