



Robotic charging system

Innovation > Mobility & Transport > Charging system automatically identifies e-vehicles

CHARGING SYSTEM AUTOMATICALLY IDENTIFIES E-VEHICLES

 MOBILITY & TRANSPORT

Researchers in Austria have developed a robotic system for identifying and charging e-vehicles.

As the global demand for electric vehicles increases, the demand for faster and easier charging solutions will also increase. In order to encourage new modes of transport, the infrastructure to facilitate such systems needs to be in place beforehand. Researchers are therefore developing a new robotic charging system for e-vehicles as part of the KoMoT project – ‘Komfortable Mobilität mittels Technologieintegration (convenient mobility by means of technology integration)’. The robotic system identifies and charges electric vehicles of a wide variety of makes and models. The system was developed by a team at Austria’s [Graz University of Technology](#), in collaboration with [BMW](#) colleagues, [MAGNA Steyr](#), [KEBA](#), and the [Austrian Society of Automotive Engineers](#).

The robotic charging system is suitable for installation in both indoor and outdoor charging stations. It identifies e-vehicles using cameras to spot vehicles that enter the charging station. In addition, the system can detect the make and model of each car and the location and type of charging port that the car has. To make this feature possible, the researchers developed a complex mechatronic system using sensors, robot control elements and robot kinematics. The e-vehicles do not have to park in any allocated spot for the charging to begin. The robotic system extends a suitable liquid-cooled charging plug into the car. Furthermore, vehicle charging occurs at a high-speed rate, with some cars taking only minutes to fully charge.

Bernhard Walzel, scientific project researcher at Graz University of Technology, said: “For the first time we have found a way to automatically recharge several vehicles, one after another, using a

robotic charging station, without the need to adapt the vehicles.”

Here at Springwise we have published other automotive innovations, including an [IoT based parking system](#) and a [robotic steering wheel](#). With increasing consideration for the environmental impact of transport, the future for automotive technology will likely be an exciting one.

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Email: bernhard.walzel@tugraz.at

Website: www.tugraz.at/en

Contact: bernhard.walzel@tugraz.at