Researchers Make Production Facilities Safe and Secure

Human-robot Workplaces Have to Be Safe for Workers and Protected against External Cyber Attacks – Researchers Support Companies

Modern production facilities, in which humans, machines, and robots collaborate closely, have to meet high safety requirements. The facilities are to be safe for workers and have to be protected against external cyber attacks. Within the “Roboshield” project, scientists of Karlsruhe Institute of Technology (KIT), Fraunhofer Institute for Manufacturing Engineering and Automation IPA, and Fraunhofer Institute of Optronics, System Technologies and Image Exploitation IOSB work on safety and security concepts for small and medium-sized enterprises in Baden-Württemberg. The companies are now offered cost-free expert advice.

“Digitization and interconnection cause the requirements to be met by modern production facilities to increase constantly,” says Dr. Christoph Ledermann, KIT. “With Roboshield, we want to help small enterprises to switch to Industry 4.0. First of all, the focus will be on preventing the components of the facility, such as robots, from injuring people.”
Security as a Basis of Industry 4.0

In parallel, IT security is gaining importance: “Due to the currently observed cyber attacks against production facilities, this topic is more pressing than ever,” says Dr. Christian Haas of Fraunhofer IOSB. Moreover, protection of the employees’ data must be ensured in the increasingly interconnected and sensor-equipped work environments. “Roboshield will cover all these aspects of safety and security and, hence, may become the company’s door opener to Industry 4.0,” Haas says.

For the companies to convert their facilities rapidly, at low costs, and safely, the researchers work on tools and processes facilitating the development and operation of secure systems and facilities. In addition, a consulting center will be established. Here, companies will obtain advice as to how a robot may be used in their production facility, which advantages this will have, and which provisions and regulations will have to be observed.

Apply now for Participation in the Project

Companies in Baden-Württemberg can apply for “quick checks” until Monday, October 22, 2018. Upon acceptance, they will be given the opportunity to ask questions regarding the safety and security of their production facilities. “Companies may ask for a risk assessment of a human-robot workplace or for advice as to how a robot can reliably identify humans working in its vicinity,” Ledermann says.

The Roboshield experts also plan to offer training courses on various topics, including the development of secure software. On the Open-Lab-Day on Thursday, February 21, 2019, at Fraunhofer IPA, Stuttgart, companies will have the opportunity to directly talk to experts and ask further questions.

More information: [www.roboshield.de](http://www.roboshield.de) (in German only)

More about the KIT Information · Systems · Technologies Center: [http://www.kcist.kit.edu](http://www.kcist.kit.edu)

Being “The Research University in the Helmholtz Association,“ KIT creates and imparts knowledge for the society and the environment. It is the objective to make significant contributions to the global challenges in the fields of energy, mobility and information. For this, about 9,300 employees cooperate in a broad range of disciplines in natural sciences, engineering sciences, economics, and the humanities and social sciences. KIT prepares its 25,500
students for responsible tasks in society, industry, and science by offering research-based study programs. Innovation efforts at KIT build a bridge between important scientific findings and their application for the benefit of society, economic prosperity, and the preservation of our natural basis of life.


The photo in the best quality available to us may be downloaded under www.kit.edu or requested by mail to presse@kit.edu or phone +49 721 608-21105. The photo may be used in the context given above exclusively.