

PROFESSIONAL SERVICE ROBOTICS AT AUTOMATICA 2016

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Source: *Industrial Robotics, Personal & Service Robots | Automatica*

AUTOMATICA 2016, which will take place in Munich from June 21 to 24, has attracted the world's best in terms of Service Robots. Housed in the dedicated Service Robotics Demonstration Park in Hall B4.518, over 20 exhibitors will show off the very latest in service robotic technology in several themed areas focussed on particular application types, such as medicine and transportation.

"Be prepared to be wowed", said María Benítez, spokeswoman for Robotnik. "We are demonstrating our new autonomous and configurable robot we've developed for remote handling and Ambient Assisted Living - RB-1. Featuring 6 DOF, RB-1 can incorporate a two or three fingered gripper, enabling users to interact with their environment in total safety." The robot is flexible, it can operate with different manufacturers' peripherals. Laser scanners of different types can be deployed in conjunction with the robot. Its special sort of integral sensor (RGBD) works with the lasers to help the robot navigate, see and recognize objects.

Another eye-catching robot coming to the show is Motoman's CSDA10F from Yaskawa. Known as "Balthazar" this robot is tapping into the trend of personalized products within the beauty industry. The individualization of industrially manufactured products has always been impractical owing to high unit labour costs. Until now. Not only can customers watch the manufacturing process of their product by online streaming, each product is delivered with a personal "making of" video.

Just as in the early days of robotics, the latest technology draws inspiration from humans. "We are harnessing spinal cord processing for our RAMCIP (Robotic Assistant for MCI Patients at home) to allow it to grip intelligently in real time", said Rich Walker, MD of Shadow Robotics. "Thanks to EU-funded research technology, RAMCIP has human-like abilities that we are using to create real-world robotic solutions. Initially, RAMCIP was developed to support elderly people, helping them lead independent lives for longer, but the technology does have broader applications too."

The Service Robotics Demo Park in Hall B4.518 allows visitors to interact with the robots, touching them without any risk and is expected to be a top attraction to visitors to AUTOMATICA this year. AUTOMATICA is the trade fair which draws state-of-the-art robotic technology from all over the world. One such is the remarkable humanoid robot from Iran, SURENA III. Capable of an amazing array of tasks from walking on straight and curved paths, walking up and down the stairs and on slopes, SURENA III also offers advanced object gripping. But it really comes into its own when detecting objects and faces, imitating human motion, and recognizing voices, albeit only Persian voices so far. All these skills allow the robot to interact with humans through vision, voice recognition and speech.

Co-operation and intuitive operation are two strong themes among AUTOMATICA exhibitors this year. These are exemplified by ROB Technologies whose robotic software enables customers to adapt their robots easily and quickly to new production tasks, without any programming knowledge. Tobias Bonwetsch, ROB Technologies, explains: "Our software draws on a decade's research on synchronising advanced digital design with robotic automation processes. All the robot's control data is generated from pre-existing CAD and the people working alongside the robot just use tablets to tell the robot what use next, so that in the packaging industry, for example, they draw on where to put the glue on the box."

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