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## Press release

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Hannover Messe 2016: Intelligent forklift truck understands speech and gestures

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Visitors can try out human-machine interaction for themselves

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*Hannover, 29 March 2016 – At Hannover Messe 2016, IPH will showcase the human-machine communication of tomorrow. In cooperation with Jungheinrich AG and other partners, IPH researchers have developed a driverless forklift truck which understands human language and gestures. Visitors can try it out for themselves: From 25 to 29 April 2016, the research results will be presented at the joint Pavilion of Lower Saxony in Hall 2, Stand A08.*

In the factory of the future, warehouse workers can assign transport tasks to intelligent automated guided vehicles, instead of getting behind the wheel themselves. A technology study of such kind of vehicle will be exhibited at Hannover Messe 2016. Apart from speech commands, as for example “Store this pallet on rack 3”, the vehicle is also able to understand and interpret the respective gesture, recognizing the pallet the worker points at.

Moreover, the vehicle has the ability to move around in factories and storehouses autonomously. 3D camera technology helps the vehicle to sense its environment and navigate like a human being, memorizing distinctive points in the environment. In case of a change, for example because a rack is pushed aside, the vehicle can adjust to it – fully in compliance with Industry 4.0. In contrast to previous automated guided vehicles, it is able to move around independently without requiring predefined paths, for example magnet sensors or markings on the floor. This reduces costs which makes the new technology also interesting for small and medium-sized enterprises.

Up to now, the intelligent forklift truck is not available for purchase. The technology study, presented at Hannover Messe 2016, has been developed in a joint project of Jungheinrich AG and the Institut für Integrierte Produktion Hannover (IPH) in cooperation with Basler AG, Götting KG and the Institute of Computer Engineering (ITI) of the University of Lübeck.

From 25 to 29 April 2016, visitors to Hannover Messe can try out for themselves how to control the forklift truck by gestures. See for the research results at the Lower Saxony Pavilion in Hall 2, Stand A08. Interested companies and journalists may contact Susann Reichert via email ([reichert@iph-hannover.de](mailto:reichert@iph-hannover.de)) for free tickets.

Further information on the research project “FTF out of the Box” are available under [www.ftf-out-of-the-box.de](http://www.ftf-out-of-the-box.de).

## About the IPH

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The Institut für Integrierte Produktion Hannover (IPH) gemeinnützige GmbH (which literally translates into Hannover institute of integrated production) is a service provider for production technology and was established in 1988 at the Leibniz University in Hannover. The IPH offers research and development, consultation and qualification concerning the subjects of process technology, production automation, logistics and XXL products. Its customers include companies from the sectors of tool and mould construction, machine and plant construction, aerospace and the automotive industry, electro industry and forging industry.

The business has its headquarters in the science park Marienwerder in the northwest of Hannover and currently employs 68 people, of which 26 are scientific personnel. (Status: February 2016)

## Contact

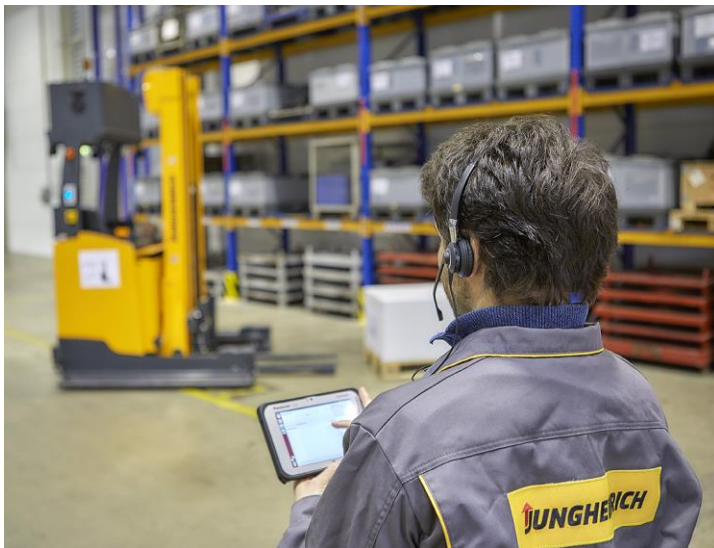
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## Photo material

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Speech and gesture control for automated guided vehicles: IPH presents its research results for the project “FTF out of the Box” at Hannover Messe 2016. (Source: Jungheinrich AG)