Leveraging Advanced Robotics & Automation in Asia Pacific

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<th>14 &amp; 15 July 2016</th>
<th>Advanced Remanufacturing &amp; Technology Centre, and Nanyang Technological University</th>
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<td>Registration fee: $200/- (inclusive of event T-shirt, tea / lunch and networking dinner)</td>
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Join us for the first ROS-Industrial Asia Pacific Workshop, organized by A*STAR’s Advanced Remanufacturing and Technology Centre (ARTC) and Nanyang Technological University (NTU). In this first edition, the workshop features how Robotic Operating System (ROS) help to leverage on Advanced Robotics & Automation in Asia Pacific. Industry key players and Academic speakers globally will share experiences on application development with ROS and clarify the current and future needs of industry.

ROS-Industrial will enable more flexible automation solutions with exchangeable components that are able to cope with dynamic environments and a large diversity of objects to be handled.

Register Now to be part of this 2-day workshop to obtain information on new technology updates, demonstration on robotic automations and latest trends in the ROS-Industrial community.

We look forward to welcoming you at the ROS-Industrial Asia Pacific workshop!

Click here to REGISTER

Dr. Brian Gerkey
Chief Executive Officer / Founder, Open Source Robotics Foundation (OSRF)
‘An overview of the Robot Operating System (ROS)’

Dr. Morgan Quigley
Chief Architect / Founder, Open Source Robotics Foundation (OSRF)
‘Two Frontiers of ROS Development’

Paul Hvass
Program Manager, ROS-Industrial Consortium Americas, Southwest Research Institute (SwRI)
‘ROS-Industrial Consortia, Inception, Present, and Future’

Dr. Mirko Bordignon
Program Manager, ROS-Industrial Consortium Europe, Fraunhofer IPA
‘Bootstrapping and shepherding ROS-Industrial in Europe’
Our panel of speakers addresses all spectrums of robotic industry including end users, small and medium enterprises, multi-national companies, system integrators and research centres/institutions of higher learning.

Nicholas Yeo
Technical Director, Advanced Remanufacturing and Technology Centre (ARTC), A*STAR
‘ROS enabled robotic automation for Factory of the Future’

Moshe Schwimmer
Innovation Catalyst, Siemens PLM Software
‘The Future of Industrial Robotics Simulation’

Dave Coleman
Research Assistant, University of Colorado Boulder
‘Beyond Free-Space Planning: Multi-Modal Manipulation using MoveIt!’

Prof. Trygve Thomessen
Managing Director, PPM AS
‘Wrapping ROS Industrial with a nice looking and intuitive graphical user interface’

Peter Boeijink
Program Director, LR Systems BV – Large Robotic Solutions
‘Disruptive innovations with very large robots’

Asst. Prof. Soh Gim Song
Assistant Professor, Singapore University of Technology and Design
‘Application of ROS to Task Constrained Optimal Motion Planning and Articulated System Design’

Asst. Prof. Pham Quang Cuong
Assistant Professor, Nanyang Technological University, MAE
‘Extending the Capabilities of Industrial Robots with ROS’

Dr. Francisco Suárez-Ruiz
Research Fellow, Nanyang Technological University, MAE
‘Extending the Capabilities of Industrial Robots with ROS’

Dr. Ehsan Asadi
Research Fellow, Nanyang Technological University, MAE
‘ROS-based solution for automating interior finishing: Active perception and task-oriented motion planning’

Dr. Liang Conghui
Research Fellow, Nanyang Technological University, MAE
‘RADOE: Robot Application Development and Operation Environment’

Aswin Thomas
Principal Software Engineer, Hope Technik
‘SESTOTM: AGVs for Manufacturing and Logistics’

Yang YuanRui
Research Associate, National University of Singapore (NUS)
‘RADOE: Robot Application Development and Operation Environment’

Dr. Suraj Nair
Principal Investigator, TUM CREATE, Singapore / Technische Universität München
‘Intuitive programming approaches for industrial robots: From semantic task descriptions to real-time control’

Nikhil Somani
Research Associate, TUM CREATE, Singapore / Technische Universität München
‘Intuitive programming approaches for industrial robots: From semantic task descriptions to real-time control’

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Robotic welding systems using ROS
This demonstration will show an automated robot welding system for multi-pass welding. The current system uses open source solutions like ROS, MOVEit and ROS industrial. This system helps improve the weld consistency and improve productivity by reducing cycle time.

Demonstration of Robotic Surface Finishing
This demo shows ROS industrial capability for direct process control like surface grinding and finishing. The system is designed for surface finishing and involves End of arm tooling design, process capability study and robot control uses ROS industrial. System designed for small footprint and Robotic compact cell for surface finishing applications.

Robotic Cleaning for Remanufacturing
This demo shows ROS capability for an automatic robotic cleaning system and corresponding software algorithm to do the surface cleaning of components from repair cycle. Cleaning is first step in repair cycle. We are designing flexible cleaning mechanism using robot for repair cycles. We are building user friendly GUI and robotic programming interface for cleaning.

Automated Robot picking items from shelf
This demo is illustrates the capability and potential application of an automated robotic picking system in ecommerce warehouses. The robotic picking system is programmed to pick a list of objects with different size, shape and material characterizes from a shelf provided by Amazon, and places it in an order bin in a limited period of time.
Several software modules namely 3D object perception and registration, motion planning, task planning, calibration and grasping module are developed and integrated together in ROS Indigo.