

APRnews

Newsletter of the KIT Focus Anthropomatics and Robotics

Issue 1|2012

EDITORIAL

The capability of interaction, cooperation, coexistence and communication between humans and machines is of key importance for human-machine symbioses. How can humans and machines interact? How should the communication between these actors be designed? The answers to these questions must rely on a thorough understanding of the human communication processes to allow the development of intuitive multimodal interfaces as natural channels for human-machine communication.

Multimodal interaction and communication is one of the central scientific research pillars of the KIT Focus Anthropomatics and Robotics. Ultimate goal is the design and implementation of multilingual interactive and multimodal systems able to perceive humans, their activities, their intention, and their environments, by processing signals from multiple sensors to understand situations and react accordingly. Such a natural and intuitive communication will facilitate shaping the internal representation of the world for the robot and speeding up learning capabilities through human teachers.

This first issue of the APRnews provides a glimpse into some latest findings at KIT concerning human-machine multimodal interaction and communication. The Newsletter concludes by presenting interACT, an excellence joint center for international student exchange and cooperation.

Prof. Rüdiger Dillmann

NEWS

University without Language Barriers

On June 11th, the Interactive System Labs presented the world's first automatic simultaneous translation service at a university. The lecture translator represents a cost effective way to assist foreign students, who can follow the lecture in their own language on their PC or mobile phone.

Opening of the FZI House of Living labs

On April 27th, the Forschungszentrum Informatik (FZI) celebrated the opening of the House of Living Labs (HoLL). The HoLL offers researchers and partners from academia and society an excellent environment for multidisciplinary research.

NAIST new interACT partner

The Nara Institute of Science and Technology, NAIST, joined the International Center for Advanced Communication Technologies, interACT, on April 9th.

CeBIT 2012

From March 6th to 10th, the KIT-Focus Anthropomatics and Robotics attracted many visitors to the KIT booth at CeBIT 2012, in Hannover. The humanoid robot ARMAR III demonstrated its capabilities in a kitchen environment. The FZI House of Living Labs presented the interactive HoLLiE service robot and solutions for intelligent energy management.

New Chair "Humanoid Robotic Systems"

In March, Dr. Tamim Asfour has been appointed to a new Professorship in "Humanoid Robotic Systems". The newly established Chair will strengthen KIT expertise in the anthropomatic research area.

First Karlsruhe Forum on Anthropomatics and Robotics

The First Karlsruhe Forum on Anthropomatics and Robotics was held on February 2nd, 2012, and brought together a multidisciplinary audience of academics and industry representatives to exchange achievements, solutions, visions, and foster technology transfer in the area of anthropomatics and robotics.

Prof. Rüdiger Dillmann elected as IEEE Fellow

In January, Professor Rüdiger Dillmann of the Department of Computer Science was honored with the prestigious title of IEEE Fellow.

KIT-Focus Anthropomatics and Robotics meets the citizens

The Focus Anthropomatics and Robotics presented itself on January 17th, in the Karlsruhe City Hall. The event ("KIT im Rathaus") attracted a large audience of Karlsruhe citizens that could gain insight into novel research activities, sharing the common goal of improving the quality of human life.

DFG grants new SFB/Transregio 125

The German Research Council (Deutsche Forschungsgemeinschaft, DFG) granted the new Transregional Collaborative Research Centre (SFB/TRR 125) "Cognition-Guided Surgery". The project starts in July 2012 and will last four years in the first phase. Partners in the project are the Heidelberg University Hospital, the Karlsruhe Institute of Technology and the German Cancer Research Center Heidelberg. The