ACADEMY OF FINLAND

FIRI 2021 – applications funded in January 2022 decision meeting

Listed in alphabetical order by research infrastructure name.

ESS - European Social Survey
University of Turku

The European Social Survey (ESS) is an academically driven comparative social survey designed to chart and explain the interaction between Europe's changing societies and the attitudes, beliefs and behaviour pattern of its diverse populations. In addition, the ESS conducts methodological research to develope survey methods. The ESS employs extremely rigorous methodological standards in sampling, question-testing, translation and field-work procedures, and continuously develops and tests new survey methods. The ESS covers 38 countries and it forms a bi-annual time series starting from 2002. All data and documentation are freely available for all researchers. A multidisciplinary research community consisting of more than 175.000 users from all over the world use the ESS data. The ESS has served as a data source for thousands of journal articles, conference papers, books and other publications.

FAIR – Facility for Antiproton and Ion Research
University of Helsinki

Facility for Antiproton and Ion Research in Europe GmbH (FAIR) is a new international accelerator facility for research with antiparticle and particle beams. It will be built in cooperation of an international community of nations and scientists. The facility will be financed by a joint international effort of so far ten member states. Finland, in consortium with Sweden, is a shareholder of FAIR. The mission of FAIR is to unravel secrets regarding the structure of matter and the evolution of the Universe. For instance, it is uncertain how the matter in the early Universe evolved and why the matter dominates over the antimatter. At FAIR, cutting edge technologies for particle accelerators and detection techniques have to be developed, often will be done in collaboration with the industry sector. Therefore, FAIR has potential for wider impact on society through its technology innovations that. The purpose of the present project is to fund Finnish share of the cost increase of FAIR.

Finstruct - Integrated Structural Biology Infrastructure-European Research Infrastructure Consortium (INSTRUCT-ERIC)
University of Helsinki, University of Oulu, University of Turku, Åbo Akademi

The aim of the project is to broaden and enhance services both financially and operationally to create the top level structural biology infrastructure in Finland and in the Instruct-ERIC, supporting top-end research and industrial use. We are securing operations in the coming years

through replacement of aging instruments and developments of new services and software for better data management; and enhancing network coordination and further strengthening the embedding in the Instruct-ERIC. Full alignment of the consortium with the research strategies of the participating organizations in terms of both the strategic focus areas and profiling ensures the continued commitment of the host organisations. The objectives are 1) improvement of coordination and management of the national research infrastructure FINStruct and the Instruct-ERIC Centre Finland, 2) developing spearhead services in the Instruct-ERIC, 3) reinvigoration of national services, 4) training and 5) sustainability.

JYFL-ACCLAB – the University of Jyväskylä Accelerator Laboratory
University of Jyväskylä

JYFL-ACCLAB will expand the range of services offered and user base by acquiring a new 3 MV electrostatic accelerator to replace the ageing 1.7 MV accelerator, used successfully for high level accelerator-based materials science. The new platform allows JYFL-ACCLAB to meet the future demands and enable closer collaboration with industry and local, national and international research groups. High current proton and intense neutron beams expand the irradiation capabilities, benefiting biomedical research, nuclear astrophysics and radiation effects testing. Combining this with the state-of-the-art characterization methods, a unique cluster of innovation and education is created. In the future, the new accelerator platform will enable the use of ion beam techniques with sub-µm lateral resolution by employing a nuclear microprobe. High energy ion implantation allows the expertise of Finnish semiconductor industry to expand into new markets and will improve their competitiveness.

OtaNano - Otaniemi micro- and nanoscience and -technology
Aalto University, VTT Technical Research Centre of Finland Ltd.
COMQURE- project aims to strengthen OtaNano's state-of-the-art services for academia and industry nationally and internationally. Specifically, this project aims to tackle the growing complexity, resolution and control requirements in following areas:
1. high resolution microscopy for nano- and 2D materials science and technology
2. measurement capabilities for advanced quantum technology
3. process analytics for improved quality of complex nanostructured devices
The practical implementation of the project focuses on strategic investments, which allow characterization, measurement and monitoring of growingly complex nanoscale structures, systems and processes.