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Search 🔍

- Institute of Robotics and Mechatronics
- Departments
- Robotic Systems
- Applications
- Research
- Projects
- Spin-offs
- Publications and downloads
- Job offers
- How to get to us
- News Collection

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⟲ Back   🖨 Print

Leading European research labs on Artificial Intelligence-driven Robotics join forces in the Network of Excellence euROBIN

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euROBIN is the 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.

Competence network euROBIN   ⟶

euROBIN comprises 31 partners across 14 countries. It is coordinated by the Institute of Robotics of Mechatronics of the German Aerospace Center and includes the highest-profile research institutions as well as outstanding industrial partners across sectors. The network was awarded 12.5 Million Euros by the EU and Switzerland in total and launched on July 1st, following a call in 2021.

"Imagine a society in which robots support you everywhere in your daily life. Just think for example about the impact e-commerce had in the last decades and imagine robots acting everywhere along this chain at the interface between internet and the real world. Robots manufacture your personalized product, pack your orders in warehouses, deliver your parcel, and even assemble your goods or cook your meal according to your wishes in your own home. This is the vision that the robotics scientists jointly working together in euROBIN, share and will work towards. This network is a major milestone for the vibrant Robotics and AI scientific community in Europe, and a unique opportunity for both scientific progress as well as creating a closely-linked community collaborating across national barriers", said Prof. Alin Albu-Schäffer, director of the DLR Institute of Robotics and Mechatronics and coordinator of the euROBIN network.

euROBIN 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. Its main goals are:

- Addressing the main scientific and technological challenges hampering the breakthrough and large-scale deployment of robotics: 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.
- Providing a stage for cooperation and exchange of scientific knowledge and talents between the most outstanding robotics labs in Europe in the eras of knowledge representation, physical interaction, robotic learning and human-robot interaction
- Generating a nucleus to which the community at large can adhere, enabling ground-breaking new applications in industrial, personal and outdoor robotics in Europe
- The network will strongly interact with and benefit from other collaborative EU-initiatives such as the euRobotics association and the AI DATA Robotics Association (Adra), empowering the strength of AI & Robotics in Europe. It builds on and contributes to the assets on the AI-on-Demand platform.

How will the network euROBIN achieve its goals?

- Leading experts from the European robotics and AI research community will share their algorithms and data (ranging from abstract representations to specific maps and pre-trained models). Transfer of software and models between robots and research groups is central to the project: By bringing excellent research centers together, the network seeks to address the fragmentation of the European AI in Robotics landscape and facilitate technology transfer.
- Software, data and knowledge will be exchanged over the EuroCore repository, designed to become a central platform for robotics in Europe. euROBIN thus creates a sustainable network fostering exchange and inclusion.
- The relevance of the scientific outcomes will be demonstrated in three application domains that promise to have substantial impact on industry, innovation, and civil society in Europe. This includes providing solutions to global challenges such as using robotics in manufacturing and recycling, personal home assistance and the impacts of urbanization, for example in terms of logistics.
- Advances are made measurable through cooperative competitions. Teams will publicly compete on visionary and challenging application on one hand, 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. If, for example, one teams generates a map of the test environment and another team reuses it, instead of regenerating it from scratch, both teams will gain points.
- An essential element is cascade funding opening up to the community at large the possibility to contribute scientific solutions and participate in the challenges.

Who is part of the network?

- Deutsches Zentrum für Luft- und Raumfahrt (de)
- Karlsruher Institut für Technologie (de)
- Institut National de Recherche en Sciences et Technologie du Numerique (fr)
- Commissariat a l Energie Atomique et aux Energies Alternatives (fr)
- Teknologisk Institut (dk)
- Czech Institute of Informatics, Robotics and Cybernetics, Czech Technical University in Prague (cz)
- C.R.E.A.T.E. Consorzio di Ricerca per l'Energia, l'Automazione e le Tecnologie dell'Elettromagnetismo (it)
- Interuniversitair Micro-electronica Centrum (be)
- Kungliga Tekniska Högskolan (se)
- L'Institut des Systemes Intelligents et de Robotique, Sorbonne Université (fr)
- Örebro University (se)
- Centre National de la Recherche Scientifique Cnrs (fr)
- Associacao do Instituto Superior Tecnico para a Investigacao E Desenvolvimento (pt)
- Universita di Pisa (it)
- Universidad de Sevilla (es)
- Fondazione Istituto Italiano di Tecnologia (it)
- Technische Universität München (de)
- Tecnalia (es)
- Universiteit Twente (nl)
- Institut Jozef Stefan (si)
- Asti Mobile Robotics Sa (es)
- DHL Express Spain, S.I.u. (es)
- PAL Robotics SI (es)
- Volkswagen Aktiengesellschaft (de)
- Universität Bremen (de)
- Fraunhofer Gesellschaft zur Förderung der Angewandten Forschung (de)
- Fundingbox Accelerator Sp Zoo (pl)
- Siemens Aktiengesellschaft (de)
- Matador Industries as (sk)
- Ecole Polytechnique Federale de Lausanne (ch)
- Eidgenössische Technische Hochschule Zürich (ch)

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Videos and 360-degree tour

- ⟶ YouTube channel of RMC
- ⟶ 360° tour