Social Sciences and Humanities   2018 calls

SH1   Individuals, Markets and Organisations: Economics, finance and management

SH1_1   Macroeconomics; monetary economics; economic growth

SH1_2   International trade; international business; international management; spatial economics

SH1_3   Development economics, health economics, education economics

SH1_4   Financial economics; banking; corporate finance; international finance; accounting; auditing; insurance

SH1_5   Labour and demographic economics; human resource management

SH1_6   Econometrics; operations research

SH1_7   Behavioural economics; experimental economics; neuro-economics

SH1_8   Microeconomics; game theory

SH1_9   Industrial organisation; strategy; entrepreneurship

SH1_10   Management; marketing; organisational behaviour; operations management

SH1_11   Technological change, innovation, research & development

SH1_12   Agricultural economics; energy economics; environmental economics

SH1_13   Public economics; political economics; law and economics

SH1_14   Quantitative economic history; institutional economics; economic systems

SH2   Institutions, Values, Environment and Space: Political science, law, sustainability science, geography, regional studies and planning

SH2_1   Political systems, governance

SH2_2   Democratisation and social movements

SH2_3   Conflict resolution, war

SH2_4   Legal studies, constitutions, human rights, comparative law

SH2_5   International relations, global and transnational governance

SH2_6   Sustainability sciences, environment and resources

SH2_7   Environmental and climate change, societal impact and policy

SH2_8   Energy, transportation and mobility

SH2_9   Urban, regional and rural studies

SH2_10   Land use and regional planning

SH2_11   Human, economic and social geography

SH2_12   GIS, spatial analysis; big data in political, geographical and legal studies

SH3   The Social World, Diversity, Population: Sociology, social psychology, social anthropology, demography, education, communication

SH3_1   Social structure, social mobility

SH3_2   Inequalities, discrimination, prejudice, aggression and violence, antisocial behaviour

SH3_3   Social integration, exclusion, prosocial behaviour

SH3_4   Attitudes and beliefs

SH3_5   Social influence; power and group behaviour

SH3_6   Kinship; diversity and identities, gender, interethnic relations

SH3_7   Social policies, welfare

SH3_8   Population dynamics; households, family and fertility

SH3_9   Health, ageing and society

SH3_10   Religious studies, ritual; symbolic representation

SH3_11   Social aspects of learning, curriculum studies, educational policies

SH3_12   Communication and information, networks, media

SH3_13   Digital social research

SH3_14   Science and technology studies

SH4 The Human Mind and Its Complexity: Cognitive science, psychology, linguistics, philosophy of mind

SH4_1 Cognitive basis of human development and education, developmental disorders; comparative cognition

SH4_2 Personality and social cognition; emotion

SH4_3 Clinical and health psychology

SH4_4 Neuropsychology

SH4_5 Attention, perception, action, consciousness

SH4_6 Learning, memory; cognition in ageing

SH4_7 Reasoning, decision-making; intelligence

SH4_8 Language learning and processing (first and second languages)

SH4_9 Theoretical linguistics; computational linguistics

SH4_10 Language typology

SH4_11 Pragmatics, sociolinguistics, discourse analysis

SH4_12 Philosophy of mind, philosophy of language

SH4_13 Philosophy of science, epistemology, logic

SH5 Cultures and Cultural Production: Literature, philology, cultural studies, study of the arts, philosophy

SH5_1 Classics, ancient literature and art

SH5_2 Theory and history of literature, comparative literature

SH5_3 Philology and palaeography; historical linguistics

SH5_4 Visual and performing arts, film, design

SH5_5 Music and musicology; history of music

SH5_6 History of art and architecture, arts-based research

SH5_7 Museums, exhibitions, conservation and restoration

SH5_8 Cultural studies, cultural identities and memories, cultural heritage

SH5_9 Metaphysics, philosophical anthropology; aesthetics

SH5_10 Ethics; social and political philosophy

SH5_11 History of philosophy

SH5_12 Computational Modelling and Digitisation in the Cultural Sphere

SH6 The Study of the Human Past: Archaeology and history

SH6_1 Historiography, Theory and methods in history, including the analysis of digital data

SH6_2 Classical archaeology, history of archaeology

SH6_3 General archaeology, archaeometry, landscape archaeology

SH6_4 Prehistory, palaeoanthropology, palaeodemography, protohistory

SH6_5 Ancient history

SH6_6 Medieval history

SH6_7 Early modern history

SH6_8 Modern and contemporary history

SH6_9 Colonial and post-colonial history

SH6_10 Global history, transnational history, comparative history, entangled histories

SH6_11 Social and economic history

SH6_12 Gender history; Cultural History; History of Collective Identities and Memories

SH6_13 History of Ideas, Intellectual History, history of economic thought

SH6_14 History of Science, Medicine and Technologies

Physical Sciences and Engineering

PE1 Mathematics: All areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics

> PE1_1 Logic and foundations
> PE1_2 Algebra
> PE1_3 Number theory
> PE1_4 Algebraic and complex geometry
> PE1_5 Geometry
> PE1_6 Topology
> PE1_7 Lie groups, Lie algebras
> PE1_8 Analysis
> PE1_9 Operator algebras and functional analysis
> PE1_10 ODE and dynamical systems
> PE1_11 Theoretical aspects of partial differential equations
> PE1_12 Mathematical physics
> PE1_13 Probability
> PE1_14 Statistics
> PE1_15 Discrete mathematics and combinatorics
> PE1_16 Mathematical aspects of computer science
> PE1_17 Numerical analysis
> PE1_18 Scientific computing and data processing
> PE1_19 Control theory and optimisation
> PE1_20 Application of mathematics in sciences
> PE1_21 Application of mathematics in industry and society

PE2 Fundamental Constituents of Matter: Particle, nuclear, plasma, atomic, molecular, gas, and optical physics

> PE2_1 Fundamental interactions and fields
> PE2_2 Particle physics
> PE2_3 Nuclear physics
> PE2_4 Nuclear astrophysics
> PE2_5 Gas and plasma physics
> PE2_6 Electromagnetism
> PE2_7 Atomic, molecular physics
> PE2_8 Ultra-cold atoms and molecules
> PE2_9 Optics, non-linear optics and nano-optics
> PE2_10 Quantum optics and quantum information
> PE2_11 Lasers, ultra-short lasers and laser physics
> PE2_12 Relativity
> PE2_13 Thermodynamics
> PE2_14 Non-linear physics
> PE2_15 Metrology and measurement
> PE2_16 Statistical physics (gases)

PE3 Condensed Matter Physics: Structure, electronic properties, fluids, nanosciences, biological physics

> PE3_1 Structure of solids, material growth and characterisation
> PE3_2 Mechanical and acoustical properties of condensed matter, Lattice dynamics
> PE3_3 Transport properties of condensed matter
> PE3_4 Electronic properties of materials, surfaces, interfaces, nanostructures, etc.

PE3_5 Physical properties of semiconductors and insulators

PE3_6 Macroscopic quantum phenomena: superconductivity, superfluidity, etc.

PE3_7 Spintronics

PE3_8 Magnetism and strongly correlated systems

PE3_9 Condensed matter – beam interactions (photons, electrons, etc.)

PE3_10 Nanophysics: nanoelectronics, nanophotonics, nanomagnetism, nanoelectromechanics, etc.

PE3_11 Mesoscopic physics

PE3_12 Molecular electronics

PE3_13 Structure and dynamics of disordered systems: soft matter (gels, colloids, liquid crystals, etc.), liquids, glasses, defects, etc.

PE3_14 Fluid dynamics (physics)

PE3_15 Statistical physics: phase transitions, noise and fluctuations, models of complex systems, etc.

PE3_16 Physics of biological systems

PE4   Physical and Analytical Chemical Sciences: Analytical chemistry, chemical theory, physical chemistry/chemical physics

PE4_1 Physical chemistry

PE4_2 Spectroscopic and spectrometric techniques

PE4_3 Molecular architecture and Structure

PE4_4 Surface science and nanostructures

PE4_5 Analytical chemistry

PE4_6 Chemical physics

PE4_7 Chemical instrumentation

PE4_8 Electrochemistry, electrodialysis, microfluidics, sensors

PE4_9 Method development in chemistry

PE4_10 Heterogeneous catalysis

PE4_11 Physical chemistry of biological systems

PE4_12 Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions

PE4_13 Theoretical and computational chemistry

PE4_14 Radiation and Nuclear chemistry

PE4_15 Photochemistry

PE4_16 Corrosion

PE4_17 Characterisation methods of materials

PE4_18 Environment chemistry

PE5   Synthetic Chemistry and Materials: Materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry

PE5_1 Structural properties of materials

PE5_2 Solid state materials

PE5_3 Surface modification

PE5_4 Thin films

PE5_5 Ionic liquids

PE5_6 New materials: oxides, alloys, composite, organic-inorganic hybrid, nanoparticles

PE5_7 Biomaterials, biomaterials synthesis

PE5_8 Intelligent materials – self assembled materials

PE5_9 Coordination chemistry

PE5_10 Colloid chemistry

PE5_11 Biological chemistry

PE5_12 Chemistry of condensed matter

PE5_13 Homogeneous catalysis

PE5_14 Macromolecular chemistry

PE5_15 Polymer chemistry

PE5_16 Supramolecular chemistry

PE5_17 Organic chemistry

PE6   Computer Science and Informatics: Informatics and information systems, computer science, scientific computing, intelligent systems

PE6_1 Computer architecture, pervasive computing, ubiquitous computing

PE6_2 Computer systems, parallel/distributed systems, sensor networks, embedded systems, cyber-physical systems

PE6_3 Software engineering, operating systems, computer languages

PE6_4 Theoretical computer science, formal methods, and quantum computing

PE6_5 Cryptology, security, privacy, quantum crypto

PE6_6 Algorithms, distributed, parallel and network algorithms, algorithmic game theory

PE6_7 Artificial intelligence, intelligent systems, multi agent systems

PE6_8 Computer graphics, computer vision, multi media, computer games

PE6_9 Human computer interaction and interface, visualisation and natural language processing

PE6_10 Web and information systems, database systems, information retrieval and digital libraries, data fusion

PE6_11 Machine learning, statistical data processing and applications using signal processing (e.g. speech, image, video)

PE6_12 Scientific computing, simulation and modelling tools

PE6_13 Bioinformatics, biocomputing, and DNA and molecular computation

PE7   Systems and Communication Engineering: Electrical, electronic, communication, optical and systems engineering

PE7_1 Control engineering

PE7_2 Electrical engineering: power components and/or systems

PE7_3 Simulation engineering and modelling

PE7_4 (Micro and nano) systems engineering

PE7_5 (Micro and nano) electronic, optoelectronic and photonic components

PE7_6 Communication technology, high-frequency technology

PE7_7 Signal processing

PE7_8 Networks (communication networks, sensor networks, networks of robots, etc.)

PE7_9 Man-machine-interfaces

PE7_10 Robotics

PE7_11 Components and systems for applications (in e.g. medicine, biology, environment)

PE7_12 Electrical energy production, distribution, application

PE8   Products and Processes Engineering: Product design, process design and control, construction methods, civil engineering, energy processes, material engineering

PE8_1 Aerospace engineering

PE8_2 Chemical engineering, technical chemistry

PE8_3 Civil engineering, architecture, maritime/hydraulic engineering, geotechnics, waste treatment

PE8_4 Computational engineering

PE8_5 Fluid mechanics, hydraulic-, turbo-, and piston engines

PE8_6 Energy processes engineering

PE8_7 Mechanical and manufacturing engineering (shaping, mounting, joining, separation)

PE8_8 Materials engineering (biomaterials, metals, ceramics, polymers, composites, etc.)

PE8_9 Production technology, process engineering

PE8_10 Industrial design (product design, ergonomics, man-machine interfaces, etc.)

PE8_11 Sustainable design (for recycling, for environment, eco-design)

PE8_12 Lightweight construction, textile technology

PE8_13 Industrial bioengineering

PE9 Universe Sciences: Astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology, space science, instrumentation

PE9_1 Solar and interplanetary physics

PE9_2 Planetary systems sciences

PE9_3 Interstellar medium

PE9_4 Formation of stars and planets

PE9_5 Astrobiology

PE9_6 Stars and stellar systems

PE9_7 The Galaxy

PE9_8 Formation and evolution of galaxies

PE9_9 Clusters of galaxies and large scale structures

PE9_10 High energy and particles astronomy – X-rays, cosmic rays, gamma rays, neutrinos

PE9_11 Relativistic astrophysics

PE9_12 Dark matter, dark energy

PE9_13 Gravitational astronomy

PE9_14 Cosmology

PE9_15 Space Sciences

PE9_16 Very large data bases: archiving, handling and analysis

PE9_17 Instrumentation - telescopes, detectors and techniques

PE10 Earth System Science: Physical geography, geology, geophysics, atmospheric sciences, oceanography, climatology, cryology, ecology, global environmental change, biogeochemical cycles, natural resources management

PE10_1 Atmospheric chemistry, atmospheric composition, air pollution

PE10_2 Meteorology, atmospheric physics and dynamics

PE10_3 Climatology and climate change

PE10_4 Terrestrial ecology, land cover change

PE10_5 Geology, tectonics, volcanology

PE10_6 Palaeoclimatology, palaeoecology

PE10_7 Physics of earth's interior, seismology, volcanology

PE10_8 Oceanography (physical, chemical, biological, geological)

PE10_9 Biogeochemistry, biogeochemical cycles, environmental chemistry

PE10_10 Mineralogy, petrology, igneous petrology, metamorphic petrology

PE10_11 Geochemistry, crystal chemistry, isotope geochemistry, thermodynamics

PE10_12 Sedimentology, soil science, palaeontology, earth evolution

PE10_13 Physical geography

PE10_14 Earth observations from space/remote sensing

PE10_15 Geomagnetism, palaeomagnetism

PE10_16 Ozone, upper atmosphere, ionosphere

PE10_17 Hydrology, water and soil pollution

PE10_18 Cryosphere, dynamics of snow and ice cover, sea ice, permafrosts and ice sheets

Life Sciences

LS1   Molecular Biology, Biochemistry, Structural Biology and Molecular Biophysics: Molecular synthesis, modification, mechanisms and interactions; biochemistry; structural biology, molecular biophysics; metabolism; signalling pathways

LS1_1 Macromolecular complexes including interactions involving nucleic acids, proteins, lipids and carbohydrates

LS1_2 Biochemistry and metabolism

LS1_3 DNA synthesis, modification, repair, recombination, degradation

LS1_4 RNA synthesis, processing, modification, degradation

LS1_5 Protein synthesis, modification, turnover

LS1_6 Lipid synthesis, modification, turnover

LS1_7 Carbohydrate synthesis, modification, turnover

LS1_8 Molecular biophysics (e.g. single-molecule approaches, bioenergetics, fluorescence)

LS1_9 Structural biology and its methodologies (e.g. crystallography, cryo-EM, NMR and new technologies)

LS1_10 Molecular mechanisms of signalling pathways

LS1_11 Fundamental aspects of synthetic biology and chemical biology

LS2   Genetics, 'Omics', Bioinformatics and Systems Biology: Molecular genetics, quantitative genetics, genetic epidemiology, epigenetics, genomics, metagenomics, transcriptomics, proteomics, metabolomics, glycomics, bioinformatics, computational biology, biostatistics, systems biology

LS2_1 Molecular genetics, reverse genetics, forward genetics, genome editing

LS2_2 Non coding RNAs

LS2_3 Quantitative genetics

LS2_4 Genetic epidemiology

LS2_5 Epigenetics and gene regulation

LS2_6 Genomics (e.g. comparative genomics, functional genomics)

LS2_7 Metagenomics

LS2_8 Transcriptomics

LS2_9 Proteomics

LS2_10 Metabolomics

LS2_11 Glycomics/Lipidomics

LS2_12 Bioinformatics

LS2_13 Computational biology

LS2_14 Biostatistics

LS2_15 Systems biology

LS3   Cellular and Developmental Biology: Cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation, stem cell biology, in plants and animals and where appropriate in microorganisms

LS3_1 Morphology and functional imaging of cells and tissues

LS3_2 Cytoskeleton and cell behaviour (e.g. control of cell shape, cell migration and cellular mechanosensing)

LS3_3 Organelle biology and trafficking

LS3_4 Cell junctions, cell-adhesion, cell communication and the extracellular matrix

LS3_5 Cell signalling and signal transduction

LS3_6 Cell cycle, division and growth

LS3_7 Cell death (including senescence) and autophagy

LS3_8 Cell differentiation, physiology and dynamics

LS3_9 Developmental genetics in animals and plants

LS3_10 Embryology and pattern formation in animals and plants

LS3_11 Tissue organisation and morphogenesis in animals and plants (including biophysical approaches)

LS3_12 Stem cell biology in development, tissue regeneration and ageing, and fundamental aspects of stem cell-based therapies

LS4   Physiology, Pathophysiology and Endocrinology: Organ physiology, pathophysiology, endocrinology, metabolism, ageing, tumorigenesis, cardiovascular diseases, metabolic syndromes

LS4_1 Organ physiology and pathophysiology

LS4_2 Comparative physiology and pathophysiology

LS4_3 Molecular aspects of endocrinology

LS4_4 Fundamental mechanisms underlying ageing

LS4_5 Metabolism, biological basis of metabolism related disorders

LS4_6 Fundamental mechanisms underlying cancer

LS4_7 Fundamental mechanisms underlying cardiovascular diseases

LS4_8 Non-communicable diseases (except for neural/psychiatric and immunity-related)

LS5   Neuroscience and Neural Disorders: Neural cell function and signalling, systems neuroscience, neural bases of cognitive and behavioural processes, neurological and psychiatric disorders

LS5_1 Neural cell function, communication and signalling, neurotransmission in neuronal and/or glial cells

LS5_2 Systems neuroscience and computational neuroscience (e.g. neural networks, neural modelling)

LS5_3 Neuronal development, plasticity and regeneration

LS5_4 Sensation and perception (e.g. sensory systems, sensory processing, pain)

LS5_5 Neural bases of cognitive processes (e.g. memory, learning, attention)

LS5_6 Neural bases of behaviour (e.g. sleep, consciousness, addiction)

LS5_7 Neurological disorders (e.g. neurodegenerative diseases, seizures)

LS5_8 Psychiatric disorders (e.g. affective and anxiety disorders, autism, psychotic disorders)

LS5_9 Neurotrauma and neurovascular conditions (including injury, blood-brain barrier, stroke, neurorehabilitation)

LS6   Immunity and Infection: The immune system and related disorders, biology of infectious agents and infection, biological basis of prevention and treatment of infectious diseases

LS6_1 Innate immunity in animals and plants

LS6_2 Adaptive immunity

LS6_3 Regulation and effector functions of the immune response (e.g. cytokines, interferons and chemokines, inflammation, immune signalling, helper T cells, immunological memory, immunological tolerance, cell-mediated cytotoxicity, complement)

LS6_4 Immunological mechanisms in disease (e.g. autoimmunity, allergy, transplantation immunology, tumour immunology)

LS6_5 Biology of pathogens (e.g. bacteria, viruses, parasites, fungi)

LS6_6 Mechanisms of infection (e.g. transmission, virulence factors, host defences, immunity to pathogens, molecular pathogenesis)

LS6_7 Biological basis of prevention and treatment of infection (e.g. infection natural cycle, reservoirs, vectors, vaccines, antimicrobials)

LS6_8 Infectious diseases in animals and plants

LS7   Applied Medical Technologies, Diagnostics, Therapies, and Public Health: Development of tools for diagnosis, monitoring and treatment of diseases, pharmacology, clinical medicine, regenerative medicine, epidemiology and public

health

LS7_1 Imaging for medical diagnosis

LS7_2 Genetic tools for medical diagnosis

LS7_3 Other medical technologies for diagnosis and monitoring of diseases

LS7_4 Pharmacology and pharmacogenomics (including drug discovery and design, drug delivery and therapy, toxicology)

LS7_5 Applied gene and cell therapies, regenerative medicine

LS7_6 Radiation therapy

LS7_7 Analgesia and surgery

LS7_8 Epidemiology and public health

LS7_9 Environmental health, occupational medicine

LS7_10 Health services, health care research, medical ethics

LS8 Ecology, Evolution and Environmental Biology: Population, community and ecosystem ecology, evolutionary biology, behavioural ecology, microbial ecology

LS8_1 Ecosystem and community ecology, macroecology

LS8_2 Biodiversity, conservation biology, conservation genetics

LS8_3 Population biology, population dynamics, population genetics

LS8_4 Evolutionary ecology

LS8_5 Evolutionary genetics

LS8_6 Phylogenetics, systematics, comparative biology

LS8_7 Macroevolution and paleobiology

LS8_8 Coevolution, biological mechanisms and ecology of species interactions (e.g. symbiosis, parasitism, mutualism, food-webs)

LS8_9 Behavioural ecology and evolution

LS8_10 Microbial ecology and evolution

LS8_11 Marine biology and ecology

LS9 Applied Life Sciences, Biotechnology and Molecular and Biosystems engineering: Applied plant and animal sciences; forestry; food sciences; applied biotechnology; environmental, and marine biotechnology; applied bioengineering; biomass, biofuels; biohazards

LS9_1 Applied biotechnology (including, transgenic organisms, applied genetics and genomics, biosensors, bioreactors, microbiology, bioactive compounds)

LS9_2 Applied bioengineering, synthetic biology, chemical biology, nanobiotechnology, metabolic engineering, protein and glyco-engineering, tissue engineering, biocatalysis, biomimetics

LS9_3 Applied animal sciences (including animal breeding, veterinary sciences, animal husbandry, animal welfare, aquaculture, fisheries, insect gene drive)

LS9_4 Applied plant sciences (including crop production, plant breeding, agroecology, forestry, soil biology)

LS9_5 Food sciences (including food technology, food safety, nutrition)

LS9_6 Biomass production and utilisation, biofuels

LS9_7 Environmental biotechnology (including bioindicators, bioremediation, biodegradation)

LS9_8 Biohazards (including biological containment, biosafety, biosecurity)

LS9_9 Marine Biotechnology (including marine bioproducts, feed resources, genome mining)