



Software and Research
in Logistics, Industry,
Medicine and IT

<https://www.risc-software.at>



RISC Software GmbH

RISC Software GmbH is a well-established, national and international Research and Development company. We incorporate mathematics, computer science and machine learning methods with practical experience and thereby develop individual software solutions for companies, medicine and industry in interdisciplinary teams.

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Services

RISC Software GmbH is engaged in research and development involving applied research, experimental development and technology transfer to basic research in the field of professional software development. RISC Software GmbH emerged as the application-oriented area of the RISC Institute JKU and is therefore deeply linked to the university environment. RISC Software covers three main areas:

- **Software Development:** The application of methods and expertise from computer science and mathematics for problems of science, business and industry.
- **Technology Transfer:** The technology transfer by software from the University in the economy, particularly in terms of basic research.
- **Applied Research Projects:** The implementation of applied research projects for the Austrian economy in national and international context.

RISC Software GmbH supports you when searching for a matching grant for your personal project proposals to keep the costs manageable. Approximately 90% of the projects were transferred from research in practice or in the next stage of development within two years.

RISC Software GmbH distinguishes three types of projects:

- **Feasibility and Concept Studies:** Feasibility and concept studies can be conducted as innovation checks or feasibility studies.
- **Cooperative Research:** The cooperative research is characterized as a consortium of research and industrial partners who submit a joint research project, get it authorized and then implement it. Following funding opportunities are available: EU projects, ICT of the future cluster projects.
- **Contract Research:** In contract research the rights and obligations are clearly defined by a contract between contractor and client. There are special requirements of the Grantor for specific national funding programs such as innovation

cheque, feasibility study or FFG basic programs.

Basically, these unbureaucratic funding opportunities for Austrian companies are a low-threshold way to research to reduce risk in the beginning and RISC Software GmbH is happy to advise with its long experience

Equipment / infrastructure

RISC Software GmbH is one of the most renowned Austrian research institutions and has been involved in research and development since it was founded by Prof. Bruno Buchberger about 30 years ago. This involves applied research, experimental development and technology transfer to basic research in cross-sectional areas, as well as professional software development in the scientific environment.

Embedded both in the economy, industry and the research landscape of Upper Austria, RISC Software GmbH has already been able to demonstrate its qualities as an active node in the network and as a team player in many cooperative projects and activities. RISC Software GmbH also demonstrates its know-how in international network projects.

RISC Software GmbH supports established companies as well as start-ups and newcomers in their developments. Through findings from research and development projects in the most diverse areas of medicine, industry, production, logistics and data and process management, RISC Software GmbH supports its partners and customers in the preparation and implementation in digitization with the help of the use of data analysis and artificial intelligence.

Best practices / case studies of cooperation

- Research Project MEDUSA: The goal of the MEDUSA consortium is to develop a revolutionary training and planning platform for neurosurgeons to simulate complex brain interventions in a detailed and holistic manner. <https://medusa.health/de>
- Project RESINET RESilience enhancement in energy grids: The RESINET project addresses the issue of resilience in energy grids, taking into account the change in framework conditions from centralized, unidirectional systems to grids with a significantly higher share of renewable, fluctuating energy feeders ("prosumers"), increasing storage capacities in the grid interconnection and controllable loads.
- Project BOOST 4.0: The largest European Big Data for Industry 4.0 initiative joining forces towards an European Industrial Data Space. <http://boost40.eu/>
- Project SafeSign: The project investigates to what extent disturbances in current deep learning based number plate classification systems contribute to misclassifications. <https://projekte.ffg.at/projekt/3789168>
- Project ARCADES: ARCADES aims at disrupting the traditional paradigm in Computer-Aided Design (CAD) by exploiting cutting-edge research in mathematics and algorithm design. <https://cordis.europa.eu/project/id/675789>

Keywords

Complex Mathematics, Combinatorial Optimization, Algorithms, Digitalization, Industry 4.0, Physical Systems, (AI-based) Data Analysis, Visual Data Analytics, Time series, forecasting, clustering, Natural Language Processing, Trustworthy & XAI, Optimization, Prescriptive Analytics, process mining, (AI-based) Image Processing, 3D Visualization, 2D/3D classification, Segmentation, 2D/3D registration, Video analysis, Simulation and Digital Twin, Modeling and Model Building, Finite element simulations with/without AI (PINN), Optimization, 3D simulation, Digitalization of processes, Virtual development of processes and products, (Agile) software development, B2B platforms, Web development, UI/UX, Data Integration and Orchestration, Presentation, Deployment, Data Management & Engineering (for Big Data), Software Modernization / Re-Engineering, Engineering Intelligence, Smart Industrial Systems, Artificial Intelligence, Deep Learning, Non-rigid registration, Heuristics