Research Council of Finland

Panel structure for winter 2024 call

Guidelines for panel selection

- Examine several panel descriptions in your field and carefully read both the scope and keywords before choosing the panel.
- 2. Choose one panel and one scientific council in your application. None of the panels are linked to a particular scientific council as such.
- 3. Submit your application to the most relevant panel. We may reallocate applications, but only if there has been an obvious typographical or other clear error in the selection. The applicant will be informed in such cases.

Please note:

- Any topic is welcome, regardless of whether it is explicitly stated in panel descriptions. Panels are typically multidisciplinary.
- The lists of keywords in panel descriptions are non-exhaustive; their aim is to guide applicants' panel selection.
- The panel structure does not represent any scientific classification as such. The numbering, names or descriptors of panels do not reflect any priorities.
- The panel structure is revised regularly (for scientific and/or operational reasons).
- Note: panel RC24_42 will review applications for Clinical Researcher funding and will not be available for other applicants.

Panel structure

RC24_01 Arts and literature	RC24 02 Atmospheric sciences	RC24_03 Bioinformatics and systems biology	RC24_04 Biomedical engineering	RC24_05 Biotechnology, biomedical materials, developmental biology and stem cell technologies	RC24_06 Cancer and immunology	RC24_07 Cell and molecular biology, and biochemistry
RC24_08 Chemical and process engineering	RC24_09 Chemistry	RC24_10 Clinical medicine	RC24_11 Communications engineering and electronics	RC24_12 Computer science and software engineering	RC24_13 Cultural studies and gender studies	RC24_14 Data science, artificial intelligence and statistics
RC24_15 Earth systems	RC24_16 Ecology and evolutionary biology	RC24_17 Economics, and business and management	RC24_18 Ecosystems, energy flow and biogeochemical cycles	RC24_19 Education	RC24_20 Energy engineering	RC24_21 Environmental social science and human geography
RC24_22 Fundamental physics of matter and light and quantum information science	RC24_23 History and archaeology	RC24_24 Human factors and technology design	RC24_25 Law, rights and regulations	RC24_26 Lifestyle, life course and public health	RC24_27 Linguistics and language studies	RC24_28 Materials science and applied photonics
RC24_29 Mathematics	RC24_30 Mechanics, structural and materials engineering	RC24_31 Neuroscience	RC24_32 One health, food sciences and veterinary sciences	RC24_33 Philosophy, theology and the study of religions	RC24_34 Physical activity and sport science	RC24_35 Plant and forest sciences
RC24_36 Politics and communication	RC24_37 Psychology, behaviour and learning	RC24_38 Robots, automation and production design	RC24_39 Sociology, demography and social work	RC24_40 Universe sciences and subatomic physics	RC24_41 Welfare, wellbeing and health	RC24_42 Clinical Researcher funding instrument

RC24_01 **Arts and literature**

Scope

The panel reviews applications in all areas of art research, musicology, and literary research, as well as multidisciplinary applications that contribute primarily to these research fields.

Key words

aesthetics; art history; art education; artistic research; art and design; art and wellbeing; performance studies; theatre; dance; film; fashion; music psychology; sociology of music; ethnomusicology; music history; comparative literature; literary history; literary and cultural studies; literary criticism; literature and identities; literature and environment

RC24_02 **Atmospheric sciences**

Scope

The panel covers research in atmospheric sciences.

Keywords

atmospheric chemistry; atmospheric composition; atmospheric aerosol research; air pollution; atmospheric remote sensing; climatology and climate change; climate modelling; meteorology; atmospheric physics and dynamics; ozone; upper atmosphere; ionosphere

Bioinformatics and systems biology

Scope

The scope of this panel covers data sciences in biology, biosciences and medicine, including related computational and mathematical analysis and modelling of complex biological systems as well as experimental studies. The focus of research can be either on method development or on analysis of biological data, or both.

Keywords

bioinformatics; biostatistics; computational biology; computational ecology; genetic epidemiology; genomics and other large scale 'omics' studies; integrative biology for personalised medicine and public health; pharmacogenetics; preventive and prognostic biology and medicine

RC24_04 **Biomedical engineering**

Scope

This panel covers engineering research with a focus on the development of engineering principles and methods for biomedical research, for example methods to study, diagnose, or treat medical conditions. Note that the scope includes, for instance, biomedical optics and development of engineering and computational methods in neuroscience.

Keywords

biomedical imaging technologies; physiological measurement technology; processing of biomedical images and signals; biomedical modelling and simulation

Back to main page

Biotechnology, biomedical materials, developmental biology and stem cell technologies

Scope

The panel includes basic and applied research using all organisms on biotechnology and bioengineering, developmental biology and stem cell research (incl. organoids and tissue regeneration), biomedical materials and nanomedicine. Research on pharmacology related to drug targeting and delivery to tissues, and toxicology of the engineered materials and therapeutics are also included.

Keywords

biomedical materials; biotechnology (microbial, industrial, medical and pharmaceutical); bioengineering and synthetic biology; biophysics; developmental biology; stem cells; pharmacology; toxicology

Cancer and immunology

Scope

The panel includes nonclinical basic and translational cancer research and immunological research.

Keywords

cancer: molecular and cellular cancer research; cancer stem cells; hemato-oncology; (cancer) imaging; metastasis and interaction with the microenvironment; oncogenes and tumor suppressors

immunology: molecular and cellular immunology; innate and adaptive immunity; autoimmune diseases (research on molecular/cellular level); autoimmunity; allergy; immunotherapy; inflammation

Cell and molecular biology, and biochemistry

Scope

The panel includes research on biological structures, functions and mechanisms at molecular and cellular levels.

Keywords

biochemistry; biophysics; cell and molecular biology; cellular and molecular microbiology and virology; structural biology; modelling in molecular and structural biology

Chemical and process engineering

Scope

This panel covers technological and engineering research within the chemical, process and environmental area as indicated by the keywords.

Please also see the related panels, for instance: <u>Chemistry</u>; <u>Energy engineering</u>; <u>Materials science and applied photonics</u>; <u>Mechanics</u>, <u>structural and materials engineering</u>; <u>Biotechnology</u>, <u>biomedical materials</u>, <u>developmental biology and stem cell technologies</u>.

Keywords

chemical engineering; process engineering; technical chemistry and chemical technology; catalysis; industrial environmental engineering; wastewater treatment; waste treatment and utilization; separation technology; biomass refinery technology; bio-based materials (lignin, cellulose, fibers)

RC24_09 **Chemistry**

Scope

The panel covers fundamental research in chemistry in the broadest sense, as indicated by the keywords. It includes for example fundamental studies of molecular properties and chemical reactions; development of analytical and theoretical methods; synthesis, properties and characterisation of compounds and materials. Theoretical, experimental and computational approaches are all relevant to the panel.

Please also see related panels, for instance: <u>Chemical and process engineering</u>; <u>Materials science and applied photonics</u>; <u>Biotechnology, biomedical materials, developmental biology and stem cell technologies</u>; and <u>Energy engineering</u> (for fuel cells).

Keywords

analytical chemistry; inorganic chemistry; organic chemistry; physical chemistry; theoretical chemistry; computational chemistry; electrochemistry (incl. battery research and related materials); photochemistry; supramolecular chemistry; natural product chemistry; biological chemistry; medicinal chemistry; coordination chemistry; organometallic chemistry; colloid chemistry; polymer chemistry (incl. biopolymers); radiochemistry; materials chemistry; surface chemistry; solid state chemistry; heterogeneous and homogeneous catalysis

RC24_10 Clinical medicine

Scope

The panel includes all fields of clinical medicine, odontology and veterinary medicine, concentrating on individual health and illness.

Keywords

all clinical disciplines

Communications engineering and electronics

Scope

The scope of the panel is in fundamental engineering research targeting communications engineering and electronics.

Please see also other panels, such as <u>Materials science and applied photonics</u>.

Keywords

circuits and systems; analog; digital and mixed signal electronics; rf electronics and antenna design; micro-, nano-, and printed electronics; micro- and nano-electronic components; computer hardware and reconfigurable architectures; computer architecture; radio science and engineering; wireless and high frequency technology; communication and information theory; communication systems; communication networks; communications engineering and electronics related signal processing

Computer science and software engineering

Scope

This is the main panel for computer science research proposals. The scope is wide and covers all layers of technical complexity, programming and software engineering approaches.

Please also see the related panels, for instance: <u>Data science</u>, <u>artificial intelligence and statistics</u>;
 <u>Communications engineering and electronics</u> (for hardware layer components); and <u>Human factors and technology design</u> (for human-computer interaction and information systems sciences).

Keywords

computer science, theoretical computer science, software engineering, computer graphics, formal methods, algorithms, programming, security & privacy, parallel and distributed computing, software architectures, embedded systems, operating systems, database systems, knowledge representation

Cultural studies and gender studies

Scope

The panel reviews applications in cultural and social anthropology, development studies, ethnology and folklore studies and gender studies as well as other multidisciplinary studies contributing primarily to these research fields.

Please also see the related panels if your research field is development studies, such as <u>Environmental</u> social science and human geography.

Keywords

attitudes and beliefs; cultural heritage; discrimination; diversity; emotions and affects; ethnicity; exclusion; family; identity; inequalities; intersectionality; kinship; LGBTIQ+; masculinity; memory; migration; minorities; poverty; power; prejudice; race; religions; rituals; sexuality; social integration; social mobility; symbolic representation; violence; welfare; work; youth

Data science, artificial intelligence and statistics

Scope

This panel focuses on advancing research in data science, artificial intelligence and statistics. The proposals in this panel primarily target these areas of study, while projects that utilise AI and/or statistics as tools are addressed by other panels.

Please also see the related panels, for instance: <u>Bioinformatics and systems biology</u> (for bioinformatics and related data analysis and modelling); <u>Human factors and technology design</u> (for human-AI interaction and AI in society); <u>Robots, automation and production design</u>; <u>Computer Science and Software engineering</u> (for theoretical computer science research); and Mathematics.

Keywords

data science (e.g. pattern recognition, predictive analytics); data mining; statistics; statistical inference (e.g. Bayesian inference); machine learning; deep learning; big data; natural language processing; speech recognition; sensor data analysis; computer vision; optimisation

RC24_15 **Earth systems**

Scope

This panel concerns the Earth's geo-, cryo- and hydrosphere, as well as Earth observation. Topics covered contribute to natural sciences and engineering, representing areas listed as examples in the keywords.

• Please also see the related panels, for instance: <u>Atmospheric sciences</u>; <u>Robots, automation and production design</u>; <u>Ecosystems, energy flow and biogeochemical cycles</u>; <u>One health, food sciences and veterinary sciences</u>; and Plant and forest sciences.

Keywords

geology; mineralogy and petrology; palaeoclimatology; palaeontology; quaternary geology; sedimentology; tectonics; environmental geology; surface and subsurface hydrology; water resources management; oceanography; glaciology and snow research; geochemistry; geophysics; physical geography; environmental modelling; remote sensing; geoinformatics; geodesy

Ecology and evolutionary biology

Scope

The scope of this panel includes ecology, evolutionary biology and ecophysiology.

Keywords

animal behaviour; behavioural ecology; biodiversity; community ecology; conservation biology; ecology; ecophysiology; evolutionary biology; evolutionary ecology; evolutionary genomics; host-parasite interactions; microbial evolution; molecular evolution; population ecology; phylogenetics and systematics; theoretical ecology

Economics, and business and management

Scope

The panel reviews applications in all fields of economics and finance, and in business research including management science, industrial management, organisation studies, accounting, marketing, and entrepreneurship. Business-focused applications in organisational communication, and operations research, and multidisciplinary applications in innovation studies, and area/industrial development also fit the scope of the panel.

- Applications in business law are reviewed in the panel <u>Law, rights and regulations</u>.
- Applications in information systems science, management information systems and other technology focused applications should see also the panel <u>Human factors and technology design</u>.
- Applications in organisational communication should see also the panel <u>Politics and communication</u>.

Keywords

macroeconomics; microeconomics; econometrics; finance; development economics; urban and real estate economics; public economics; labour economics; behavioural economics; health economics; international economics; environmental and resource economics; agricultural economics; industrial organisation; business studies; business administration; management; strategy; organisation studies; human resources management; accounting; management accounting; marketing; corporate social responsibility (CSR); industrial management; international business; entrepreneurship; SMEs; innovations; logistics; supply chain management

Back to main page

Ecosystems, energy flow and biogeochemical cycles

Scope

This panel focuses on natural ecosystems and interaction of physical, chemical and biological processes. It includes elemental cycles and energy flows in all habitats.

Keywords

aquatic science; biogeochemical cycles (aquatic, terrestrial, atmospheric); dendrochronology; environmental microbiology; environmental science; environmental stressors; geosciences (with biological links/elements); microbial ecology; paleoecology; peatlands; soil science

RC24_19 **Education**

Scope

This panel concerns applications in education. The panel focuses especially on education as a societal, cultural and system-level phenomenon. Although the main focus of research is within the field of education, the research is typically interdisciplinary, linking especially to political sciences, administrative sciences, sociology and other social sciences, philosophy, and social environmental research.

Please also see the related panels, such as <u>Psychology</u>, <u>behaviour and learning</u>.

Keywords

Education science; adult education science; vocational education research; education evaluation research; general education; teacher education; teaching and pedagogy; education policy; study paths and education transitions; education systems; education evaluation; comparative (international) education research; philosophy of education, sociology of education; education and equality; special education; participation and inclusion in education; democracy and education; learning environments (physical/digital); expertise; work in academia; vocational education; higher education; lifelong learning; environmental and sustainable development within education; social and professional role of teachers; literacy (including e.g. digital, media, AI literacy); all educational levels when relevant

RC24_20 **Energy engineering**

Scope

The panel approaches different ways of energy production, conversion, distribution and storage.

• Please also see the related panels, for instance: <u>Chemistry</u> (for research in batteries and related materials) and <u>Materials science and applied photonics</u> (for research in solar cell materials).

Keywords

electric power and energy systems; energy conversion processes; energy generation power plants and industrial energy; electrical motors; internal combustion engines; combustion technology; fuel cells; renewable energy; thermodynamics; energy distribution and storage

Back to main page

Environmental social science and human geography

Scope

The panel reviews applications in environmental social science, human geography, urban, spatial and regional planning and development studies, as well as multidisciplinary studies contributing primarily to these research fields.

Keywords

economic geography; environment and development; environmental anthropology; environmental politics and policy; environmental sociology; human mobility; human–nature interactions; land-use; landscape architecture; multi-species studies; political ecology; political geography; regional studies; social and cultural geography; sustainability transitions; tourism research; urban studies

Back to main page

Fundamental physics of matter and light and quantum information science

Scope

This panel covers physics research on the fundamental properties of matter and light, as well as physics research on quantum information science from theory to applications. The theoretical methods include analytical, numerical as well as statistical approaches.

• Please see also the related panels, for instance: <u>Materials science and applied photonics</u>; and <u>Universe Sciences and subatomic physics</u>.

Keywords

atomic and molecular physics; condensed matter physics; quantum materials; topological matter; spintronics; magnetism; superconductivity; mesoscopic quantum physics and quantum technologies; quantum optics; fundamental aspects of optics and photonics; fundamental aspects of matter-light interaction; fusion plasma physics

RC24_23 **History and archaeology**

Scope

The panel reviews applications in the fields of history and archaeology. Applications can focus on national or international topics, analyse themes from prehistory to the contemporary period, and examine theoretical or methodological questions. The panel also welcomes multidisciplinary applications contributing mainly to research on history and/or archaeology.

Keywords

cultural history; economic history; environmental history; history of science and technology; history theory and methodology; intellectual history; military history; political history; social history; museology; bioarchaeology; prehistoric archaeology; classical archaeology; medieval archaeology; urban and industrial archaeology; maritime archaeology; indigenous archaeology

Human factors and technology design

Scope

This is a multidisciplinary review panel for applications related to a broadly understood theme of human-technology interaction. The scope of the panel is wide and interdisciplinary, combining human agency and technology in various domains (see examples in keywords).

Keywords

human-computer interaction; information systems science; design research; business administration, information management and systems; psychology & emotions; education & learning; health & care; economy & innovation; AI & society, explainable AI; virtual, augmented & extended reality; digital games & gamification

Law, rights and regulations

Scope

The panel reviews applications in all fields of law and legal studies, including socio-legal studies and empirical legal research, interdisciplinary applications with a significant legal component, and applications on rights, governance and regulations in other fields (for example: environmental social science research, management and business research, gender studies, political science, other social sciences).

Keywords

administrative law; commercial law; comparative law; constitutional law; criminal law and criminal justice; environmental law; European law; family law; financial law; international economic law; international law; intellectual property; labour law; private law; procedural law; property law; public law; welfare law; legal philosophy; jurisprudence; legal history; doctrinal study of law; socio-legal studies; empirical legal studies; criminology; legal policy; legal geography; space and law; digital approaches to law; gender and law; arbitration and dispute resolution; contractual frameworks and theory; governance; regulations; regulatory theory; human rights; minorities; environmental issues

Lifestyle, life course and public health

Scope

The panel includes research on population prevalences of lifestyle and health, life course and public health.

Keywords

cardiovascular health; cognition and health; disease prevention; epidemiology; health behaviour; health intervention; health promotion; human microbiota; life course; lifestyle; mental health; metabolic health; nutritional science; obesity; physiology; public health

Linguistics and language studies

Scope

The panel reviews applications on applied and theoretical linguistics; phonetics; individual languages and language groups; and the study of language, culture and society. The panel also reviews psycholinguistics and neurolinguistics applications with a strong focus on linguistics research.

- Applicants in psycholinguistics and neurolinguistics need to consider whether their main contribution is to linguistic research or whether they should choose the panel <u>Psychology</u>, <u>behaviour and learning</u>.
- Applicants working on language didactics/pedagogy or language learning evaluation should also see the panel <u>Education</u>.

Keywords

applied linguistics; corpus linguistics; computational linguistics and language technology; historical linguistics; language acquisition; language learning and language education; language revitalisation; language variation; heritage, indigenous, and minority languages; neurolinguistics; psycholinguistics; sociolinguistics; translation and interpreting studies; genealogy; gender; linguistic anthropology; morphology and syntax; phonetics and phonology; semantics and pragmatics; typology; discourse analysis; conversation analysis; interaction analysis; multimodal analysis

Materials science and applied photonics

Scope

The panel focuses on physical properties of materials, including applied aspects of light-matter interaction. This encompasses research on the development, fabrication and characterisation of materials such as semiconductors, thin films, organic electronics, as well as research on soft matter physics. The panel also covers research on the design and fabrication of photonic and optoelectronic materials, including their use in areas such as photovoltaics, photodetectors, optical sensing, and imaging. Theoretical, experimental, and computational approaches are all relevant to the panel.

Please also see the related panels, for instance: <u>Chemistry</u>; <u>Chemical and process engineering</u> (for biobased materials); <u>Fundamentals physics of matter and light and quantum information science</u>; <u>Mechanics</u>, <u>structural and materials engineering</u>; <u>Robots</u>, <u>automation and production design</u>; and <u>Biomedical engineering</u> (for biomedical optics).

Keywords

materials physics and chemistry; functional materials; semiconductors; surface physics; thin films; organic electronics; photovoltaics and photodetectors; photonics materials (including optical metamaterials); optoelectronics and optoelectronic components; optical sensing and imaging; laser physics; soft matter physics

RC24_29 Mathematics

Scope

The panel covers research in mathematics concerning, for example, the subjects listed in the keywords.

• Please also see the related panels, for instance: <u>Data science</u>, <u>artificial Intelligence and statistics</u>; and <u>Computer science and software engineering</u>.

Keywords

complex analysis; harmonic analysis; partial differential equations; functional analysis; geometric measure theory; calculus of variations; geometry; inverse problems; mathematical physics; dynamic systems theory; control theory; algebra; combinatorics; number theory; mathematical logic; coding theory; graph theory; group theory; probability theory; numerical analysis

Mechanics, structural and materials engineering

Scope

In this engineering panel, the main focus of research is on manufacturing, shaping and joining of materials mainly used in mechanical engineering or civil engineering, but also in other engineering fields. The scope of the panel includes research on mechanics and structural engineering, as well as the behaviour, properties and durability of end products.

Please also see the related panels, for instance: <u>Materials science and applied photonics</u>; <u>Chemistry</u>;
 <u>Chemical and process engineering</u> (e.g. separation of metals); and <u>Robots, automation and production design</u>.

Keywords

fracture; fatigue; mechanics; tribology; biomechanics; construction mechanics; geotechnics; soil mechanics; structural engineering; steelmaking; additive manufacturing; welding; alloys; metals; physical metallurgy; concrete, steel, composite and wood structures; manufacturing, properties, use and durability; bridges

Neuroscience

Scope

The panel includes research on the development, function, dysfunction and ageing of the nervous system. It also encompasses preclinical research related to models of nervous system diseases, biological basis of cognitive processes and behavior, biological basis of neurological and mental disorders.

Please also see the related panel <u>Biomedical engineering</u>.

Keywords

neuroscience; neurobiology; neurophysiology; molecular and cellular neuroscience; neurogenetics; neuropharmacology; developmental neurobiology; circuit- and systems neuroscience; neural basis of cognition including action and social interaction; nervous system function and dysfunction

One health, food sciences and veterinary sciences

Scope

The scope of this panel includes the One Health approach, integrating the health of people, animals and the environment.

 Applicants working on food systems are encouraged to explore the panel <u>Environmental social science</u> and human geography.

Keywords

food sciences (including e.g. food microbiology, food safety, food chemistry, food technology); environmental health (including e.g. ecotoxicology, indoor air quality, pollution, WASH (Water, Sanitation, Health and Hygiene)); host-microbe interactions (including e.g. infectious diseases in humans and animals caused by pathogens, zoonosis, anti-infective treatments and prevention, antimicrobial resistance); veterinary and animal sciences

Philosophy, theology, and the study of religions

Scope

This is a panel for applications from all research areas in philosophy, theology and the study of religions. The proposed research questions and approaches can be historical, literary, theoretical, practical, applied or interdisciplinary, and connect to various philosophical, theological or religious traditions and worldviews. The panel also welcomes multidisciplinary applications that contribute to philosophical or theological research or the study of religions.

Keywords

ethics; epistemology; history of philosophy; logic; ontology and metaphysics; philosophy of language; philosophy of mind; philosophy of science; social and political philosophy; exegetics; church history; practical theology; systematic theology; study of religions

Physical activity and sport science

Scope

The panel includes research on physical activity and sport science and interventions related to these.

Keywords

interventions and policy work related to physical activity and sedentary behavior; exercise biology; social sciences of sport; sport and exercise psychology; effects of physical activity or sedentary behavior in gerontology and rehabilitation; kinesiology and biomechanics; musculoskeletal system; performance sports

Note: Applications to the Academy Programme for Sport Science and Physical Activity are reviewed in this panel.

Plant and forest sciences

Scope

The scope of this panel includes both basic and applied research on plants at different levels of biological complexity from molecules through to ecosystems and their management. The following keywords in the context of plant and forest research are covered.

Keywords

agriculture; agronomy; biochemistry; biodiversity; biophysics; cell and molecular biology; conservation and sustainability; developmental biology; ecology; ecosystems and landscape ecology; evolutionary biology; forest dynamics; forest economics; forest management; genetics; photosynthesis; phylogenetics and systematics; physiology and ecophysiology; plant-microbe and plant-fungal interactions; plant virology; population biology; remote sensing/GIS/laser scanning

Politics and communication

Scope

This panel reviews applications from all research areas in political science, administrative sciences, international relations, and media and communication studies.

- For applications related to health, welfare and wellbeing, please also consider the panel <u>Welfare</u>, wellbeing and health.
- For applications in organisational communication with a strong business or management context, please also consider the panel <u>Economics</u>, and <u>business</u> and <u>management</u>.

Keywords

communication technologies; conflict; creative and cultural industries; data; datafication; democracy; democratic institutions; democratic participation; digitalisation; elections; elites; foreign policy and diplomacy; games and play; gender; governance; interest groups; international or global institutions and cooperation; journalism; mediatisation; media culture; media innovations; media and creative labour; media systems and media platforms; organisations; peace; political agency; political economy; political parties; political participation; interpersonal, organisational, political or speech communication; public administration; public policy; representation; security; social movements

Psychology, behaviour and learning

Scope

The panel reviews applications in psychology and education. Within education, the emphasis is on processes and aspects of learning and wellbeing.

- Applicants in the field of education should consider whether their proposal is best suited to this panel or the panel <u>Education</u>.
- Applicants in the field of psycholinguistics and neurolinguistics should consider whether their proposal is best suited to this panel or the panel <u>Linguistics and language studies</u>.
- Applicants in health, welfare and wellbeing should also consider the panel <u>Welfare</u>, <u>wellbeing and health</u>.
- Applicants in social psychology should consider whether their proposal is best suited to this panel or the panel <u>Sociology</u>, <u>demography and</u> social work.

Keywords

attention and perception; memory; learning; emotions; personality; temperament; cognitive functions; individual development and life course; sexuality; social cognition; cognition and metacognition in learning; executive function; (self-)regulation; motivation; collaborative learning; self-efficacy; student-teacher interaction; learning difficulties; digital pedagogy and cognition; physical activity and learning; mental disorders; and occupational well-being and learning;

Within psychology, the panel covers applications within developmental and educational psychology, health psychology, work and organisational psychology, psychotherapy, and, where applicable, systemic and cognitive neuroscience and social psychology, not excluding other possible fields.

Within education, the panel covers applications within general education and teacher education, special education, and early childhood education and preschool education, not excluding other possible fields.

Robots, automation and production design

Scope

The scope of this panel includes engineering research on robots and autonomous systems as well as technological and methodological advances in the development of close-range remote sensing and radars (e.g. lidar scanning), applicable in a wide context of use. The scope further includes mechatronics, manufacturing automation, production design, construction production and transportation. A typical research plan in this panel may utilize or even develop artificial intelligence tools and/or computations algorithms (for example, robotic perception) but is strongly connected to a specific application and contains research on a complete functional system and/or hardware.

• Please see also the related panels, for instance: Atmospheric sciences (incl. lidar applications for aerosol and cloud observations); Data science, artificial intelligence and statistics (incl. computer vision algorithms); Economics, and management (incl. incl. and management and economic considerations); Human factors and technology design (incl. human-robot interaction/collaboration); Earth systems (incl. satellite remote sensing applications); and Materials science and applied photonics panel (incl. optical sensing and imaging).

Keywords

automation; control; robotics; mobile robotics; sensing; scanning; mapping; navigation; situational and dynamic awareness; positioning; autonomous vehicles; UAV; drone; marine technology; lidar scanning; photogrammetry; modelling of surroundings; monitoring and maintenance of buildings and infrastructures; construction production, transportation

Sociology, demography and social work

Scope

The panel reviews applications in demography, sociology, social policy, social psychology, social work, as well as other multidisciplinary studies contributing primarily to these research fields.

- Applications related to health, welfare and wellbeing, please also consider the panel <u>Welfare</u>, <u>wellbeing</u> and <u>health</u>.
- Applications related to ethnographically oriented research, please also consider the panel <u>Cultural</u> studies and gender studies.

Keywords

care; crime; disability; discrimination; diversity; exclusion; family; gender; inequalities; life course; population dynamics; poverty; power; science and technology studies; social attitudes; social mobility; social influence; social integration; social structure; violence; welfare; work and employment

Universe sciences and subatomic physics

Scope

The panel covers all branches of astronomy, space science, and sub-atomic physics (i.e. particle and nuclear physics).

 Please see also the related panel <u>Atmospheric sciences</u>, which covers the upper atmosphere and ionosphere research.

Keywords

galactic and extragalactic astronomy; astrophysics and astrochemistry; planetary science (Solar System research and exoplanetary science); solar and space physics (including heliophysics, space weather, space plasma physics, magnetospheric and ionospheric physics); observational and theoretical cosmology; and particle and nuclear physics

Welfare, wellbeing and health

Scope

The panel includes multidisciplinary topics related to human welfare, wellbeing and health. The scope of the panel is wide covering a range of themes on the influence of social factors on human health and its implications for human welfare.

Keywords

ageing and wellbeing; digitalisation in health and social services; eHealth and welfare; family, fertility and society; health care systems; health economics and management; health policy and society; health service resources; health sociology; healthcare ethics; health inequalities; mental health and society; nursing science; occupational health; public health and social care; substance abuse

RC24_42 **Clinical Researcher funding instrument**

Note: This panel will only review applications for Clinical Researcher funding.