

KARIS Is Winner in the Land of Ideas

Institute for Material Handling and Logistics Celebrates Award's Ceremony with an Open Day on Next Wednesday



KARIS – autonomous elements optimize materials flow at stores and production halls. (Photo: KIT)

KARIS, the intelligent materials flow system developed by the Institute for Material Handling and Logistics of Karlsruhe Institute of Technology (KIT) is awardee in the competition “365 Orte im Land der Ideen” (365 places in the land of ideas). The system consists of small autonomous elements optimizing materials flow at stores or production halls. On June 22, the Institute will receive the award on an Open Day.

Materials flow systems are the heart of any store and production hall. However, stationary systems used so far, such as roller conveyors, meet today's alternating requirements to an insufficient degree only. Their adaptation requires a high expenditure and is associated with high costs. In the future, intelligent and small autonomous transporters are to transport objects much more flexibly and inexpensively than existing systems.

With KARIS (Small-scale Autonomous Redundant Intralogistics System), KIT scientists focus on the interaction of a number of



*KIT Mobility Systems Center:
Solutions for tomorrow's mobility*

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small, quick, and autonomous elements instead of rigid systems. Development of this novel system was inspired by the flexible transportation logistics of an ant colony. The individual KARIS elements have a base area of half a square meter and are 40 centimeters high. Thanks to special sensors, the intelligent transport units are capable of orienting autonomously in their environment. Mutual coordination via a WLAN component ensures that they are always there when objects have to be transported. For the transportation of larger objects, they may also combine to clusters of variable size.

“We are very proud of being a ‘selected place’ in the land of ideas,” says Professor Kai Furmans, Head of the Institute for Material Handling and Logistics, IFL, of KIT. “KARIS stands for materials flow at future stores and production halls: Autonomous, flexible, resources-efficient.”

Frank Arlaud from Deutsche Bank, Karlsruhe, will hand over the award “Ausgewählter Ort 2011” (selected place 2011) on June 22 and emphasizes prior to the ceremony: “The intralogistics system of KIT is an excellent example of Germany as a location of innovation and shows how transportation processes within a company will be carried out more flexibly and efficiently in the future.”

The award’s ceremony is planned to start at 16.45 hrs and will be part of an Open Day of the Institute for Material Handling and Logistics. It will begin at 13.30 hrs and offer tours through the Institute and various presentations on aspects of future logistics concepts.

The Germany-wide competition “365 Orte im Land der Ideen” visualizes the potentials of Germany as a location of innovation. Since 2006, this competition has been organized by the initiative “Deutschland – Land der Ideen” (Germany – land of ideas) together with Deutsche Bank under the auspices of the Federal President. The KARIS project of the Institute for Material Handling and Logistics is one of 2600 applications submitted this year.

For KARIS, KIT logistics experts have been cooperating with a total of eleven partners from science and industry that have joined the “AGT Intralogistik BW” since 2007. The KARIS project is funded by the Baden-Württemberg Ministry of Science, Research, and the Arts (MWK).

A short film on KARIS can be found at:

<http://www.youtube.com/watch?v=dKvB8PpPayA>

The Mobility Systems Center pools KIT activities relating to vehicle technology. Presently, 40 KIT institutes with about 800 employees are working on methodological and technical fundamentals for tomorrow's vehicles. It is their objective to develop energy-efficient, low-emission, and safe vehicles and mobility concepts. The researchers also consider the complex interactions of vehicle, driver, traffic, and society.

Under the heading of "Future Mobility", KIT will present its scientific activities on its new "Campus East – Mobility and Innovation" during an Open Day on July 02. More information can be found at: www.pkm.kit.edu/3072.php

Karlsruhe Institute of Technology (KIT) is a public corporation according to the legislation of the state of Baden-Württemberg. It fulfills the mission of a university and the mission of a national research center of the Helmholtz Association. KIT focuses on a knowledge triangle that links the tasks of research, teaching, and innovation.

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