

## I FEEL SLOVENIA

Slovenia is an EU Member State that lies at the intersection of the Alps, the Mediterranean, the Pannonian Plain and the Dinaric Alps. The great diversity of the Slovenian landscape is matched by its well-preserved natural environment; more than half of Slovenia is forested and over one-third of its territory is included in the Natura 2000 network. Slovenia is a green, creative and smart country. Its free market-based economy is dynamic, digitised, innovative and geared towards sustainable development. Slovenia takes pride in its outstanding sporting achievements, its advanced technologies and science, and its lively artistic creativity and heritage preserved with love and dedication.



A society based on knowledge and innovation is the society of the future

Resolution on the Slovenian Scientific Research and Innovation Strategy 2030 (ReZrIS30)

The Slovenian Scientific Research and Innovation Strategy 2030 (ReZriS30) is a key strategic document for research, development, and innovation which serves as a basis for policy-making in the areas of social, economic and sustainable development and societal challenges.



# Ø teristics Ö SE (1) S Slovenia harac nnova



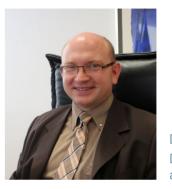
Dr. **Igor Papič**Minister of Higher Education,
Science and Innovation

The Slovenian R&I landscape is defined by its openness, strong collaborative culture, and the ambition of individual researchers and institutions to engage across the full spectrum of globally relevant research fields. Consequently, Slovenia is well-positioned to keep pace with leading global advancements in most areas. Moreover, in select fields, Slovenian researchers are acknowledged as pioneers and active members of prominent international research communities. The relatively small size of the national R&I system fosters close interconnections among thematic communities, creating a distinctive and integrated academia-business ecosystem. The landscape is also characterised by great potential and ambition for further growth, development, enrichment and global collaboration.



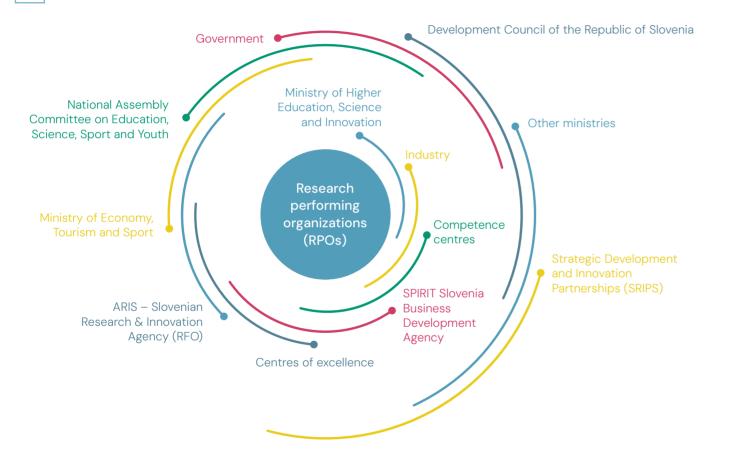
Dr. **Jure Gašparič**State Secretary for
Science and Innovation

The Slovenian R&I system has been shaped by a century of change and collaboration. Having been part of seven different states during the turbulent 20th century, it has proven to be effective, responsive, resilient, and internationally connected. Today, our universities and independent research institutions actively foster international partnerships and openness, rooted in scientific excellence. Together, they are laying the foundation for tomorrow's prosperity.



Dr. **Tomaž Boh**Director General of the Science and Innovation Directorate

Slovenia's R&Ilandscape is driven by a dynamic ecosystem of public research institutes and universities, guided by strategic frameworks such as the Scientific Research and Innovation Activities Act and the Slovenian Scientific Research and Innovation Strategy 2030, which ensure stable public funding and long-term policy continuity. The research community— comprising research performing organisations, Strategic Development and Innovation Partnerships (SRIPs), Centres of Excellence, Competence Centres, R&I industry units, and intermediary organisations—is internationally connected and actively collaborates across the quadruple helix, fostering scientific excellence, breakthrough innovations, and pioneering exploration in emerging fields.



# THE RESEARCH AND INNOVATION LANDSCAPE

Scientific research and innovation has always had an important place in Slovenia, with a clear recognition that it is key for our development and the most comprehensive tool for tackling the societal challenges of the future. Slovenia's R&I landscape is characterised by a robust systemic and financial framework that ensures adequate autonomy for scientific research in general, and research institutions in particular, with clearly defined responsibilities and secured financial and organisational stability.

Well-established and newly developed research performing organisations are at the heart of our evolving R&I ecosystem. Collaboration and close ties with industry facilitate the emergence of high-tech companies and start-ups and creates opportunities for Slovenian companies to act as valuable partners in key global value chains. Both are supported by several intermediary organisations and structures, which promote knowledge transfer, cross-sectoral

and interdisciplinary collaboration, facilitate principles of Open Science and ensure that scientific results are communicated effectively to key stakeholders and the general public.

The framework conditions are set-up by the Government of Slovenia, with R&I policy development falling under the responsibility of the Ministry of Higher Education, Science and Innovation and the Development Council of the Government of Slovenia as the highest political expert advisory body, where all the relevant stakeholders are represented. The lively interplay within the national R&I ecosystem ensures that its actors are well connected to one another and to key global partners in R&I, fostering cutting edge research, increasing the long-term impact on societal change, and underpinning competitive innovative solutions to some of the most pressing societal challenges.

## Slovenia in figures

2.126.324

Total population

20.271 km<sup>2</sup>

Surface area

The capital Ljubljana with a population of

300.354

(metro area 556.862)

is host to some of the

most renowned R&I institutions in Slovenia. including its oldest and largest university, the University of Ljubljana and a majority of

research institutes.

40,7%

Share of population with tertiary education

79.987

Number of students

2,7%

Share of population with doctoral education (second highest in OECD)

1.4 billion €

R&D expenditure (2.13% of GDP)

## EIS 2025 key advantages

### Human resources

(e.g. population involved in lifelong learning, new doctorate graduates) 121.1

relative to EU

### Innovators

(e.g. SMEs introducing product innovations)

119.7

relative to EU

### . . . la Linkages

(e.g. Public-private co-publications):

130.1

relative to EU

## R&I targets

### Leading innovator

by 2030 according to EIS

**GERD:** 3,5% of GDP by 2030 Government R&D expenditure: 1,5 of GDP by 2027

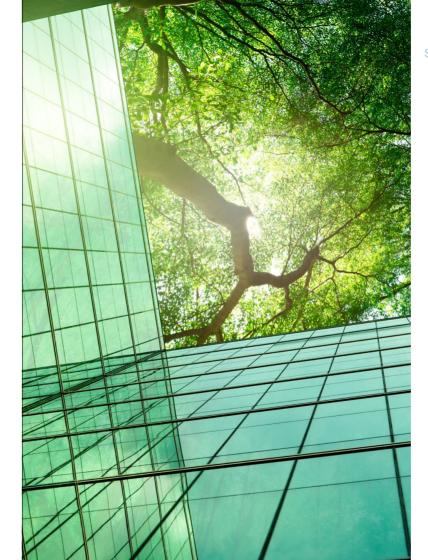
# GOVERNANCE OF THE R&I ECOSYSTEM

### Legislation and strategic priorities

Within the framework of its strategic priorities (Resolution on the Slovenian Scientific Research and Innovation Strategy2030 - ReZriS30) in the field of research and innovation (R&I). Slovenia has set itself ambitious development objectives, one of them being to become a leading innovator within the European Innovation Scoreboard (EIS) by 2030. To achieve these goals, Slovenia has been intensively modernising its national R&I ecosystem. In line with these objectives and with the general governmental reforms, the Ministry of Higher Education, Science and Innovation was formed in 2021, consolidating R&I under the policy responsibility of a single government entity. Similarly, a single executive agency (the Research Funding Organisation - RFO) for R&I had been established in Slovenia, which

operates as the <u>Slovenian Research and Innovation</u> <u>Agency</u>. This streamlined approach aims to enhance coordination and effectiveness in advancing Slovenia's R&I aspirations.

ReZrlS30 is the principal strategic document in the field of R&I in Slovenia. It sets several ambitious objectives and provides concrete measures to achieve them by 2030. ReZrlS30 outlines five (5) distinct policy objectives that form the foundations of a modern R&I ecosystem: (1) Effective governance of the scientific R&I system; (2) Enhanced investment in R&I; (3) Researchers' career development and excellent science; (4) Excellent and internationally competitive Research Infrastructure; (5) Accelerated cooperation between science and industry, knowledge transfer and innovation. Several sectoral



strategies, such as <u>Slovenia's Sustainable Smart Specialization Strategy - S5</u> and the <u>Slovenian Industry Strategy</u>, complement <u>ReZrIS30</u>.

The new Scientific Research & Innovation Activities Act increases the public financial investment by the government and regulates funding, allowing financial stability and autonomous development of scientific research activities and the research performing organisations. The new act provides public research institutes with a higher degree of autonomy, including the possibility to transfer knowledge more quickly and efficiently (through spin-offs and spin-outs) and the possibility to set up a company in order to transfer knowledge more quickly and efficiently. The act also introduces elements of results-based funding through contractually defined KPIs, greater incentives to reward researchers, both in terms of financial incentives for international cooperation and cooperation with industry. The act creates the conditions for Slovenia to become an internationally attractive destination for R&I, with a focus on the return of Slovenian researchers. working abroad.

The Ministry of Higher Education, Science and Innovation is the primarily responsible public body and policy authority in the field of R&I in Slovenia. It focuses on the quality development of higher education, the transfer of knowledge into practice for the development of society as a whole, and the creation of a stimulating environment for R&I. "Our goal is for Slovenia to become a country of knowledge, science and innovation and to

Policy & executives

be recognised as such around the world." In line with the whole-of-government-approach, defined in the new Scientific Research & Innovation Activities Act, other ministries have been defined as responsible for financing R&I, such as ministries, responsible for economy, cohesion policy and development as well as other ministries in line with their duties and responsibilities.

### Advisory bodies

The Development Council of the Republic of Slovenia is the government's expert advisory body for R&I. It is composed of ministers, responsible for policy areas directly connected with R&I (science, innovation, economy, finance, development, digitalization, energy, environment, agriculture) and representatives of key R&I stakeholders (Slovenian Academy of Sciences and Arts, Chamber of Commerce and Industry of Slovenia, Slovenian Rectors Conference, Coordination of Independent Research Institutes - KOsRIS, trade unions, students, researchers, researchers from abroad, strategic R&I partnerships, ...). The Council proposes measures in the field of R&I policy, monitors results, impacts and developments, and the implementation of the programming documents for R&I activities."

The Programme Committee for the Operational Coordination of scientific research and innovation policy develops topical basis for a coherent R&I policy, contributing to a more efficient and coordinated management of activities, coordinates the actions of different ministries and agencies and addresses key issues for standardisation and coherence in the implementation of R&I policies. It discusses and coordinates the strategic and operational aspects relating to scientific R&I policy planning and liaises with the Development Council of the Republic of Slovenia.



## **R&I FIGURES**

National financing

**2,13 %** of GDP

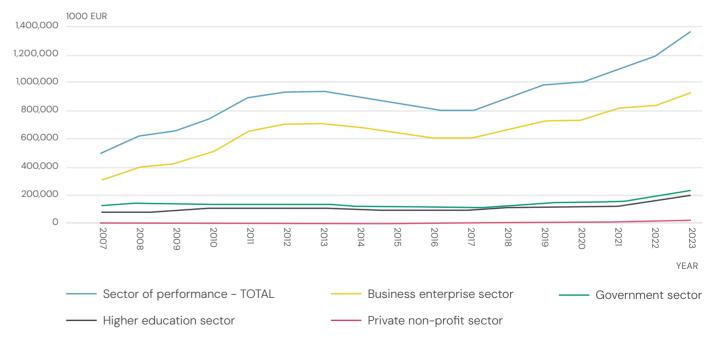
**O,81 %** of GDP

Total investment in R&I

Total public investment

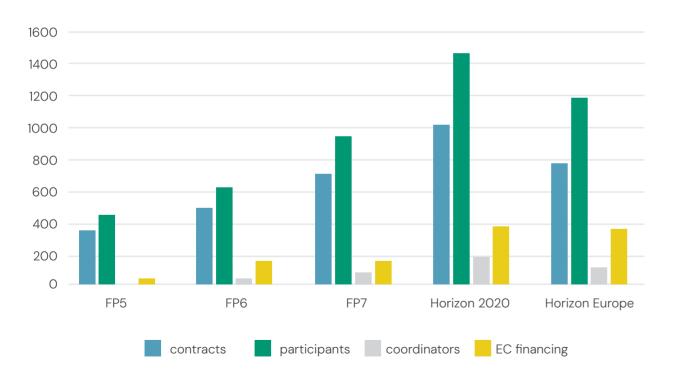
**Objectives:** Public investment in R&I to reach 1.25% of GDP by 2030, with public investment at least 1% of GDP by 2027, and total investment R&I to reach 3.5% of GDP by 2030. Under the Scientific Research and Innovation Activities Act adopted in 2021 stable funding for RPOs has been introduced, with the budget for scientific research to gradually increase to reach at least 1% of GDP till 2027.

## Gross domestic expenditure on R&D (1000 EUR) by SECTOR OF PERFORMANCE AND YEAR



Source: Statistical Office of Rebublic of Slovenia

### R&I Perfomance - Slovenia in EU Framework Programmes



## Research performing organizations (RPOs)

Slovenia has 3 public universities, 4 private universities, 19 national research institutes and 760 R&I industry units. Together they represent the principal landscape of the RPOs in Slovenia.

### Centres of excellence

Centres of Excellence (CoE) are defined as high quality multidisciplinary teams of researchers from academia and business. They cover a wide variety of scientific fields and societal challenges, among them health, space, chemistry and biology, low-carbon technologies, advanced materials, polymers and pharmaceutics. Eight CoE haven been established and cover a wide variety of scientific fields and societal challenges, among them health (CO BIK), space (CO SPACE), chemistry and biology (CIPKEBIP), low-carbon technologies (CO NOT), biotechnology (ENFIST), polymers and pharmaceutics (POLIMAT). More recently, the InnoRenew Centre of Excellence, dedicated to carrying out cutting-edge scientific

research on the use of renewable materials, to innovative and interdisciplinary research on wood and its applications, and to the transfer of knowledge and results to the economy and society was established. The Centre of Excellence is housed in the largest timber building in Slovenia, where the sinks are also made of Slovenian wood and bring "elements of nature into the space, in accordance with the REED principles" (Restorative Environmental and Ergonomic Design). The Centre for the Technologies of Gene and Cell Therapy was approved for support from Horizon Europe in 2022 and represents a Centre that will set new milestone in the Slovenian healthcare system.

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# Strategic development and innovation partnerships (SRIPs)

The Strategic development and innovation partnerships (SRIPs) are an effective instrument for connecting actors in the fields of research, development and innovation, thus contributing to the development and added value of the economy. Currently, Slovenia has 9 running SRIPs in fields of Smart Cities and Communities, Smart Buildings and Home including Wood Chain, Circular Economy, Sustainable Food Production, Information and Communication Technologis, Factories of the Future, Health – Medicine, Mobility and Materials as end Products.



### Slovenian Strategy of Sustainable Smart Sepcialisation - S5



### R&I capacities

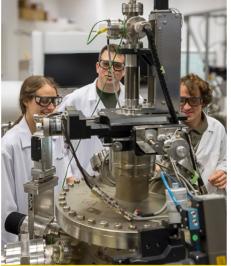
### **RESEARCH PERFORMING ORGANISATIONS**







19 national research institutes



760 R&I industry units

# Universities and independent higher education institutions

Higher education in Slovenia is guided by the The studies are organised by both public and private universities, and other higher education institutions, namely at faculties, art academies, and higher vocational colleges.

The activities and responsibilities of the higher education institutions, i. e. scientific R&I and education, are specified by law.

Currently, the <u>Resolution on the National programme of higher education 2030</u> provides the strategic framework and objectives within higher education. The key strategic goal is to raise the level and quality of the higher

educational qualification in Slovenia, improve the responsiveness, flexibility and attractiveness of the higher education system irrespective of economic needs, non-economic requirements and expectations of the society; accelerate its integration internationally; improve the accessibility of education and open up opportunities for continuous education and lifelong learning in higher education, all over Slovenia. Furthermore, higher education in Slovenia strives to increase the intensity of research and innovation and facilitate the transfer of knowledge to the societal environment.

# RESEARCH PERFORMING ORGANISATIONS

### **Public Universities**

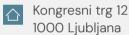
A university is an autonomous, scientific, research, artistic and educational higher education institution with a special status, providing for the development of science, professionalism and the arts, and transmitting knowledge in several scientific or artistic fields or disciplines through faculties, art academies or colleges of education. The Constitution of the Republic of Slovenia guarantees the autonomy of public universities. In the educational process, they enable students to acquire the knowledge and competencies necessary for further education or employment. In order to establish a university, study programmes must be accredited at all three levels in at least four scientific research disciplines and five educational fields.



### University of Ljubljana



### UNIVERZA V LJUBLJANI



www.uni-lj.si

rektorat@uni-lj.si

### **EMPLOYEES**

**††††** 6.891

**1** 3.102 **1** 3.789

www.facebook.com/@unili

www.instagram.com/univerza\_v\_ljubljani

www.linkedin.com/school/university-of-ljubljana

The University of Ljubliana cultivates fundamental, applied and developmental research and strives to achieve excellence and the highest quality in all fields of science and art. It is an increasingly recognizable, internationally open and excellent research university that contributes to the quality of life. Based on its own research, it educates critical-thinking top scientists, artists and experts who are qualified to manage sustainable development.

University researchers and research groups demonstrate their scientific research work with topnotch projects in the fields of art, sports, humanities, natural sciences, technology, social sciences and medicine. "We exchange achievements in the field of science and art with other universities, scientific research institutions, the economy and the wider social environment. In this way, we contribute our share to the treasury of knowledge and transfer knowledge from it to students and to society."



- 1. In 2023, 151 new projects financed from European programs (58 Horizon Europe projects and 93 projects from various programs, such as Digital Europe, Life+, Justice, Erasmus+, COST actions, Interreg, etc. ), of which there are 25 where UL is the supporting organization. UL participation in European projects: 645 (98 with UL as lead organization).
- 2. ERC advanced grant FIRSTLIGHT
- 3. ERC advanced grant DEAGENCY
- 4. ERC advanced grant QUEST
- 5. ERC Proof-of-the-concept Grant E-CO-HEAT

- 1. E-RIHS (European Research Infrastructure for Heritage Science)
- 2. CESSDA (Consortium of European Social Science Data Archives)
- 3. FLIXIR State-of-the-art infrastructure for life sciences
- 4. ATRIS European Advanced Translational Research Infrastructure in Medicine
- 5. SiMBioN Slovenian Multimodal Bioimaging Node

- 1. Eutopia
- 2. The Guild
- 3. LERU CE7
- 4. Rector's Forum of SE Europe
- 5. Cooperation in 33 networks, 556 concluded international institutional agreements













### University of Maribor



Slomškov trg 15 2000 Maribor

www.um.si/en/home-page

rector@um.si

### **EMPLOYEES**



986

1.264

www.facebook.com/UniversityOfMaribor www.instagram.com/univerza\_v\_mariboru/

www.linkedin.com/school/univerza-v-mariboru

University of Maribor is Slovenia's second largest university, actively developing content for knowledge and research integration and cooperation with the economy, working with local communities, education, research and business institutions as a globally recognised innovation ecosystem. Through continuous development and involvement in international integrations and centres of excellence, it provides a stimulating environment for the achievement of cutting-edge research and artistic excellence.

The University of Maribor achieves excellent results and provides a supportive and stimulating environment for in-depth research and activities, especially in the following areas: data science and artificial intelligence in biomedicine, materials and technologies, heritage science and climate change, art, semiconductors and space technologies, life sciences, environmental science with energy to combat climate change, medical technologies, advanced GIS technologies and quantum technologies.



### Key international projects since 2020

- 1. HosmartAl "Hospital Smart development based on Al
- 2. HybridNeuro "Hybrid neuroscience based on cerebral and muscular information for motor rehabilitation and neuromuscular disorders
- 3. oooScience! "Fake news and conspiracy theories? Let's empower (ourselves for) Science!
- 4. MAHEPA "Modular Approach to Hybrid-Electric Propulsion Architecture
- 5. TRISAT an institutional non-commercial nanosatellite mission in cooperation with ESA -The European Space Agency

### Key Research Infrastructures

- Upgrading national research infrastructures -HPC RIVR
- 2. Upgrading national research infrastructures RIUM
- 3. Data base for research infrastructure UM BRiUM
- 4. The University of Maribor Infrastructure programme
- 5. Access to databases services at the University Library of Maribor

- 1. ATHENA European University
- 2. CoARA Coalition for Advancing Research Assessment
- 3. ESA The European Space Agency
- 4. Partnership with Graz University of Technology and Elettra Sincrotrone Trieste
- 5. <u>EuroHPC JU</u> European High Performance Computing Joint Undertaking

### University of Primorska





Titov trg 4 6000 Koper

www.upr.si/en

info@upr.si

### **EMPLOYEES**

**†††** 782

314 🛉 468

www.facebook.com/UniversityUP/?locale=sl\_Sl www.instagram.com/upr.si/

www.linkedin.com/school/universityofprimorska

The University of Primorska is a medium-sized, internationally integrated university - public institute composed of 6 faculties, 1 research institute, and 2 additional institutes. It implements educational programs at all three levels of study and covers all research fields. It enrolls approximately 6.000 students annualy. In 2023, UP officially became a full member of **Transform4Europe**, a European university network that brings together over 150.000 students and 10.000 researchers.

Their areas of expertise include:

- Algebraic graph theory
- Archeology and cultural heritage
- Cryptography
- Human-computer interaction
- Renewable resources and a healthy living environment
- Entrepreneurship and innovation
- Suicidology
- Unesco chair of interpretation and education for enhancing integrated heritage approaches



### Key international projects since 2020

- I. InnoRenew CoE Renewable materials and healthy environments research and innovation Centre of Excellence
- 2. NEBA Alliance New European Bauhaus Academy Alliance
- 3. STEPCHANGE Science Transformation in EuroPe through Citizens involvement in HeAlth, conservation and energy rEsearch
- 4. GREENHERITAGE Nurturing a sustainable future in the gardens of time
- 5 COASTUR Sustainable Resilient Transformation of the Rural Coastal Tourism Industry

## Hyperspectral optical system

Key Research Infrastructures

- 2. Creep machine
- 3. 3D Printer OBJET260 Connex3
- 4. IonTorrent S5 System for next-generation sequencing
- 5. Short-Wave Infrared Camera SWIR-CL-400-N25E

- 1. Transform4Europe T4EU
- 2. European Network of Innovative Universities -**ENIHEI**
- 3. European Universities Association (EUA)
- 4. Rectors' Conference of the Universities of the Alps Adriatic Region (AARC)
- 5. Virtual University of the Adriatic-Ionian Basin (UNIADRION)

# Faculty of information studies in Novo mesto



Fakulteta za informacijske študije Faculty of information studio

Ljubljanska cesta 31a 8000 Novo mesto

www.fis.unm.si



info@fis.unm.si

### **EMPLOYEES**

**††††** 77

**†** 3



www.facebook.com/FakultetaFIS/

www.instagram.com/fis.nm/

in www.linkedin.com/school/faculty-of-information-studies

The Faculty of Information Studies, established in 2008, is the first public higher education institution in Southeast Slovenia. It offers free full-time and part-time studies at all three levels in fields like Informatics in Contemporary Society, Computer Science and Web Technologies, Data Science, Cyber Security, Business Informatics, Information Society, and Information Sciences. We They are renowned for interdisciplinary research in Al, supercomputing (HPC Trdina), and complex systems.



### Key international projects since 202

- 1. Al-powered Next Generation of VET
- 2. Empowering participation and accelerating synergies in Widening countries with a focus on Green & Digital Transition
- 3. <u>Culinary Trail of the Ethnic and Local Cuisine in the Danube Region</u>
- 4. Smart, Resilient and Sustainable Communities European Digital Innovation Hub
- 5. Artificial Intelligence and Combined Survey Techniques for Stone Quarries Optimization

FACULTY OF INFORMATION STUDIES IN NOVO MESTO

### Key Research Infrastructures

- 1. HPC Trdina;
- Decision Support Systems Laboratory, Complex Systems and Data Science Lab, Graph Theory Laboratory, Laboratory for HPC, Al and Data Science;
- 3. Jean Monnet Centre of Excellence:
- 4. Intitute for social morphogenesis;
- 5. Knowledge and Technology Transfer Office

- I. Pennsylvania State University
- 2. The European Organization for Nuclear Research (CERN)
- 3. European Southern Observatory
- 4. Craiova University
- 5. International Conference on Information Technologies and the Information Society ITIS



### Public research institutes

A public research institute is an institute established by the Republic of Slovenia for the purpose of independent scientific research activities on the proposal of the ministry responsible for science or the Slovenian Academy of Sciences and Arts (SASA). An institute is established for the purpose of performing a public service under the Scientific Research and Innovation Activities Act and is defined in the Act of Establishment as a public research institute. There are 19 active public research institutes in Slovenia.



### Geological Survey Of Slovenia



Dimičeva ulica 14 1000 Ljubljana

www.geo-zs.si

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### **EMPLOYEES**

**† † † †** 132

**†** 55 **†** 77

www.facebook.com/GeoloskizavodSlovenije

Geological Survey of Slovenia focuses on fundamental and applied geoscience research to understand the geosphere's origin, structure, and dynamics, and its interactions with other Earth systems, including the anthroposphere. By collecting and interpreting data, GeoZS produces maps, models, and reports to inform industry, policy-makers, and the public. Its expertise supports sustainable land use, resource management, and a safe living environment, promoting humanity's well-being and prosperity.

Four research programmes form the basis of scientific work:

Regional geology: Groundwater geochemistry; Mineral resources; Dynamic Earth

Strategic development is grouped into five thematic areas that reflect the global, European and national challenges:

Environmental changes and quality of life: geological hazards; Energy transition and use of carbon-free sources: twin development



- I. GSEU Geological Service for Europe
- 2. EO4MASRISK Ground Deformation and Risk Detection Information Service, European Space Agency - ESA
- 3. INFO-GEOTHERMAL Supporting the efficient cascade use of geothermal energy by making available official and public information
- 4. MAURI-CE Management of urban water resources in Central Europe facing climate change
- 5. Mineral potential of the ESEE region

- I. Geological field observatories
- 2. Geothermal Laboratory
- 3. Laboratory for Electron Microscopy and Microanalysis
- 4. Hydrogeological Laboratory
- Applied Geophysical 5. Equipment (Seismics, Ground Penetrating Electrical Resistivity Tomography)

- 1. EuroGeoSurveys (EGS)
- 2. International Union of Geological Sicences (IUGS)
- 3. World Community of Geological Surveys (WCOGS)
- 4. European Institute of Innovation and Technology - RawMaterials (EIT RawMaterials)
- 5. European Geothermal Energy Council (EGEC)

www.linkedin.com/company/geological-survey-of-slovenia Sustainable use of mineral and energy resources; www.youtube.com/@geoloskizavodslovenije6306/ Digital transformation with the goal of digital

### The Slovenian Forestry Institute





Večna pot 2 1000 Ljubljana



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info@gozdis.si

### **EMPLOYEES**





www.facebook.com/gozdis.si

The Institute (SFI) is an internationally renowned research institution specializing in forest ecosystems, biodiversity, forest health, and sustainable forest management. It is recognized for its contributions to both basic and applied science on a wide range of forestry topics. SFI plays a key role in promoting forest resilience in the face of global environmental change, and collaborates with various national and international stakeholders through research projects and partnerships.

A public research organization of national importance, internationally recognized for leading and participating in state of the art research and innovation projects related to forests, forest landscapes, forest ecosystems, ecology, forest management, and the use of forest goods and services, as well as game and hunting. It conducts research on forest biodiversity in the context of climate change and plays a pivotal role in advancing knowledge about the role of forests in a changing environment.



### Key international projects since 2020

- 1. OptFORESTS Harnessing forest genetic resources for increasing options in the face of environmental and societal challenges
- 2. FOREST4EU European innovation partnership network promoting operational group dedicated to forestry and agroforestry
- 3. PathFinder Towards an Integrated Consistent European LULUCF Monitoring and Policy Pathway Assessment Framework
- 4. FORSAID Forest surveillance with artificial intelligence and digital technologies -
- 5. SOIL: OurlnvisibleAlly Facilitating implementation of EU soil legislation in Alpine municipalities, thus seizing transnational knowledge, mutual learning & concrete, cross-sectoral implementation on local level

### Key Research Infrastructures

- 1. Laboratory facilities (e.g. forest ecology and forest protection, forest genetics and physiology, microscopy)
- 2. Permanent research plots across Slovenia to monitor the state of the forest ecosystem and its response to climate change and anthropogenic influences (e.g. National Forest Inventory plots, Forest genetic monitoring plots)
- 3. Seed, nursery and forest protection Centre (SDVG) - new facility (2026) will include Seed bank and BSL3 level laboratory

- 1. International Union of Forest Research Organisations
- 2. European Forest Institute
- 3. Institut national de recherche pour l'agriculture, l'alimentation et l'environnement (INRAE). France
- 4. ICP Forests International Co-operative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests)
- 5. Consiglio Nazionale delle Ricerche (CNR), Italy

### The Jožef Stefan Institute



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### **EMPLOYEES**



**†** 743



www.facebook.com/IJS.SI/

www.instagram.com/institutjozefstefan/

www.linkedin.com/company/jozef-stefan-institute/

X https://x.com/JSI\_SLO/

The Institute's mission is to create, disseminate and transfer knowledge in the natural, life and engineering sciences. The Institute carries out cutting-edge research and technology development such as nanotechnologies, new materials, biotechnologies, management and production technologies, communication technologies, computing and knowledge technologies, environmental technologies and reactor technologies.

The Institute's main objectives are to provide professional scientific and applied results in the form of processes, products and scientific advice, and to nurture highly qualified young scientists. The Institute is committed to international cooperation with many of the world's leading scientific research institutions and demonstrates its scientific excellence through regular publications in international scientific journals with the highest impact factors.



### Key international projects since 2020

- 1. <u>HiPeR-F:</u> Challenging the Oxidation-State Limitations of the Periodic Table via High-Pressure Fluorine Chemistry
- 2. <u>DrumS</u>: Weakly Driven Quantum Symmetries
- 3. Boundary: Boundaries of Quantum Chaos
- 4. <u>HIMMS</u>: High-Resolution Imaging of Metastable States
- 5. SQUASH: Slovenian Quantum Science Hub

### Key Research Infrastructures

- 1. TRIGA Reactor
- 2. The tandem ion accelerator "Tandetron"
- 3. Transmission electron microscopy Sepctra 300 and other advanced microscopes (AFM, CLM, itd.)
- 4. Gravitational Physiology Laboratory ("human centrifuge") at Planica Nordic Centre
- 5. Mass spectrometer TOF-SIMS and other spectrometers (XPS, AES, MC-IPC, HRX, itd.)

- 1. Excellent science (ERC, ERI, FET, MSCA), Industrial Leadership, Societal challenges, SwafS, Crosscutting activities, EIT Health
- Excellent science (ERC, MSCA, ERI), Global challenges & European industrial competitiveness, Innovative Europe (EIC, EIT), Widening participation (e.g. Twinning), Implementing defence fund
- 3. Fusion, Fission
- 4. ERASMUS+
- International business and research cooperation (EIT Manufacturing, CNR - Consiglio Nazionale delle Ricerche - Italy, Germany, USA, Austria, France, Ireland, Denmark, Belgium, Bosnia and Herzegovina, etc.)



# Institute for Economic Research



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### **EMPLOYEES**







www.linkedin.com/company/institut-za-ekonomska-raziskovanja-institute-for-economic-research

The Institute for Economic Research, established in 1965, is the largest public research institution in the field of economics in Slovenia. Its mission is to create fundamental knowledge and conduct cutting-edge research in economics, relevant for the sustainable development. Its mission is to create fundamental knowledge and conduct cutting-edge research in economics relevant for the sustainable development. Its research focus is based on the research programme "Slovenia's New Development Strategy in the EU", which is complemented by the implementation of a number of national and international projects.

The Institute is focused on development of fundamental knowledge and conducting ground-breaking research in economics, focusing on sustainable development. Its research, applying quantitative and qualitative methods, covers the following areas: economic development drivers, technological development and innovation, pension and healthcare systems, long-term care, labour market and education, regional and structural development, environment and energy, culture and creative sector, business consulting.



### Key international projects since 202

- 1. SUSTAINWELL
- 2. <u>MIGAPE</u> Mind the Gap in Pensions: Simulation and Knowledge Dissemination on Gender Gaps, their Underlying Causes and how they should be Reduced
- 3. LIFE ClimatePath2050
- 4. <u>IMPACT HTA</u> Improved methods and actionable tools for enhancing HTA
- 5. <u>ForHeritage</u> Excellence for integrated heritage management in central Europe

### **Key Research Infrastructures**

 SHARE (a research infrastructure for studying the effects of health, social, economic and environmental policies over the life-course of European citizens and beyond)

### Key international partnerships

- 1. The World Economic Forum
- 2. The Joint Research Centre
- 3. The World Intellectual Property Organization
- 4. The European Social Policy Network
- 5. The Royal Statistical Society

INSTITUTE FOR ECONOMIC RESEARCH

# Institute for Hydraulic Research





Hajdrihova ulica 28 1000 Ljubljana



www.hidroinstitut.si



hidroinstitut@hidroinstitut.si

### **EMPLOYEES**







The mission of the Institute for Hydraulic Research

is to transfer years of experience and knowledge in hydraulic engineering into practice, to conduct research on hydraulic phenomena in physical models and to provide a high-quality basis for understanding hydraulic phenomena. In the past, research on hydropower dominated, but today this research is being joined by research on topics related to pressing issues of modern society, such as flood safety, ecological restoration and sediment transport.

The Institute has been integrating various numerical tools into the solution of open hydraulic engineering questions for many years. Despite the rapid development of numerical tools, research in the covered and open-air hydraulics laboratory of the Institute still remains crucial for the analysis of the design situation when data from nature are not available, and for fundamental and applied research, where physical modelling allows a systematic treatment of a particular phenomenon.



### Key international projects since 2020

- 1. <u>RENATA</u>: Integrated ecological restoration of the Kučnica/Kutschenitza River as a sustainable water management strategy with the aim of improving the ecological situation
- 2. <u>LIFE IP RESTART</u>: Boosting waste recycling into valuable products by setting the environment for a circular economy in Slovenia
- 3. Hydraulic model research of the River Adige section through Verona

### Key Research Infrastructures

- 1. Covered laboratory for conducting hydraulic model research
- 2. Open area for conducting hydraulic model research
- 3. Pressure station for tests of hydraulic systems operating at pressures up to 1,5 bar and with a discharge capacity up to 1200 l/s.
- 4. Two testing flumes
- 5. Underground technological reservoir

INSTITUTE FOR HYDRAULIC RESEARCH

# The Institute of Metals and Technology



Lepi pot 11 1000 Ljubljana

www.imt.si



info@imt.si

### **EMPLOYEES**



39





IMT is a public research institute primarily engaged in research and also in educational activities in the field of metallic materials and technologies. Its primary mission is to generate new knowledge in the areas of metallurgy, tooling, additive technologies, biomaterials and nanotechnology. Its secondary mission is the transfer knowledge to meet the needs of manufacturing enterprises, thermal and nuclear energy sectors, to improve the quality of life and promote sustainable development.

IMT possesses advanced expertise in the characterization of metallic materials at the macro, micro, and atomic levels. Additionally, it specializes in both static and dynamic mechanical testing and has extensive knowledge in the fields of tribology and biodegradable metallic materials. Furthermore, IMT has numerous publications in the area of metallic material production, including induction melting, horizontal continuous casting, and additive technologies.



### Key international projects since 2020

- 1. Green Additive Manufacturing through Innovative Beam Shaping and Process Monitoring InShaPe,
- CEUS GAČR project (Czech-Slovenia) N2-0182: Development of advanced bioabsorbable Zn-based materials using powder-metallurgy techniques
- 3. <u>CEUS NCN GAČR</u> project (Poland-Czech-Slovenia) N2-0276: New ODS steel structure for extreme environments using the ultrasonic dispersion of nano-oxides in combination with SLM and PPS
- 4. EUROfusion in EURATOM
- 5. Project <u>22IEM04</u> MQB-Pascal from Program Metrology Partnership

# THE INSTITUTE OF METALS AND TECHNOLOGY

### Key Research Infrastructures

- 1. TEM/STEM EDS Thermo Fisher Scientific Talos F200i
- 2. PBF-LB/M, Aconity Mini and Aconity Midi +
- 3. SEM Thermo Fisher Scientific Apreo 2S
- 4. Scanning Electron Microscope ZEISS Crossbeam 550 FIB-SEM Gemini II z EDAX
- Hybrid plasma ultrasound/induction atomizer AMAZEMET 2.0

- Max Planck Institute for Sustainable Materials, Duesseldorf, Germany
- 2. University of Chemistry and Technology in Prague, UCT Prague, Czech Republic
- 3. Faculty of Materials Science and Engineering, Warsaw University of Technology, Poland
- 4. Technical University of Munich, Germany
- 5. Lund University, Lund, Sweden

## Institute of Mathematics, Physics and Mechanics



Jadranska ulica 19 1000 Ljubljana

www.imfm.si



### **EMPLOYEES**



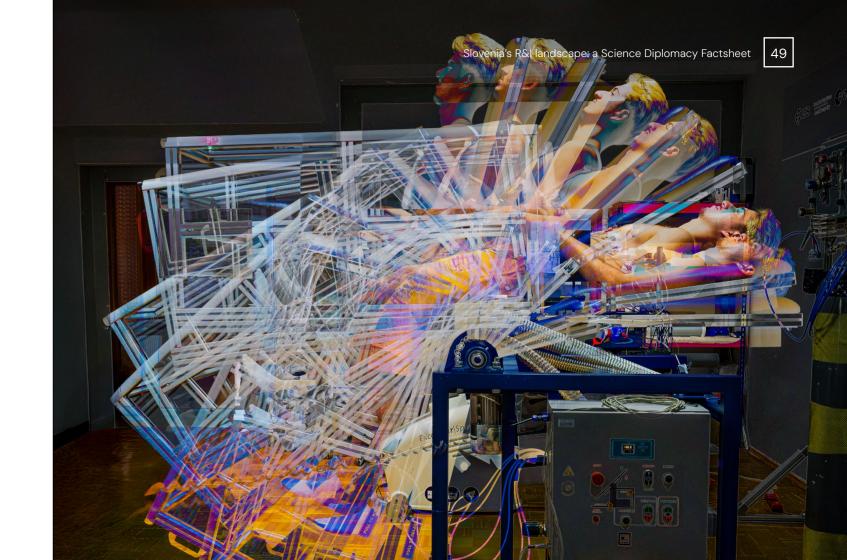




The institute is the central and largest scientific research organization in the field of mathematical sciences in Slovenia. We conduct top-tier research in the fields of mathematics, physics, and theoretical computer science. In collaboration with Slovenian universities, we train young researchers, participate in the best international research networks and we serve as a bridge between theoretical science and its application in the economy.

The institute conducts research in mathematics and physics. It focuses on complex, harmonic, and functional analysis, graph theory, algebra, topology, theoretical computer science, magnetism in condensed matter physics, and magnetism in the living state-biomagnetism.

- 1. Laboratory for NQR and weak magnetic fields
- 2. Mathematical Library



### The Institute for Fthnic Studies



Eriavčeva cesta 26 1000 Ljubljana

www.inv.si

inv@inv.si

### **EMPLOYEES**



**1** 8 **1** 18

www.facebook.com/Institutzanarodnostnavprasania www.linkedin.com/company/instituteforethnicstudies www.youtube.com/@institutzanarodnostnavpras9059

www.x.com/InEthnicStudies

The Institute for Ethnic Studies is the oldest scientific research institute in Slovenia, with origins dating back to 1925. It is a public research institute in the field of ethnic studies, that performs research, monitors, interprets and presents in an interdisciplinary and multidisciplinary manner historical and contemporary dynamics related primarily to the Slovene nation, Slovene communities in neighbouring countries, Slovene emigration, national minorities in Slovenia and international minority protection.

The institute demonstrates scientific excellence through incisive and high-quality scientific research, projects and publications, whose significance and resonance often go beyond the national context. A wide range of scientific research topics are studied by a top-quality, interdisciplinary scientific staff, who also shares their knowledge through teaching and public engagement. The Institute has been very successful in obtaining international projects and in networking with related institutions abroad.



### Key international projects since 2020

- 1. LEGITIMULT Legitimate Crisis Governance in Multilevel Systems
- 2. MINCOOP Conceptualization Operationalization of Minorities in the Practice of UN Treaty Bodies
- 3. Primis Plus: Multicultural stories: a sensorial journey through local minorities' point of view
- 4. CUI RFM: An inclusive culture of remembrance and cross-border cooperation in education and performing arts
- 5. 100 years in the balance: the Hungarians of Prekmurje in the light of statistics

### Key Research Infrastructures

- 1. Library
- 2 Information and documentation centre
- 3. Digital tools and databases (interactive maps)

- 1. IMISCOE (International Migration Research Network)
- 2. COST action PLURILINGMEDIA
- 3. Academic network on interethnic relations and inorities in Southeast Europe



### Institute of Contemporary History



INŠTITUT INSTITUTE
ZA NOVEJŠO ZGODOVINO OF CONTEMPORARY HISTORY

Privoz 11 1000 Ljubljana

www.inz.si

☑ <u>info@inz.si</u>

### **EMPLOYEES**

**††††** 57

24 🛊 33

www.facebook.com/InstitutZaNovejsoZgodovino/ www.instagram.com/institut\_za\_novejso\_zgodovino/

https://www.linkedin.com/company/in%C5%Altitut-za-novej%C5%Alo-zgodovino

The Institute of Contemporary History is a modern historical institute with a sixty-year tradition, keeping pace with the development of historiography and considering the achievements of other humanities, social sciences and especially digital humanities. It seeks to keep under constant review the starting point of the discipline, the influences of the environment and national science policy. The Institute will continue to walk the line between the past and the present.

The Institute of Contemporary History is increasingly focused on understanding and solving the current social problems of our time, which are multifaceted and often global in nature. The creation of new, excellent and indepth knowledge therefore requires interdisciplinary and technologically advanced research based on innovative methods in internationally intertwined groups of motivated researchers.



### Key international projects since 2020

- ARENAS: Analysis of and Responses to Extremist Narratives
- 2. TransSocio: Transnational sociology and concepts of social expertise in Eastern Europe, 1970s-2000s
- 3. BENASTA: Becoming National against the State: Popular discontent and adherence to minority nationalisms in late nineteenth-century Eastern Europe
- 4. ParlaMint: Comparable and Interoperable Parliamentary Corpora (CLARIN ERIC)
- 5. ParlaCAP: Comparing agenda settings across parliaments via the ParlaMint dataset (OSCARS)

### Key Research Infrastructures

- Research Infrastructure of Slovenian Historiography
- 2. History of Slovenia SISTORY portal
- 3. Slovenian Digital Research Infrastructure for the Arts and Humanities (<u>DARIAH-SI</u>)
- 4. Common Language Resources and Technology Infrastructure, Slovenia (CLARIN.SI)
- 5. Repository for Slovenian Digital Humanities (SIDIH)

### Key international partnerships

- Digital Research Infrastructure for the Arts and Humanities (<u>DARIAH ERIC</u>)
- 2. European Information and Research Network on Parliamentary History (<u>EuParl.net</u>)

INSTITUTE OF CONTEMPORARY HISTORY

# The National Institute of Chemistry



Hacquetova ulica 19 1000 Ljubljana

<u>www.ki.si</u>

glavna.pisarna@ki.si

### **EMPLOYEES**

**††††** 437

1 20

🛉 232

www.facebook.com/kemijskiinstitut/

www.linkedin.com/company/geological-survey-of-slovenia/

www.instagram.com/kemijski

<u>www.x.com/kemijski</u>

The National Institute of Chemistry is a scientifically excellent, established and breakthrough research institution based in Europe. With our cutting-edge research, we are enriching the global treasury of knowledge by solving the most pressing challenges facing society including: health, sustainable energy, climate change, a circular economy and safe food. We successfully transfer knowledge to industry and, in the long-term, support the role of science in the development of society.

Basic and applied research are oriented towards fields which are of long-term importance to both Slovenia and the world: materials research, life sciences, biotechnology, chemical engineering, structural and theoretical chemistry, analytical chemistry and environmental protection; through which the institute is in line with the needs of the domestic and foreign pharmaceutical, chemical, automotive and nanobiotechnological industries.



### Key international projects since 202

- SUSHEAT Horizon– Smart integration of waste and renewable energy for sustainable heat upgrading in industry
- 2. <u>CTGCT</u> Horizon– Centre for the Technologies of Gene and Cell Therapy
- 3. <u>BATMASS</u> i3– EU circular battery valley for second life, recycling and remanufacturing of materials and black mass
- 4. <u>UPSTREAM</u> Horizon– Circular and Bio–Based Solutions for the Ultimate Prevention of Plastics in Rivers Integrated with Elimination And Monitoring Technologies
- 5. <u>MULTIXSCALE</u> –Euro HPC– Centre of Excellence in exascale-oriented application co-design and delivery for multiscale simulations

# THE NATIONAL INSTITUTE OF CHEMISTRY

### Key Research Infrastructures

- Scanning transmission electron microscope and CryoEM miscroscope
- 2. High resolution powder x-ray diffractometer
- 3. NMR spectrometer
- 4. Karl Zeiss Supra 35 VP Electronic Microscope with EDX analysis
- 5. HPC technology

- 1. CERIC ERIC- Central European Research Infrastructure Consortium
- 2. Institute Max von Laue-Paul Langevin (ILL), France
- 3. SusChem European Technology Platform for Sustainable Chemistry
- 4. CECAM Centre Européen de Calcul Atomique et Moléculaire
- 5. ERICInstruct The leading research infrastructure in structural biology

### Agricultural Institute of Slovenia



Hacquetova ulica 17 1000 Liubliana

www.kis.si

info@kis.si

### **EMPLOYEES**







www.facebook.com/KISinstitut

www.instagram.com/kis\_institut

www.linkedin.com/company/kmetijski-institut-slovenije

www.x.com/KISinstitut

The Institute is Slovenia's leading public agricultural research organization, addressing modern agriculture, environmental protection and ecology. Key areas include plant and animal production, fruit growing, viticulture, soil and environmental protection, agricultural engineering, and economics. We oversee product quality, provide training, and offer advisory services, along with authorizations and accreditations in agriculture.

**Institute** conducts state-of-the-art and innovative research in plant and animal production. breeding and genetics, fruit growing and viticulture, plant and environmental protection, soil use and soil protection, agricultural engineering and energy, and agricultural economics. We are actively involved in international cooperation, knowledge transfer, and research and innovation projects and programmes.



### Key international projects since 2020

- 1. Increasing the efficiency and competitiveness of organic crop breeding - ECOBREED
- 2. Genome and Epigenome eNabled breeding in MOnogastrics - GEroNIMO
- 3. Resilient beekeeping and breeding to safeguard natural genetic resources and pollination services - BeeGuards
- 4. Optimising renewable energy in rural areas for a sustainable and circular economy - ECOLOOP
- 5. Root phenotyping and genetic improvement for rotational crops resilient to environmental change - Root2Res

### Key Research Infrastructures

- . Experimental farm test / trials fields and greenhouses and experimental orchards
- 2. Central Laboratories Agrochemical Laboratory and the Oenological Laboratory

- 3. Genetics Laboratory (e.g. molecular biology analyses, genetics, population genetics).
- 4. Plant Protection Laboratory for pest diagnostics and remote sensing.
- 5. Centralized agricultural cattle breeding (Oracle): Model calculations KIS: sheets for agricultural products

- l. Institut national de recherche pour l'agriculture, l'alimentation et l'environnement (INRAE), France
- 2. Stichting Wageningen Research (WR), Netherlands
- 3. Consiglio Nazionale delle Ricerche (CNR), Italy
- 4. Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria (CREA), Italy
- 5. Aarhus Universitet, Denmark



### National Institute of Biology



Večna pot 121 1000 Liubliana

www.nib.si

tajnistvo@nib.si

### **EMPLOYEES**







www.facebook.com/NIBSIo

www.linkedin.com/company/national-institute-of-biology

The National Institute of Biology (NIB) is the largest independent public life sciences research institute in Slovenia. NIB's mission is to generate new knowledge in the biological sciences to understand life processes, conserve biodiversity and maintain a healthy environment to achieve a better quality of life and support sustainable development.

The main activities of the Institute are basic. developmental and applied research in the fields of life sciences and biotechnology, biophysics, biomedicine and systems biology. Many activities are related to environmental issues, agriculture, nutrition and increasingly to health. Interdisciplinary links are established in the fields of nature and environmental protection, informatics, pharmacy and medicine, agriculture, forestry, food, tourism, maritime transport, and spatial planning.



### Key international projects since 2020

- I. INEXTVIR Innovative Network For Next Generation Training and Sequencing of Virome
- 2. <u>CutCancer</u> Twinning for excellence to strategically advance research in carcinogenesis and cancer
- 3. SPACETIME Spatial Analysis of Cancer Evolution in the Tumour Immune MicroEnvironment
- 4. DIMARK Transnational Network for Linking Digital Earth Observation to Freshwater Markers for Better Understanding of Water-connected Climate Change Adaptation and Risk Prevention in Alpine Region
- 5. STOPP Strategies To Prevent and Reduce Plastic Packaging Pollution from the Food System

### Key Research Infrastructures

- Quarantine greenhouse and plant and tissue culture chambers with plant phenotyping system
- 2 3-D Laser Vibrometer
- 3. Transmission and in-line electron microscopes and confocal microscopes
- 4. Real-time PCR and digital PCR equipment
- 5. Research vessel and research buoy with associated instrumentation

- . European Reference Laboratory (Viruses and Bacteria)
- 2. PARC European Partnership for the Assessment of Risk from Chemicals
- 3. European Cooperation in Science and Technology (COST) - Ocean4Biotech
- 4. METROFOOD-RI Preparatory Phase Project: New research infrastructure in support of food and nutrition
- 5. EPSO European Plant Science Organisation

# The Educational Research Institute

PEDAGOŠKI INŠTITUT P 1965-202

Gerbičeva ulica 62 1000 Ljubljana

<u>www.pei.si</u>

pedagoski.institut@pei.si

### **EMPLOYEES**



9 🛉 40

www.facebook.com/pedagoski.institut/?locale=sl\_Sl www.x.com/pi\_slovenia

The Educational Research Institute is the leading national research institution in the field of education in Slovenia. Its mission is to develop and promote the quality of education with the aim of ensuring equality, fairness, sustainability, and social progress. Through research and international partnerships, it supports educational policies and contributes to creating social opportunities and learning environments that foster personal growth, social justice, and lifelong learning.

The Educational Research Institute pursues scientific excellence through advanced research in education. Priorities include effective teaching practices, social inclusion, equal opportunities, innovative methods, ethics, language use, and education digitalization. It supports policy development to enhance education quality, foster sustainable social progress, and strengthen competencies for future challenges.



### Key international projects since 202

- PISA (Programme for International Student Assessment)
- 2. <u>ICILS</u> (International Computer and Information Literacy Study)
- 3. <u>DECAP-HE</u> (Designing for Enhanced Competence through Active Participation in Higher Education)
- 4. <u>PIRLS</u> (Progress in International Reading Literacy Study)
- 5. <u>EDUCAT(H)UM</u> (Education at the Boundaries of the Human: The Challenge of New Technologies)

# THE EDUCATIONAL RESEARCH INSTITUTE

### Key Research Infrastructures

- 1. <u>Digital library</u> of the Educational Research Institute
- 2. <u>Infrastructure</u> program for data collection and archiving
- 3. Research centers
- 4. Licenses for advanced statistical software
- 5. Access for research groups by appointment

- International Association for the Evaluation of Educational Achievement (IEA)
- 2. Organisation for Economic Co-operation and Development (OECD)
- 3. European Educational Research Association (EERA)
- 4. Network of Education Policy Centers (NEPC)
- 5. Institute for Social Research in Zagreb (ISRZ)

## Rudolfovo – Science and Technology Centre Novo mesto

## RUDOLFOVO

Podbreznik 15 8000 Novo mesto

www.rudolfovo.eu

info@rudolfovo.eu

### **EMPLOYEES**

**††††** 53

**†** 26 **†** 27

www.facebook.com/Rudolfovo
www.linkedin.com/company/Rudolfovo

Rudolfovo - Science and Technology Centre Novo mesto co-creates, disseminates and transfers high-tech knowledge to partners in the economy. It does this by carrying out a multitude of industrial, applied and fundamental projects. The R&D activities are strengthened by four research groups: the Centre for Advanced Technologies, the Centre for Digitalisation, the Centre for Circular Economy and the Centre for Technology Transfer and Intellectual Property Rights.

**Rudolfovo** promotes scientific excellence through four centres focusing on Industry 4.0, digitisation and digital transformation of the economy, the circular economy, technology transfer to business and intellectual property. Our goal is to create a strong ecosystem of innovative, high-tech companies in Slovenia. We are building stability, quality jobs and competitiveness for the region through modern infrastructure, business support and inspiring young people to take up STEM careers.



### Key international projects since 2020

- 1. Culinary Trail
- 2. AI4VET4AI
- 3. RuBio
- 4. QEC4QEA

RUDOLFOVO – SCIENCE AND TECHNOLOGY CENTRE NOVO MESTO

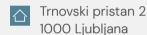
### Key Research Infrastructures

- 1. NIKON CT scanner
- 2. Fanuc training cell with ER-4iA robot
- 3. Power management system
- 4. RAPTOR 3DX 3D scanner
- 5. FANUC R-1000iA/80F Robotic Arm and 3D Vision Sensor 3DV/1600

- 1. ISA International Sociological Association
- 2. RSA Regional Studies Association
- 3. AUTM Tech transfer network
- 4. QUIC The European Quantum Industry Consortium
- 5. ASTP Knowledge Transfer Association

## The Urban Planning Institute of the Republic of Slovenia





www.uirs.si

info@uirs.si

### **EMPLOYEES**

**††††** 38

**†** 14 **†** 24



The Urban Planning Institute of the Republic of Slovenia (UIRS) is Slovenia's leading research institution in urbanism and spatial planning. UIRS focuses on sustainable mobility, urban innovations, smart cities, nature-based solutions, public participation, and urban regeneration. Collaborating locally and internationally, it contributes to quality urban living and sustainable development through research and expert analyses.

The Urban Planning Institute of the Republic of Slovenia (UIRS) achieves scientific excellence through an interdisciplinary approach, integration of research fields, and collaboration with international partners in projects such as Horizon Europe, DUT, JPI Urban EUrope and Interreg EU. Its scientific priorities include sustainable urban development, smart cities, nature-based solutions, public participation, spatial regeneration, and improving quality of life in cities.



### Key international projects since 2020

- 1. DISTENDER
- 2. Blue Green GOVERNANCE
- 3. SPADES
- 4. NATURO
- 5. TAP for uncertain futures EU

### Key Research Infrastructures

I. Participatory GIS research system

- 1. HEPA EU
- 2. POLIS
- 3. ENHR



## Slovenian National Building and Civil Engineering Institute



Dimičeva ulica 12 1000 Ljubljana



www.zag.si



info@zag.si

### **EMPLOYEES**





www.linkedin.com/company/zag-zavod-za-gradbenistvo-slovenije

ZAG is a public research institute, the main activity of which is scientific research in the field of civil engineering. Recently, it has adopted a transdisciplinary approach, with researchers combining knowledge from various fields to surpass the boundaries of individual disciplines. Quality research work, the ability to connect different disciplines, and the integration of fundamental and applied research to address realworld challenges contribute to ZAG's recognition.

ZAG prioritises the development of knowledge and research in the following areas:

- Sustainable use of resources in construction
- 2. Energy efficiency of the built environment in the construction sector
- 3. Safety, resilience and adaptability of the built environment
- 4. Healthy living/built environment
- 5. New test methods and digitisation in construction

"We build a safer and more sustainable society with developing new methods and technologies and by observing the sociological aspects of living."



- 1. FRISSBE
- 2. CINDERELA
- 3. InnoRenew CoE
- 4. EIT RawMaterials projects (core partner) RIS HUB Adria
- 5. PaperChain

- . Materials characterisation & testing laboratories (cement, concrete, recycled materials, metals, polymers, ceramics)
- 2. Fire laboratory Logatec
- 3. Laboratory for testing of structures & advanced geotechnical laboratory
- 4. Tomography unit (state of the art station for non-destructive characterisation of materials)
- 5. Hardware and software for digitalisation of built environment

- 1. FEHRL (Forum of European National Highway Research Laboratories)
- 2. ENBRI (European Network of Building Research Institutes)
- 3. EOTA (European Organisation for Technical Assessment)
- 4. EIT RawMaterials (core partner)
- 5. PIARC The World Road Association

# Pomurje science and innovation centre





Rakičan, Lendavska ulica 28 9000 Murska Sobota



www.zis.si



info@zis.si

### **EMPLOYEES**







The public research institute ZIS Pomurje has been operating for only two years, and the effective start of its operation can be considered as 2024. At the moment, we are still establishing our research focus, however we are producing most of our scientific contributions in the field of mechanical engineering, more specifically in the field of materials characterisation and metallurgy. Another area that is being established is the field of healthy food in relation to public health, and a third area that we cover is the field of political science and informatics in social sciences.

In mechanical engineering, we are successfully researching gold nanoparticles for various applications (cosmetics, medicine, optical properties), biocompatible gold alloys and other alloys. In physics, we theoretically investigate the phase properties of liquid crystals. They are linked to agriculture and study the effect of agricultural soil on heavy metals and microplastics. They are also starting research on food safety in relation to public health.



### Key international projects since 2020

- 1. University of Belgrade, Faculty of Dental Medicine Cooperation Agreement
- 2. University of Montenegro, Faculty of Maritime Studies Cooperation Agreement
- 3. RWTH Aachen, Germany Cooperation Agreement

## POMURJE SCIENCE AND INNOVATION CENTRE

## Science and Research Centre of Koper



Garibaldijeva ulica 1 6000 Koper

www.zrs-kp.si

kabinet@zrs-kp.si

### **EMPLOYEES**

**††††** 148



www.facebook.com/zrskp

www.instagram.com/zrs\_koper

www.linkedin.com/ZRSKoper

**ZRS Koper** aims to become a Hub of Mediterranean wisdom, fostering interdisciplinary collaboration across humanities, social, and natural sciences to address environmental, social, and cultural challenges in the Mediterranean and upper Adriatic. Guided by its mission to create, to be inclusive, and share knowledge, ZRS Koper engages in research, expertise, education, scientific events, publishing, librarianship, and international collaboration, driving academic and societal progress.

Recognizing the importance of global cooperation, **ZRS Koper** actively engages in international scientific partnerships. By connecting with similar organizations worldwide, the Centre fosters a vibrant exchange of ideas and methodologies. This international outlook enriches its research and expands its influence beyond regional boundaries. The Centre will continue to pursue excellence through ambitious projects, critical self-assessment, and adherence to the highest ethical standards.



### Key international projects since 2020

- I. OPEN BORDERS (ERC)
- 2. MICREATE
- 3. T-BRAIN BOOST
- 4. TWIN BRAIN
- 5. METROFOOD

### Key Research Infrastructures

- Centre for Mediterranean Cultures
- 2. Laboratory of the Institute for Olive Growing
- 3 Mediterranean Health Centre
- 4. The IKARUS Laboratory
- 5. Annales Publishing House ZRS Koper

- 1. Euro-Mediterranean University
- 2. National Taiwan Sport University
- 3. Kobe Institute for Atmospheric Studies, Japan
- 4. Azerbaijan State Academy of Physical Education and Sport
- 5. University college Dublin

## The Research Centre of the Slovenian Academy of Sciences and Arts



**ZRC SAZU** 



Novi trg 2 2000 Maribor



www.zrc-sazu.si/en



zrc@zrc-sazu.si

#### **EMPLOYEES**





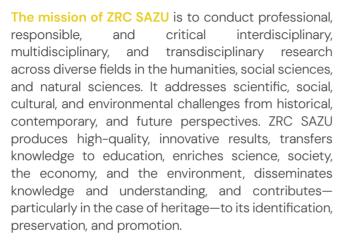




www.facebook.com/zrcsazu www.instagram.com/zrcsazu



www.youtube.com/@zrc-sazu



ZRC SAZU stands out as an outstanding research institution, leveraging its long tradition, institutional knowledge, and collaboration with exceptional national and international partners. Its excellence lies in its ability to innovate through diverse research themes, interdisciplinary approaches, and a commitment to managerial and scientific rigor. By fostering a supportive and creative environment, ZRC SAZU empowers researchers to deliver ground-breaking achievements that shape the future of science and society.



- 1. STONE: Unraveling the enigma of stećci tombstones
- 2. SHARED GREEN DEAL: Social sciences and humanities for achieving a responsible, equitable, and desirable green deal
- 3. CULTURALITY: CULTUral heritage in RurAL remote areas for creative tourism and sustainabilITY
- 4. ARTEMIS: Applying reactive twins to enhance monument information systems
- 5. SafeHabitus: Strengthening farm health and safety knowledge and innovation systems

- Basic research infrastructure: Access to research software, office support, project development support
- 2. The ZRC SAZU Atrium, a place to host public events, exhibitions, and conferences.

- 3. Inhouse video-recording unit: Capacity to record conferences and create video material.
- 4. ZRC SAZU repositories

- 1. Joint doctoral program in karst studies (University of Nova Gorica and Yunnan University)
- 2. Leadership in the International Union of Speleology
- 3. Representation of Slovenia in UN bodies for geographic naming
- 4. Co-Implementation of the European Master in Migration and Intercultural Relations (EMMIR) with European and African universities, led by the University of Oldenburg, Germany.
- 5. Participation in approximately fifty international projects, encompassing both long-term and new partnerships.



## National research infrastructures



TRIGA Mark II nuclear reactor has been operating in Slovenia since 1966, as part of the "Jožef Stefan" Institute. The acronym TRIGA stands for the main purposes of the reactor, which are Training, Research, Isotopes, General Atomics. The educational aspect of the reactor is particularly interesting, as almost all nuclear experts (and all professors of reactor physics) from Slovenia have been trained on the reactor. Foreign experts from countries where nuclear technology is still being developed also regularly practice and receive training at the reactor.



Slovenian NMR centre is a national facility that offers infrastructure and expertise in the field of NMR spectroscopy to scientists and researchers in academic and industrial institutions. Slovenian NMR centre is a national facility open to academic researchers and researchers from industrial partners, which is also a part of the Central European Research Infrastructure Consortium (CERIC ERIC). Research program of NMR centre includes data acquisition and interpretation for those who apply NMR in their research as part of basic and applied research projects or in industry itself.



Cryo-TEM microscope Glacios located at the National institute of Chemistry, it enables: single-particle analysis, cryo-tomography and electron diffraction on microcrystals. In this way biological samples in near native environment can be observed. Observation of non-biological samples is also possible. The equipment is accessible to internal and external users, as the RI is part of the EATRIS-TRI.si. If the project is feasible, the user may get a predetermined time slot to record data. Only advanced users, who have extensive experience with such equipment can do the experiment themselves. In the case of non-experienced users, the experiments will be done either in collaboration with certified experienced users and/or facility manager.



The VEGA HPC (High Performance Computer), commissioned as the primary supercomputer system of the Slovenian national research infrastructures upgrade project "HPC RIVR" and delivered as the first of EuroHPC Joint Undertaking systems, Vega is hosted at the Institute of Information Science – IZUM in Maribor. It increases the computing capacity in Slovenia and the European Union as a whole and helps researchers, as well as other users in the public and private sector.It can handle more than 6.9 peta FLOPs per second or 6.8 million billion calculations per second. Access to the Vega HPC cluster is provided via Nordugrid ARC middleware and direct access is provided via Slurm.



Infrastructural Centre of Marine Biology Station

# is part of the Marine Biology Station at the National Institute of Biology (NIB). The IC MBP has existed since 1995 as a technological hub to support the research and application activities of the Marine Biological Station in Piran. Already then, cooperation with the local economy became the foundation on which the technological development of the centre was built. Since 1995, a number of development organisations in the coastal area have been involved in supporting

the Centre's activities. The IC MBP Piran has also been

operating as an infrastructure centre since 2004.



Open Science Slovenia is the front office of the national open-access infrastructure, which consists of Slovenian universities' repositories, the repository for standalone faculties and a national portal that aggregates content from the repositories of other Slovenian archives. The repositories and the national Open Science portal make the research results of Slovenian research organizations accessible to researchers, students, businesses, and other users at home and around the world. Researchers have an infrastructure that enables them to comply with the provisions on mandatory open access to research results from publicly funded research. The bilingual web and mobile interfaces and a recommendation system are available to users from all over the world.

Memberships















atrsis







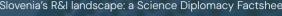












Digital, Computing & Digital RI

Health and Food















Social and Cultural Innovation







Health and Food









## Emerging fields







## Artificial intelligence – International Research Centre on Artificial Intelligence under the auspices of UNESCO

IRCAI was formally established by the Government of Slovenia in October 2020 as a category II Centre under the auspices of UNESCO. IRCAI's research goal is to develop artificial intelligence-based tools, products and services that will help UNESCO Member States accelerate their efforts to meet the Sustainable Development Goals (SDGs). IRCAI utilizes scientific discovery networks, technology, and connections with governments and researchers for public advocacy and collaborates with others on critical challenges. IRCAI comprises scientists, engineers, machine learning and ethics experts, and policy aficionados who are working together to advance the nexus between artificial intelligence and development.

## Artificial intelligence – SMASH – (s)MAchine learning for Science and Humanities

SMASH is an innovative, intersectoral, career-development training program for outstanding postdoctoral researchers from anywhere in the world, centred on developing cutting-edge machine learning applications for science and humanities. It aims to enhance the research excellence and career prospects of outstanding postdoctoral researchers from around the world. Involving top 5 Slovenian academic institutions, 25 international and non-academic partners and coordinated by the University of Nova Gorica, it will host fifty talented individuals, to offer them the opportunity to develop their research ideas based on access to the data-science potential of VEGA, one of Europe's newest High-Performance Computers.





## Advanced materials – Centre for the Development, Demonstration and Training of Carbon–Free Technologies (DUBT)

This new project aims to establish a centre with state-of-the-art research infrastructure for the development of battery and hydrogen technologies on the site of the new research unit of the National Institute of Chemistry in Zasavje, thus making an important contribution to the overall restructuring of the former coal region. The centre aims to improve investment in the region and the region's complementarity with international initiatives, develop advanced materials for carbon-free technologies at higher TRL, develop services and technologies in the field of carbon-free technologies, contribute to the economy through knowledge transfer, growth and development of industry and SMEs in the region and beyond, and raise public awareness and provide support to decision-makers.

# Slovenian Quantum Science Hub - SQUASH

squash is a project grounded in the current strategic directions of both Slovenia and the European Union. It is designed to support young researchers in reaching scientific maturity and independence across various fields of quantum sciences, from physics and chemistry, to material science, computer science, and engineering. The foundation of scientific excellence at the "Jožef Štefan" Institute is further complemented by collaboration with 46 distinguished partners from Slovenia and from all across Europe, North America, India and Japan.

They offer highly attractive working conditions, together with excellent personal mentoring from some of the world-renowned experts in quantum sciences, and the opportunity to develop a powerful set of transferable skills across three key pillars: Leadership, Personal Development, and Communication, tailored to each postdoctoral researcher's unique needs.



## The Center for the Technologies of Gene and Cell Therapies - CTGCT







CTGCT is a centre intended to bridge the gap between research and therapeutic solutions and focuses on creating a pipeline of biomedical tools, focused on the development of therapeutic solutions for rare genetic diseases and difficult-to-treat cancers. The CTGCT is an infrastructure center within the National Institute of Chemistry and a European Center of Excellence (CoE), partnering with distinguished research and healthcare institutions such as University College London (UCL, UK), University medical center Utrecht (UMC Utrecht, NL), Technical university Dresden (TU Dresden, DE) and University hospital Charité Berlin (Charité, DE). Funded by the European Commission, UK Research and Innovation – UKRI and the Government of Slovenia, the construction of the new centre will start in 2025, and it will bring together important pieces of research and analytical equipment that researchers and clinicians will have access to. The CTGCT aims to be a pioneering research institution in Slovenia, addressing critical healthcare challenges through cutting-edge research in cancer and rare genetic diseases. Committed to excellence, inclusivity, and collaboration, the CTGCT wants to attract top talent and Slovenian scientists working abroad, while fostering a stimulating environment for young researchers.

## Researchers in Slovenia

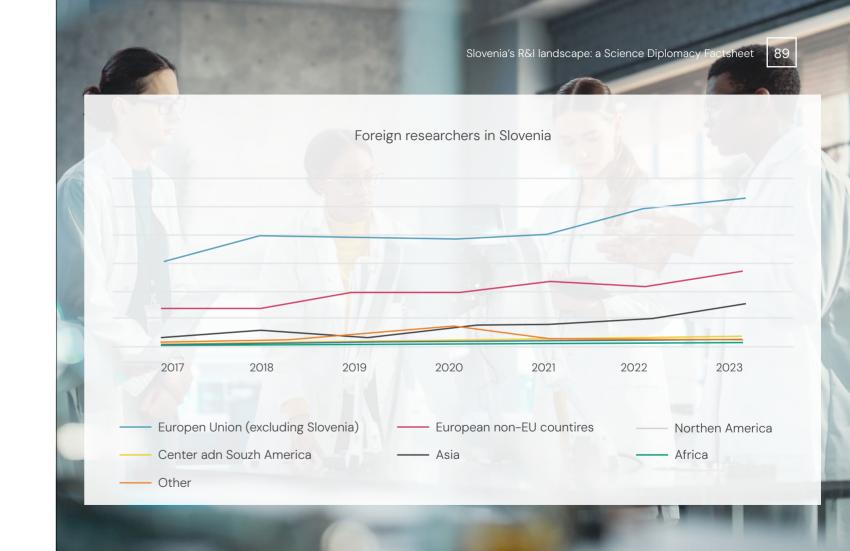
A total of 25.863 people were involved in R&D activities across all sectors in 2023 (amounting to 17.879 FTEs), of whom 17.587 were researchers. The largest share of researchers is employed in the business enterprise sector (50%), and the smallest in the private non-profit sector (1.4%).

Among researchers, almost two-thirds (64%) were men, and slightly more than one-third (36%) were women. Natural sciences, engineering and technology as well as medical sciences attract the largest shares of researchers altogether. The share of female researchers is highest in medical and health sciences (62%) and lowest in engineering and technology (19.5%).

	TOTAL	Men	Women
Sector of employment - TOTAL	17.587	11.267	6.320
Business enterprise sector	8.843	6.660	2.183
Government sector	3.038	1.543	1.495
Higher education sector	5.459	2.928	2.531
Private non-profit sector	248	136	111

# Researchers by field of research

Natural sciences and engeneering	15.090
Natural sciences	5.159
Engineering and technology	6.450
Medical sciences	2.746
Agricultural sciences	734
Social sciences and humanities	2.497
Social sciences	1.488
Humanities	1.010
Filed of research and development - TOTAL	17.587



## Key R&I institutions and organisations

#### Ministry of Higher Education, Science and Innovation

www.gov.si/en/state-authorities....

smeu.mvzi@gov.si

#### The Programme Committee for the Operational Coordination of R&I

www.gov.si/zbirke/delovna-teles...

#### CIPKeBiP (CoE for Integrated **Approaches in Chemistry** and Biology of Proteins)

www.cipkebip.org

\_ivija.Tusar@cipkebip.org

#### **Development Council of the** Government of Slovenia

www.gov.si/zbirke/delovna-telesa...

#### COBIK CoE

www.cobik.si/about/our-story

info@conot.si

#### Slovenian Research and **Innovation Agency**

info@aris-rs.si

## SPACE - SI (Slovenian CoE for Space Sciences and **Technologies Space**)

www.space.si/en/

office@space.si

#### **EN-FIST CoE**

www.enfist.si

info@enfist.si

#### CoE PoliMaT

www.polimat.eu/en

info@polimat.eu

#### SRIP Smart Cities and Communities

www.pmis.ijs.si

matjaz.logar@ijs.s

#### **SRIP Circular Economy**

www.srip-circular-economy.eu

srip@stajerskagz.si

#### InnoRenew CoE

#### **SRIP Smart Buildings and** Home including Wood Chain

www.pametne-stavbe.com

srip.psidl@zag.si

#### SRIP Sustainable Food Production

www.gzs.si/srip-hrana/vsebina...

srip.hrana@gzs.si

#### Centre for the Technologies of Gene and Cell Therapy -CTGCT

www.ctgct.si/en/about-us/

nfo@ctgct.si

#### **SRIP GoDigital**

www.sripgodigital.gzs.si/vsebina...

srip.godigital@gzs.si

#### SRIP Factories of the Future

www.ctop.ijs.si/en/home/

petra.hauschild@ijs.si

#### CONOT CoE

www.conot.si

## Key R&I institutions and organisations

#### SRIP Health - Medicine

www.sripzdravje-medicina.si/en

info@sis-egiz.eu

#### University of Ljubljana

www.uni-lj.si

intern.office@uni-lj.si

#### Faculty of information studies in Novo mesto

www.fis.unm.si

projektna.pisarna@fis.unm.si

#### **SRIP Mobility**

www.acs-giz.si/en/about-acs

dunja.podlesnik@acs-giz.si

#### University of Maribor

www.um.si/en/home-page

rector@um.si

#### **Geological Survey Of** Slovenia

https://www.geo-zs.si/en/

tajnistvo@geo-zs.si

#### SRIP Materials as end Products

www.matpro.gzs.si/vsebina/ENG

tjasa.polc@gzs.si

#### Univeristy of Primorska

www.upr.si/en

nternational@upr.si

#### The Slovenian Forestry Institute

www.gozdis.si/en

info@gozdis.si

#### The Jožef Stefan Institute Institute for Economic Research

www.ier.si

larisa.vodeb@ier.si

#### Institute of Mathematics. **Physics and Mechanics**

www.imfm.s

imfm@imfm.si

#### Institute of Contemporary History

The Institute of Metals and

www.inz.si

info@inz.s

www.ijs.si

Technology

www.imt.si

info@imt.si

#### Institute for Hydraulic Research

www.hidroinstitut.si

hidroinstitut@hidroinstitut.si

The Institute for Ethnic

#### The National Institute of Chemistry

www.ki.si

nastja.vodeb@ki.si

Slovenia

**Studies** www.inv.si/en projektna.pisarna@inv.si Agricultural Institute of

info@kis.si

## Key R&I institutions and organisations

#### National Institute of Biology

www.nib.si

projectoffice@njb.si

The Urban Planning Institute of the Republic of Slovenia

www.uirs.si

info@uirs.si

The Research Centre of the Slovenian Academy of

www.zrc-sazu.si/en

kabinet@zrs-kp.si

The Educational Research Institute

pedagoski.institut@pei.si

**Slovenian National Building** and Civil Engineering Institute

www.zag.si

info@zag.si

Pomurje science and innovation centre

www.sites.google.com/view...

info@zis.si

Rudolfovo - Science and Technology Centre Novo mesto

www.rudolfovo.eu

nfo@rudolfovo.eu

Science and Research Centre of Koper

www.zrs-kp.si

cup@zrs-kp.si

TRIGA Reactor Infrastructure Centre

www.ric.ijs.si/en/

triga@ijs.si

Slovenian NMR Centre

www.slonmr.si

slonmr@ki.si

Infrastructural Centre of Marine Biology Station Piran

www.nib.si/mbp/en/

infombp@nib.si

Advanced materials - Centre for the Development, Demonstration and Training of Carbon-Free Technologies (DUBT)

www.ki.si/en/departments/d50...

Cryo-TEM microscope Glacios

www.ki.si/en/glacios

cryoem@ki.si

**VEGA HPC** 

www.izum.si/en/hpc-en/

support@sling.si

International Research Centre on Artificial Intelligence under the auspices of UNESCO (IRCAI)

www.ircai.org

info@ircai.org

Slovenian Quantum Science Hub - SQUASH

www.squash.ijs.si

sauash@iis.si

SMASH - (s) MAchine learning for Science and Humanities

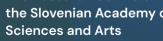
www.smash.ung.si

smash@ung.si

Centre for the Technologies of Gene and Cell Therapy - CTGCT

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