CALL 2025(2)

EXPERTISE AREAS OF OUR PARTICIPATING MEMBERS

CWI

https://www.cwi.nl/en/groups/innovation-research-focus-areas/

ALGORITHMS

The digitalization of society and the omnipresence of computers bring new challenges and opportunities for algorithms.
Read more

DATA AND INTELLIGENT SYSTEMS

The growth of data and increasingly complex processes require advances in data management and intelligent autonomous systems**.**
Read more

CRYPTOGRAPHY AND SECURITY

The more society digitalizes, the more important it becomes to guarantee the security and privacy of all digital information and its processing.
Read more

QUANTUM COMPUTING

The development of quantum computer hardware simultaneously requires the development of quantum computing algorithms and software.
Read more

FRAUNHOFER - GESSELSCHAFT

ALGORITHMS AND SCIENTIFIC COMPUTING

Fraunhofer Institute for Algorithms and Scientific Computing (SCAI)
http://www.scai.fraunhofer.de

APPLIED AND INTEGRATED SECURITY

Fraunhofer Institute for Applied and Integrated Security (AISEC)
http://www.aisec.fraunhofer.de/en.html

APPLIED INFORMATION TECHNOLOGY

Fraunhofer Institute for Applied Information Technology (FIT)
http://www.fit.fraunhofer.de

CELL THERAPY AND IMMUNOLOGY

Fraunhofer Institute for Cell Therapy and Immunology
https://www.izi.fraunhofer.de/en.html

COGNITIVE SYSTEMS

Fraunhofer Institute for Cognitive Systems (IKS)
https://www.iks.fraunhofer.de/en.html

COMMUNICATION, INFORMATION PROCESSING AND ERGONOMICS (FKIE)

Fraunhofer Institute for Communication, Information Processing and Ergonomics (FKIE)
http://www.fkie.fraunhofer.de/en.html

COMPUTER GRAPHICS RESEARCH

Fraunhofer Institute for Computer Graphics Research (IGD)
http://www.igd.fraunhofer.de

DIGITAL MEDIA TECHNOLOGY

Fraunhofer Institute for Digital Media Technology (IDMT)
http://www.idmt.fraunhofer.de/

DIGITAL MEDICINE

Fraunhofer Institute for Digital Medicine (MEVIS)
http://www.mevis.fraunhofer.de

ENERGY ECONOMICS AND ENERGY SYSTEM TECHNOLOGY

Fraunhofer Institute for Energy Economics and Energy System Technology (IEE)
https://www.iee.fraunhofer.de/

EXPERIMENTAL SOFTWARE ENGINEERING

Fraunhofer Institute for Experimental Software Engineering (IESE)
http: //www.iese.fraunhofer.de/

HIGH FREQUENCY PHYSICS AND RADAR TECHNIQUES

Fraunhofer Institute for High Frequency Physics and Radar Techniques (FHR)
https://www.fhr.fraunhofer.de/en.html

INDUSTRIAL ENGINEERING

Fraunhofer Institute for Industrial Engineering (IAO)
http://www.iao.fraunhofer.de

INDUSTRIAL MATHEMATICS

Fraunhofer Institute for Industrial Mathematics (ITWM)
http://www.itwm.fraunhofer.de

INTEGRATED CIRCUITS

Fraunhofer Institute for Integrated Circuits (IIS)
http://www.iis.fraunhofer.de

INTELLIGENT ANALYSIS AND INFORMATION SYSTEMS

Fraunhofer Institute for Intelligent Analysis and Information Systems (IAIS)
http://www.iais.fraunhofer.de/

MANUFACTURING ENGINEERING AND AUTOMATION

Fraunhofer Institute for Manufacturing Engineering and Automation (IPA)
https://www.ipa.fraunhofer.de/en.html

MECHATRONIC SYSTEMS DESIGN

Fraunhofer Institute for Mechatronic Systems Design (IEM)
https://www.iem.fraunhofer.de

MOLECULAR BIOLOGY AND APPLIED ECOLOGY

Fraunhofer Institute for Molecular Biology and Applied Ecology (IME)
https://www.ime.fraunhofer.de/en.html

OPEN COMMUNICATION SYSTEMS

Fraunhofer Institute for Open Communication Systems (FOKUS)
http://www.fokus.fraunhofer.de

OPTRONICS, SYSTEM TECHNOLOGIES AND IMAGE EXPLOITATION

Fraunhofer Institute for Optronics, System Technologies and Image Exploitation (IOSB)
http://www.iosb.fraunhofer.de

SECURE INFORMATION TECHNOLOGY

Fraunhofer Institute for Secure Information Technology (SIT)
http://www.sit.fraunhofer.de

SOFTWARE- AND SYSTEMS ENGINEERING

Fraunhofer Institute for Software- and Systems Engineering (ISST)
http://www.isst.fraunhofer.de

TELECOMMUNICATIONS

Fraunhofer Institute for Telecommunications, Heinrich Hertz Institute (HHI)
http://www.hhi.fraunhofer.de

TRANSPORTATION AND INFRASTRUCTURE SYSTEMS

Fraunhofer Institute for Transportation and Infrastructure Systems (IVI)
http://www.ivi.fraunhofer.de/en.html

WIND ENERGY SYSTEMS

Fraunhofer Institute for Wind Energy Systems (IWES)
https://www.iwes.fraunhofer.de/en.html

INESC TEC

https://www.inesctec.pt/en/research/artificial-intelligence-95

ARTIFICIAL INTELLIGENCE

With a significant impact on many industries, including healthcare, transportation and manufacturing, Artificial Intelligence is also playing an increasingly important role in our everyday lives, from virtual assistants to online recommendation systems.

BIOENGINEERING

Bioengineering is a rapidly growing and evolving field at the intersection of engineering and the life sciences, to provide solutions in medicine, biology and the environment, among others.

COMMUNICATIONS

Digital network communications underpin the Internet and the myriad of services we increasingly depend on, indispensable for the widespread digital transformation.

COMPUTER SCIENCE AND ENGINEERING

Computer science and engineering are the linchpins to the unstoppable evolution of computing and enable its application to an ever-growing plethora of computer-based solutions.

PHOTONICS

Drawing from the world of electronics and using methods like signal and sensor fusing, Photonics is widely recognised as pivotal in facing several technological shortcomings, namely in medicine, telecommunications, and computing.

POWER AND ENERGY SYSTEMS

Research in Power and Energy Systems envisions to support the full and enduring decarbonisation of society, an overarching objective of the EU, anchored on the integration of renewable energy sources and energy efficiency.

ROBOTICS

Robotics provides new tools and paradigms to enable robots to operate in complex and dynamic environments, shared with humans.

SYSTEMS ENGINEERING AND MANAGEMENT

Systems Engineering and Management research seeks to improve systems for decision support, human-centred operations, intelligence, technology management, and innovation.

RISE

https://www.ri.se/en/expertise-areas

Only the hereafter expertise areas are eligible under the ERCIM FP Programme

ARTIFICIAL INTELLIGENCE

RISE combines AI research with interdisciplinary research, a wide range of test beds, inspiring innovation hubs, educational programmes, digital platforms and extensive experience in software. More than 75 AI projects are currently underway at RISE, conducted by over 60 active AI researchers. Also, we have established a center for applied AI. We possess a wealth of experience in working with practical applications as well as the situations that arise therefrom.

AUTOMATED VEHICULES

RISE brings together expertise and unique testbeds in the field of transport and mobility. Within automated vehicles, we focus on the development, simulation and testing of technologies and methods for active and passive road safety and automated driving.

CYBER SECURITY

RISE has full-ranging competency within cybersecurity, including both technical and human aspects. We offer expertise within certification of management systems, standardization, IoT security, cloud security, software security, safe AI and have good knowledge of how individuals respond to different situations. In our virtual testbed Cyber Range, both industry and public sector can test systems, find solutions, and increase their knowledge. In many aspects, RISE is at the forefront in Europe, and we also manage the Swedish Node for Accelerating Cybersecurity Research and Innovation. RISE offers services in penetration testing and is also one of the initiators of Cyber Campus Sweden.

DATA SCIENCE

RISE offers expertise and experience within the entire field of data science. From advanced statistics and signal processing to modern AI methods and scalable data platforms, as well as a wide range of applications – from industrial data analysis to new innovative products and services.

DIGITAL HEALTH

RISE offer expertise in digital technologies as well as experience in the challenges and opportunities associated with the introduction of e-health and welfare technologies. We conduct needs analyses, develop skills and lead innovation projects, and can serve as advisors in the procurement of welfare technologies.

DIGITAL INFRASTRUCTURE

RISE can lead and coordinate complex projects that require cooperation between the business community and the public sector. We work with cybersecurity in digital infrastructure, such as Cyber Range, and have expertise in business models and policy labs for shared data and new services. RISE also has the AstaZero testbed for digital infrastructure for vehicle fleets and the Awitar testbed for wireless communication in vehicles.

DIGITALISATION

RISE promotes socially useful AI and data-driven innovation. Based on needs, we utilise data and digital technology to develop solutions for applications in all of society. We combine ICT know-how within AI, IoT, cybersecurity, System of Systems and more, including key issues such as data management, ethics and the connected human. Together with customers and partners and with unique test environments, we contribute to Sweden becoming an international leader in digitalisation for a sustainable future and a better life for all.

INTERNET OF THINGS

Intelligent systems that connect to one another will see be part of every new product; for example, an intruder alarm connecting your home to your mobile telephone. The collective name for these systems is the Internet of Things (IoT). Absolutely anything can be connected; machines, vehicles, household appliances, shoes, furniture, clocks and, not least, people. The business opportunities are legion, as are the challenges in areas such as privacy and security.

SENSORS AND SENSOR SYSTEMS

Making large-scale IoT a reality requires massive development of innovative sensor technologies and sensors that are small, accurate, inexpensive and highly energy-efficient – or even self-sustaining. Here at RISE we are taking an active part in this development, while also further developing and refining more conventional sensor technology, and we can offer sensor characterisation and calibration. RISE brings together the most comprehensive expertise in the field of sensors and sensor systems, and offers unique resources in the form of testbeds and laboratories for sensor research and development.