

PRESS RELEASE

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Fraunhofer IPA joins euROBIN project with leading European research labs on AI-driven robotics

31 well-known European research labs cooperate in the Network of Excellence euROBIN which is running from July 2022 until June 2026. Fraunhofer IPA is particularly involved in using robotics to reach one of the UN »Sustainable Development Goals«.

euROBIN is a new network of excellence that brings together European expertise on robotics and AI. It establishes a unified pan-European platform for research and development. For the first time, a large number of distinguished research labs across Europe are jointly researching AI-based robotics. Goals include both significant scientific advances on core questions of AI-based robotics as well as strengthening the scientific robotics community in Europe by providing an integrative community platform.

The network is open to the entire robotics community and provides mechanisms of cascade funding to double its number of members over the next years. It comprises 31 partners across 14 countries. Coordinated by the Institute of Robotics and Mechatronics of the German Aerospace Center, it includes the highest-profile research institutions as well as outstanding industrial partners across sectors. euROBIN was awarded 12.5 Million Euros by the EU and Switzerland in total and launched on July 1st 2022 with a runtime until June 2026.



In July 2022, the kickoff meeting for the project start took place. Image credit: DLR.

Press communication

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Cognitive robots for reaching the “Sustainable Development Goals”

The initiative seeks to bring together the robotics community and to benefit science, industry, and society while promoting European values. The network is a facilitator of knowledge transfer and exchange between research institutions and industry partners. The project partners will be working on two main goals. The first one is to use robotics for reaching the “Sustainable Development Goals” (SDGs) announced by the United Nations (UN) in 2016. Fraunhofer IPA is involved in the work package 1 “Robotic manufacturing for a circular economy”, which is connected to SDG 12 “Responsible consumption and production”.

“The euROBIN project perfectly fits to the network of our AI Innovation Center “Learning Systems and Cognitive Robotics” that we are managing together with the Fraunhofer Institute for Industrial Engineering IAO here in Stuttgart”, explains Dr. Werner Kraus, head of the department Robot and Assistive Systems at Fraunhofer IPA. “The project leverages the ecosystem in Baden-Württemberg to excellent European research.”

Knowledge transfer

Addressing the main scientific and technological challenges hampering the breakthrough and large-scale deployment of robotics is the second main goal: euROBIN focuses on making cognition-enabled robotics solutions more transferable and reusable among scientists and by new industries. This is crucial to better join forces in Europe in this dynamic and very competitive field. This concerns for example the skill transfer from one robot to another, from one domain to another, such as human to robot, or from researchers to other researchers.

Competitions and scientific contributions

Two major project aspects will enable to reach these goals. One are cooperative competitions. Teams will publicly compete on visionary and challenging applications, but the competition rules will be made such that exchange of knowledge, data, and results between teams is equally valued to the mere task performance. Fraunhofer IPA will be involved in the manufacturing challenge and particularly in the robotized handling of flexible objects. The other aspect are scientific contributions with these four focuses: InterAct, learning transfer, transferable knowledge, and human-centered transfer.

Further information about the AI Innovation Center (German only):

<https://www.ki-fortschrittszentrum.de/>

The project receives funding within the “Horizon Europe” program.

FRAUNHOFER INSTITUTE FOR MANUFACTURING ENGINEERING AND AUTOMATION IPA



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During the kickoff meeting, Werner Kraus participated in a lab tour and was able to see the DLR robots in action. Image credit: DLR.

Expert contact

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With nearly 1200 employees, the **Fraunhofer Institute for Manufacturing Engineering and Automation**, Fraunhofer IPA, is one of the largest institutes in the Fraunhofer-Gesellschaft. The total budget amounts to € 82 million. The institute's research focus is on organizational and technological aspects of production. We develop, test and implement not only components, devices and methods, but also entire machines and manufacturing plants. Our 19 departments are coordinated via six business units, which together conduct interdisciplinary work with the following industries: automotive, machinery and equipment industry, electronics and microsystems, energy, medical engineering and biotechnology as well as process industry. The research activities of Fraunhofer IPA aim at the economic production of sustainable and personalized products.