Minds, Machines & Management

# B&R at the 2015 MIT Europe Conference in Vienna

For the fifth time, the Austrian Federal Economic Chamber (WKO) partnered with the Massachusetts Institute of Technology (MIT) to hold a conference entitled "Minds, Machines & Management" in Austria. B&R was invited to present alongside top researchers from MIT in front of 450 Austrian companies, managers and scientists. Topics at the conference varied widely – from urban agriculture, commercial drone applications and industrial 3D printers to applications for artificial intelligence. There were also plenty of opportunities available to exchange innovative ideas, view new models and discuss interesting questions with renowned professors and experts from MIT as well as successful Austrian companies and scientists.

**The panel of renowned MIT professors and experts included:**

- Michael Schrage (MIT Center for Digital Business)
- Nicholas Roy & Thomas Poggio (Computer Science and Artificial Intelligence Laboratory)
- John Clippinger & Caleb Harper (MIT Media Lab Human Dynamics Group)
- George Westerman (MIT Sloan School of Management)
- Wojciech Matusik (MIT Department of Electrical Engineering & Computer Science)
- Sangbae Kim (MIT Department of Mechanical Engineering)
- Vikash Mansinghka (MIT Intelligence Initiative)
- Devavrat Shah (MIT Department of Electrical Engineering and Computer Science)

Dr. Gernot Bachler represented B&R at the conference with a presentation entitled "Evolution and Trends in Human and Robotic Interaction in Production Industries". As technical manager of B&R's Motion business unit, he is responsible for R&D in the area of CNC and robotics. In his address, Bachler discussed developments in the field of industrial robotics with a particular focus on the challenges of Industry 4.0. State-of-the-art automation technology alongside tightly integrated robotics, as offered by B&R, provides a perfect foundation for all types of machinery and equipment with applications in nearly every industrial sector. When talking about robotics, handling tasks are generally the first thing that comes to mind; however, robots are also seeing increased usage in processing applications such as sheet metal bending and spray painting. These robots may not always look like the classic 6-axis articulated arm. More and more, they feature a highly specialized arrangement of serial and parallel kinematic structures optimized for a particular task.

This is where integrated robotics solutions from B&R really pay off. Any combination of kinematic structures can be linked to the path-generating functions of the robotics software via standardized interfaces – without having to modify the core functionality. Augmented by specific technology functions and a flexible programming interface with a configurable robotics programming language, B&R's integrated robotics technology provides machine builders and integrators the perfect foundation for the automation solutions of the future. Integrated safety plays a key role as well. The extreme flexibility required in many production industries often means that humans and machines must work closely together without being encumbered by safety gates and enclosures. Monitoring functions such as Safely Limited Speed at the Tool Center Point (SLS@TCP), the implementation of boundaries for the workspace and the orientation of the tool itself are essential in developing optimal safety solutions.

Safety functions from the area of SafeROBOTICS can be combined with single-axis monitoring functions with extremely fast response times as well as traditional SafeLOGIC controller function blocks in order to create the perfect safety solution. All safety functions offered by B&R are TÜV-certified and field-proven.

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