idw - Informationsdienst Wissenschaft
Nachrichten, Termine, Experten

Pressemitteilung

Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, DFKI
Simone Wiegand

30.09.2022
http://idw-online.de/de/news802211

Buntes aus der Wissenschaft, Wissenschaftspolitik
Informationstechnik, Meer / Klima, Physik / Astronomie, Wirtschaft
überregional

Cutting-edge AI research out of Bremen continues to grow - DFKI celebrates new building

More space for artificial intelligence: In the presence of numerous honorary guests from politics, industry and science, the German Research Center for Artificial Intelligence (DFKI) in Bremen celebrated the inauguration of the extension building in Robert-Hooke-Strasse 1 today. The spacious extension offers a unique infrastructure with an area of about 4,500 square meters to advance research into future topics such as human-machine cooperation, space and underwater robotics, embedded systems, and quantum AI.

For more than 15 years, the DFKI in Bremen has been conducting cutting-edge research on key technologies in artificial intelligence (AI), robotics and cyber-physical systems, developing innovative solutions that support humans in numerous areas of their lives and work – from robots for use in high-risk areas, and systems for rehabilitation after a stroke, to reliable electronics for self-driving vehicles and the smart home, to intelligent waste management and sustainable management of maritime resources. From the very beginning, the federal government and the state of Bremen have been jointly involved in establishing and expanding the DFKI site.

In his opening speech, Bremen's mayor and Senate President Dr. Andreas Bovenschulte attested to the significant added value of the research institute for the Hanseatic city: "The DFKI's extension building shows once again the importance of research for Bremen as a science location. Not only when it comes to artificial intelligence, but also in digitization, robotics, and lightweight construction. Thus, Bremen secures and creates many highly qualified jobs. I congratulate the DFKI on this innovative extension."

In her speech, Dr. Anna Christmann, the German government's coordinator for aerospace and the Federal Ministry of Economics and Climate Protection's (BMWK) representative for the digital economy and startups, pointed out the special impact of DFKI research: "The German government has set itself the task of researching and sustainably using digital technologies in aerospace. The DFKI site in Bremen plays a significant role with its focus on innovative robotics solutions. By focusing on a rapid transfer of research results into real applications, the DFKI in Bremen generates great benefits for industry and society."

Tim Cordßen-Ryglewski, State Councillor at the Senator for Science and Ports, emphasized the role of the research center for Bremen's scientific landscape: "DFKI is now home to top researchers from all over the world and it is impossible to imagine Bremen's research landscape without it." In addition to the close links with the University of Bremen in the areas of teaching and the promotion of young researchers, he highlighted the institute's involvement in the U Bremen Research Alliance: "Here, the university and the federal-state-funded non-university research institutions located in Bremen cooperate to create transdisciplinary scientific beacons. One of these beacons is the field of artificial intelligence, for which DFKI is largely responsible." said Cordßen-Ryglewski.

Prof. Dr. Antonio Krüger, CEO of DFKI, pointed out the importance of the expansion of the Bremen site: "The extension of DFKI Bremen creates more space for artificial intelligence, offers new spaces, new laboratories, and opens up new opportunities for the research departments. However, it is not just a building, but really a research instrument with test capacities that do not exist again in Germany. The work in Bremen not only secures the future of human-oriented robotics research, but also ensures the safety of ubiquitous technical systems. This is not only important for DFKI, but has a national significance and a European dimension with international appeal."
The extension, which was financed by one-third by the European Regional Development Fund (ERDF) and by two-thirds by the company's own funds, adds new test facilities, workshops, integration and office space to the Maritime Exploration Hall, which was completed in 2013 and is unique in Europe. The centerpiece of the extension is a 17-meter-high Multifunctional Hall with an artificial crater landscape. Thanks to an overhead crane with a load capacity of 12.5 tons and extensive project areas, large systems can be deployed here and versatile research projects can be pursued. Two-story experimental environments provide sufficient space for motion tests with robotic walking, flying and driving systems. Experiments with legged robots and exoskeletons will be possible in a six-and-a-half meter high Living Lab with a gravity compensation system. Last but not least, DFKI's own childcare will now have a terrace and a new playground. All of this benefits the 163 employees who – supported by around 80 student assistants, temporary staff and visiting researchers – are currently working in the research departments Robotics Innovation Center, headed by Prof. Dr. Dr. h.c. Frank Kirchner, and Cyber-Physical Systems, headed by Prof. Dr. Rolf Drechsler.

The technologies developed at DFKI in Bremen have great transfer potential to applications in medicine, industrial production or the deep sea, which benefit from the robust hardware and software systems designed for the space context. This also contributes to greater transparency and explainability of AI due to the high certification requirements in these areas. With their work in the field of underwater robotics, the Bremen researchers are creating important infrastructural prerequisites for the expansion of sustainable resource and energy extraction. The Scientists are also researching intuitive forms of interaction for direct human-robot collaboration, as well as pioneering concepts for the design of quantum algorithms and their use for AI applications. In addition, the site is driving the development of promising open-source hardware, which, as an independent and cost-effective alternative to the major chip manufacturers, enables innovations in many applications of embedded systems.

Prof. Dr. Dr. h.c.. Frank Kirchner, Executive Director of DFKI Bremen, sees the research infrastructure as essential for success: "For the development of intelligent algorithms, a controllable and flexibly adaptable research environment at the highest technical level is crucial, enabling us to generate extensive data in high quality. From this data, which of course must be validated in the real world, artificial intelligence can learn and continuously improve its behavior. Only robust and secure AI can help us solve pressing current and future problems."

About 90 guests accepted the invitation to the ceremony – including former Supervisory Board members Dr. Susanne Reichrath and Dr. Volker Saß, who were honored for their many years of commitment and intensive support for the research center. Guided tours to get an impression of the unique research landscape and the diverse technology developments completed the day’s program.

For editorial offices:
A digital press kit with the press releases and photos for download can be found in the DFKI Cloud at the following link:
https://cloud.dfki.de/owncloud/index.php/s/qkcgD3fPd9Gi2ej

wissenschaftliche Ansprechpartner:

Contact DFKI Bremen:
Prof. Dr. Dr. h.c. Frank Kirchner
German Research Center for Artificial Intelligence GmbH (DFKI)
Executive Director DFKI Bremen
E-mail: frank.kirchner@dfki.de

Phone: +49 421 178 45 4101

Joining Robot Charlie (back from left) Tim Cordßen-Ryglewski, Prof. Dr. Frank Kirchner, Prof. Dr. Rolf Drechsler and Dr. Andreas Bovenschulte. Missing from the picture are Dr. Anna Christmann and Prof. Dr. Antonio Krüger, who were present via screen.
DFKI, Annemarie Popp