ESF Research Networking Programmes – 2008 Call for Proposals –
Final list of all Proposals recommended by SCs for funding to MOs and planned launch in 2010

	Project Nr	Unit	Leading Unit	Project
1.	08-RNP-001	LESC	LESC	**Advances in Farm Animal Genomic Resources (GENOMIC-RESOURCES)** Paolo Ajmone Marsan (IT) *Keywords*: animal genetic resources; biodiversity; conservation; farm animals and genomics Abstract: GENOMIC-RESOURCES will contribute to the education of a new generation of scientists in cutting edge approaches to the characterization, evaluation, management and conservation of Farm Animal Genetic Resources (FAnGR). Visiting researchers will work and learn novel tools and methods offered by recent advances in molecular technologies, statistical and econometric approaches, GIScience and integrated data analysis. Eight participants from eight different countries will deliver a structured interdisciplinary research and training programme, covering different branches of genetics and breeding, animal physiology and husbandry, socio-economics and geographic analysis. Research will address three main themes: i) characterization; ii) economic evaluation; and iii) exploitation and conservation of FAnGR. Training will be organised locally through Summer schools and Workshops addressing specific interdisciplinary topics. Emphasis will be placed on training future research leaders to design and manage research programmes, by teaching complementary skills, from presentational skills to project management. Visiting researcher mobility will include four months in one of the partner institutions.
2.	08-RNP-003	LESC	LESC	**Micro-Dynamics of Ice (Micro-DICE)** Paul Dirk Bons (DE) *Keywords*: ice; glaciology; materials science; climate record; microstructure Abstract: Understanding the dynamic behaviour of ice in glaciers, polar ice caps and sea ice is a major challenge, especially in a time of changing climate. The grain and sub-grain scale microstructure are crucial state variables that link atomic-scale processes to the macroscopic behaviour of ice, including its rheology and transport properties. Improved analysis, modelling and interpretation of ice microstructures are therefore imperative for a better understanding of the flow and evolution of large ice bodies, from polar ice caps, mountain glaciers, sea ice to planetary ice. In addition, linking microstructures to geophysical signals such as radar imaging and seismic profiling will enable mapping of microstructures in 3 and 4 dimensions. This interdisciplinary Research Network will bring together the main European researchers in the field, as well as those in related fields, such as metallurgy and geology. A series of networking activities is planned with the aim of integrating the research efforts of individual groups within Europe and improving the exchange of new ideas and methods. Improved training and mobility of young researchers will be achieved through a series of workshops, short courses and a summer school, publication of a textbook on ice microstructures, as well as travel grants to visit other research groups and analytical facilities. A research conference at the start of the Programme aims to highlight the major questions and challenges that the research community faces, while a second conference at the end of the funding period will serve to present the achievements of the Programme activities. Web-based initiatives include the Atlas of Ice Microstructures (AIM), which will allow public access to very-high resolution images of ice microstructures from deep ice cores and laboratory experiments. The Micro-DICE website will be a major resource for research and teaching with a lifetime well beyond that of the Programme.

ESF Research Networking Programmes – 2008 Call for Proposals –
Final list of all Proposals recommended by SCs for funding to MOs and planned launch in 2010

	Project Nr	Unit	Leading Unit	Project
3.	08-RNP-006	LESC	LESC	**Citizens Monitoring Biodiversity (CMB)** Yde de Jong (NL) *Keywords*: biodiversity; monitoring; taxonomy; citizen science; land use Abstract: Changes in land use and climatic conditions cause drastic changes in species distributions, and a generally rapid decrease in biodiversity. The increased human mobility and trade enhances the spread of invasive species and disease agents over the globe. Such changes are monitored and modelled by various research groups in most European countries. The cooperation with citizens in biodiversity monitoring is a crucial aspect of this endeavour, as it allows the collection of observations of many plants, fungi and animals over a very large geographical area, a prolonged period and at many times during the day and the year. On the other hand, nature observation as a form of citizen science is becoming more and more professionalised due to the development of sophisticated web-based tools and increased availability of scientific information over the internet. The citizens' contribution to biodiversity monitoring can be greatly enhanced by standardisation in the use of taxonomic names and monitoring procedures. The present programme organises a series of meetings and workshops that will lead to more interoperable and more reliable databases. Important preliminary work on standardisation of data and metadata formats between different nature observation communities has been done at the national level, e.g. in the Netherlands. The European FP6 project Eumon inventoried nature monitoring programs all over Europe and identified the taxonomic groups and habitat monitoring schemes that have high potential for integration. The current FP7 project PESI prepares the taxonomic standards that will serve as the backbone to which all biodiversity-related data in Europe are connected. PESI is an initiative of the European Distributed Institute of Taxonomy (EDIT), which guarantees the strong scientific basis of this collaboration. The improved coordination of the work of voluntary biodiversity observers will be a major contribution to the new large knowledge infrastructures such as the European initiative LifeWatch.
4.	08-RNP-017	LESC	LESC	**EARTHTIME – The European Contribution (EARTHTIME-EU)** Heiko Pälike (UK) *Keywords*: geological time scale; radio-isotope dating; astronomical calibration; magnetostratigraphy; biostratigraphy Abstract: This Research Network Programme (RNP) proposal is part of a broader international initiative "EARTHTIME: a community-based scientific effort aimed at sequencing Earth history through an integrated geochronologic and stratigraphic approach". The ambition is to broaden the EARTHTIME platform in Europe with this RNP, which combined with a proposed FP7 Marie-Curie Initial Training Network ("GTSnext"), will also serve as the basis for wider outreach towards the Earth Science community, and allow crucial construction of databases and teaching activities with a global dimension. The Geological Time Scale (GTS) is the fundamental measurement yardstick and the key to reconstruct Earth history. We want to (1) develop a next generation fully integrated GTS for the last 100 million years, and (2) exploit the scientific predictions arising from this improvement. This time scale, with unprecedented accuracy, precision, resolution and stability, can be achieved by integrating independent dating techniques. The numerical calibration of the GTS is the main focus of the GTSnext-ITN. With the RNP we specifically aim to link the much improved numerically calibrated time scale with other stratigraphic disciplines to arrive at a fully integrated GTS. Combining the RNP with GTSnext, the expected scientific contributions and breakthroughs are 1) new insights into key geological processes including climate change, catastrophic impacts, and volcanic hazards, 2) a stable time scale that is beneficial for academia and industry, 3) full integration and intercalibration of different numerical dating and stratigraphic techniques, leading to 4) significant improvement in the consistency of these techniques; 5) progress towards a fully astronomically-tuned and stratigraphically integrated GTS over the last 100 million years. A fundamental comprehension of geological time and the time scales at which key processes occur is appropriate in view of the impact we have on System Earth. The website for the EARTHTIME-EU contribution is http://www.earthtime-eu.eu.

	Project Nr	Unit	Leading Unit	Project
5.	08-RNP-018	EMRC	EMRC	**European Network for Gastrointestinal Health Research (ENGIHR)** Severino Pandiella (UK) *Keywords*: gastrointestinal health; probiotics; prebiotics; microbiota; functional foods Abstract: Recent consumer's awareness regarding food suggests that the primary role of a diet is not only to provide enough nutrients to fulfil metabolic requirements of the body but also to modulate various functions of the body. Considerable efforts have been made to influence the intestinal microbiota by dietary means in such a way that the health of the host is beneficially affected. There has been a strong growth in food products containing probiotics and/or prebiotics, though not in all cases supported by clinical studies. Recent changes in the way the EU regulates functional foods will bring new challenges in the development of functional products. Uncovering how probiotic and prebiotic interventions function in vivo will make possible to further expand applications that improve general health and provide anti-disease benefits. This Network proposal aims to bring together a wide spectrum of scientist and professionals sharing their knowledge and expertise to address the current challenges and issues related to the production and validation of gut health promoting foods. This will be done through a series of scientific meetings organised over a four-year period. The Network will have an interdisciplinary nature, will promote training and development of young scientists through short visits and exchange grants, and will encourage the integration of new partners. The proposed Steering Committee and Collaborators include a very broad range of disciplines and has the support of industrial partners. The Network also has a global dimension with collaborations in Japan, USA and Australia.
6.	08-RNP-022	LESC	LESC	**Research and Monitoring for and with Raptors in Europe. (EURAPMON)** Richard Shore (UK) *Keywords*: raptor; population; contaminant; monitoring; environmental health Abstract: The wider aim of the programme is to strengthen the contribution of research and monitoring for and with raptors in Europe to delivery of biodiversity, environmental and human health benefits, including maintenance and recovery of raptor populations and their habitats, and reduced chemicals threats to ecosystem and human health. The immediate objectives are (1) to establish a sustainable and resource-efficient Europe-wide network for monitoring for and with raptors, linked to international networks; (2) to establish consensus on Europe-wide priorities for monitoring for and with raptors, based on comprehensive inventory of existing monitoring, and of needs of key users (policy makers, risk assessors, environmental managers); (3) to spread best practices and build capacities in Europe for harmonized monitoring for and with raptors; (4) to build a web-based database, populated with interoperable data on European raptor population trends and (contaminant and other) pressures on raptors in Europe, and to produce European- and EU- scale analytical outputs which meet priority needs of users. Activities, workplan and budget are carefully tailored to achieve outputs which meet these objectives. The proposal builds on our existing network, which has already achieved notable output and is eminently qualified for the job. It includes participants from 15 ESF member countries and from key international bodies (UNEP/CMS, BirdLife, MEROS, Raptor Research Foundation) with relevant expertise, databases and members covering all ESF member countries; we have access to a significant proportion of leading and emerging expertise and facilities for such work in Europe. Our multi-disciplinarity (conservation biologists, ecologists, raptor ecotoxi-cologists) will enable development of new leading-edge methods for early detection of environmental change, determination of drivers of change (with levels of certainty) and prediction of emerging problems (e.g. based on combined ecological, chemical, metabonomic and/or genomic techniques). This should effectively position raptors as sentinels of the health of European ecosystems.

	Project Nr	Unit	Leading Unit	Project
7.	08-RNP-033	SCH SCSS	SCSS	**Beyond Territoriality: Globalisation and Transnational Human Rights Obligations (GLOTHRO)** Wouter Vandenhole (BE) *Keywords*: Globalisation; Human Rights; Transnational Obligations; Non-State Actors Abstract: Human rights violations occur daily, all over the world. Sovereign States legally bear the primary responsibility for human rights violations. But what happens when these States are not able to live up to their human rights obligations? Do other States have extraterritorial obligations to help them out? Which role should other actors (companies, international organisations) play? This Programme starts from the assumption that human rights obligations, in particular also in the field of economic, social and cultural rights, need to be re-thought in the present era of globalisation. The displacement of the state and the increased power and impact of corporations and international organisations, pose major practical and conceptual challenges to human rights law. In practice, human rights law faces a serious risk of marginalisation if it fails to adapt to this changing reality. Conceptually, the decentralisation of the territorial state necessitates a fundamental re-thinking of a basic tenet of human rights law, i.e. that human rights obligations are primarily if not exclusively incumbent on the territorial state. The proposed Programme intends to address a dual challenge, i.e. to deepen the understanding of human rights obligations of foreign states, and to bring together sub-fields of human rights study, i.e. on the human rights obligations of transnational corporations, international organisations and foreign states. Currently, research on the topic is mostly done by individual researchers, and sometimes by relatively small research groups. Moreover, as this is a new field, most researchers are relatively young scientists. Not enough critical mass and expertise is available in any individual country of Europe to study transnational human rights obligations in all their complexity. The Programme will be instrumental in creating a real research community on the issue, in attracting new scholars to the field, as well as in mainstreaming the topic in human rights scholarship.
8.	08-RNP-068	EMRC SCSS	SCSS	**Work Recovery European Network (WREN)** Jason Devereux (UK) *Keywords*: Worker recovery; health; wellbeing; disease; restorative activities Abstract: The first international workshop on 'Recovery from Work' was held at the University of Surrey, on the 31st March and 1st of April 2008. The focus was on how workers respond to the physical and mental demands of their workplace both during and after working hours. It brought together many important researchers in the areas of psychology, physiology, epidemiology and ergonomics to discuss this new emergent issue of recovery from work. There were 20 invited experts from nine European countries and the USA. The workshop were managed by the principal investigators Dr. Mark Cropley and Dr. Jason Devereux (University of Surrey), and each session was chaired by other members of the organising committee, Dr Gerhard Blasche (University of Vienna, Austria), Dr. Terry Hartig (Uppsala University, Sweden) & Dr. Sabine Sonnentag (University of Konstanz, Germany). It was agreed that recovery from work is one of the most important areas of future research in social sciences. New research will provide a better understanding of the relationship between the organisation of work and health, well being and performance and also the potential impact on employment, ageing, safety and societal costs. There are four key areas that require further collaborative research: -What is recovery? -Antecedents (work relatedness and individual diversity) -Processes (biological pathways) & Activities (recovery/coping activities) -Environments (physical and social environments) & Outcomes (Cognitive, physiological, & behavioural) An international collaborative group has now been formed and will continue discussions and collaboratiive research via steering committee meetings, sponsored workshops, a scientific conference, and funded visits. The next Meeting is being planned for 2009 in Sweden seeking funding from the COST programme. Further sources of funding are needed for subsequent activities up to 2014.

ESF Research Networking Programmes – 2008 Call for Proposals –
Final list of all Proposals recommended by SCs for funding to MOs and planned launch in 2010

	Project Nr	Unit	Leading Unit	Project
9.	08-RNP-071	EMRC	EMRC	**European LeukemiaNet (ELN)** Rüdiger Hehlmann (DE) *Keywords*: European LeukemiaNet; European leukemia registries; guidelines and recommendations; standardised leukemia diagnostics; spread of excellence Abstract: Treatment of leukemias has emerged as one of the most challenging areas in oncology. As leukemia therapy is complex, networking offers synergy effects and problem-solving potential. The European LeukemiaNet (ELN) funded by the 6th European Union Framework Programme since 2004 has set up a network for research, treatment and diagnostics in the field of leukemia with 147 participating institutions in 28 countries. The aim of the network is to make leukemia a curable disease. The ELN offers in a collaborative action across Europe: 1) Central services via a Network Management Center (NMC), a European Leukemia Information Center (ELIC) and Central Information and Communication Services (CICS); 2) Promotion of European registries for leukemia and preleukemic disorders; 3) Performance of clinical trials on a European scale; 4) Development of guidelines and management recommendations for treatment and molecular monitoring of leukemias, for morphological diagnosis, gene profiling, microarray analyses, indications for stem cell transplantation and for infections in neutropenic patients; 5) Integration of member countries by exchange visits, organisation of meetings, conferences, workshops and symposia; 6) Spread of Excellence, to raise awareness of the network, through targeted information material and meetings; 7) Development of public-private partnerships between ELN and industry. The ELN provides the tools to foster leukemia research and promote public health care in the field of leukemia across Europe.
10.	08-RNP-073	SCH	SCH	**Court Residences as Places of Exchange in Late Medieval and Early Modern Europe (1400-1700) (PALATIUM)** Krista De Jonge (BE) *Keywords*: palace architecture; early modern residence; ceremonial space; architectural history; court history Abstract: The PALATIUM network aims at creating a common forum for research on the late medieval and early modern European court residence or palace (palatium) in a multi- and trans-disciplinary perspective. The world of the courts 1400-1700 constituted a network of truly European scale and international character, but its architecture is only rarely studied in its “connectivity”. In this project proposal, the “palace” is seen as a place for cultural exchange. Human interaction in this space is regulated and codified by a set of rules, known as the “ceremonial”. The interaction between the ceremonial (intangible, but known through a set of tangible testimonials of different types, written and visual) and palace architecture (tangible) is one of the key questions the PALATIUM network aims to address. The palace’s space and form carry multiple connotations. They represent power, lineage, tradition vs. innovation to the informed observer; the decoding of this system of signs necessitates not only input of the historian of architecture and of art, but also of various other disciplines focused on other fields, such as archaeology, politics, literature, theatre and music. The PALATIUM network specifically wants to encourage the debate on method in the field.
11.	08-RNP-076	PESC	PESC	**Contact And Symplectic Topology (CAST)** Kai Cieliebak (DE) *Keywords*: Contact and Symplectic Topology, Floer homology, Hamiltonian dynamics, symplectic field theory, Stein manifolds Abstract: The goal of this network is to stimulate exchange between researchers from all branches of contact and symplectic topology, in order to create a comprehensive perspective on the field and make progress on some of the basic open questions. The European scale of the network reflects the global nature of these questions as well as the European strength in the subject. The planned activities include workshops, research collaborations, and the exchange of PhD students and postdocs.

	Project Nr	Unit	Leading Unit	Project
12.	08-RNP-079	SCH SCSS	SCSS	**Responding to Complex Diversity in Europe and Canada (RECODE)** Peter A. Kraus (FI) *Keywords*: Complex diversity; ethno-linguistic diversity; public religions; transnationalism; multiculturalism and redistribution Abstract: This interdisciplinary, comparative research programme is intended to explore to what extent the processes of transnationalisation, migration, religious mobilisation and cultural differentiation entail a new configuration of social conflict in post-industrial societies. Such a possible new constellation we here label complex diversity. The leading idea is that such diversity is developing at a global level, but particularly in European-style societies, where social entitlements, supranational policies and cultural diversity enjoy a considerable, but often contradictory degree of legitimacy. In this perspective, Canada offers some interesting similarities and contrasts with Europe. Our project tries therefore to identify the cleavages and normative issues that this new constellation raises on both sides of the Atlantic, and to develop expertise in the institutions, public policies and cultural resources that can respond to them. The thematic focus of the programme covers the areas of linguistic diversity and political communication, religious pluralism, transnationalism and, finally, multiculturalism and welfare state policies.
13.	08-RNP-081	SCH	SCH	**The Metaphysics of Properties (MetProp)** Olivier Massin (CH) *Keywords*: properties, metaphysics, make-believe, mind, language Abstract: The network "The Metaphysics of Properties" is intended to integrate research and teaching activities (mainly at the doctoral and post-doctoral level) of the philosophy departments of the Universities of Nottingham, Leeds (UK), Barcelona, Valencia (Spain), Geneva, Fribourg (Switzerland), Münster (Germany), Bergamo (Italy), Lund (Sweden), the Jagiellonian University (Krakow, Poland) and the Jean Nicod Institute (Paris, France) in hotly debated areas of metaphysics and the philosophy of mind and language. Bringing European expertise on the theory of properties together, the proposed network will encourage and support an already existing dynamic collaboration between the three main partners and the associated members in research and teaching. This collaboration, which an ESF funding would render even more effective, is already evidenced by conferences, common publications, teaching visits as well as mutual participation in doctoral schools and workshops. The objectives of the network are the organisation of workshops, the faciliation of joint publications and more generally an intensification of the exchange of research expertise as well as a closer collaboration in the training of PhD-students (mainly through co-supervision). The benefits to be reaped from such a collaboration are the transdisciplinary integration European research and teaching institutes leading in the targeted areas.
14.	08-RNP-082	EMRC	EMRC	**European Myositis Network (EUMYONET)** Ingrid Lundberg (SE) *Keywords*: Myositis; inflammation; network Abstract: The inflammatory myopathies, collectively named myositis, are rare chronic disorders with muscle weakness as the primary clinical complaint and where new therapies are needed. Disease mechanisms are largely unknown but genetic factors contribute to disease susceptibility and are likely to determine clinical subsets and prognosis. The aim of this network is to establish an interdisciplinary network in order to share knowledge and expertise in various scientific fields of adult and juvenile myositis, and to establish a European myositis data base with longitudinally followed patients and a biobank with DNA, serum samples and muscle biopsies. Internationally developed and partly validated outcome measures for disease activity and disease damage will be recorded. Through an EU-funded project, AutoCure, a European myositis consortium has been founded including a cohort of 850 myositis patients with clinical data, DNA and sera. We now aim to extend this cohort by including experts outside AutoCure and by collecting 500 more cases. Data collection will be facilitated by an electronic myositis register, which will be implemented in the network. A whole genome wide scan analysis and serotyping will be performed within the consortium and in collaboration with an international genetic study, MYOGEN. This study will permit us to investigate the role of genes and serological markers for disease susceptibility and prognosis. It will raise new scientific questions on possible molecular pathways in myositis that can be further tested within our network. This network with its unique large data base with well characterized myositis patients will provide a platform for scientific work in order to achieve increased understanding of disease mechanisms and in addition will facilitate recruitment to clinical trials in myositis patients.

	Project Nr	Unit	Leading Unit	Project
15.	08-RNP-096	PESC	PESC	**Application- and Methodology-Driven Innovation in Design Of Experiments (AMIDOE)** Peter Goos (BE) *Keywords*: Data Collection; Design of Experiments; Research Design Abstract: In quantitative work in any field of application, data collection issues are at least as important as data analysis. This Research Network Programme (RNP) is concerned with the collection of experimental data, in particular with statistical aspects of the design of experiments (DOE). Any improvements in the way experiments can be designed have the potential to generate important increases in knowledge and savings in time and money in many disciplines. The rapid developments in different application areas and in different branches of mathematics have led to a fragmentation in the theory and practice of DOE, leaving many current DOE problems unsolved. Solving these problems requires cross-fertilisation between the different mathematical bases for DOE (combinatorics, continuous optimization methods, discrete optimization algorithms, algebraic geometry and linear algebra) and users of DOE. The envisaged achievement of the RNP is to bring together international experts in DOE and users of DOE in engineering, industry, medicine, and exact and human sciences to facilitate this cross-fertilization, and create a learning platform and a forum for raising and discussing challenging problems through focused workshops and training programmes. The RNP will define the research direction in DOE for the next decade, guarantee that state-of-the-art DOE methodology is utilized in applications and ensure that the next generation of researchers in Europe will have a broad enough grounding in the subject to enable them to use the best of different parts of DOE theory throughout their careers as new applications arise.
16.	08-RNP-106	PESC	PESC	**New Approaches to Biochemical Sensing with Plasmonic Nanobiophotonics (PLASMON-BIONANOSENSE)** Stefan Maier (UK) *Keywords*: Nanobiophotonics; biochemical sensing; plasmonics; single molecule science Abstract: The aim of this research network is to establish a European platform for achieving convergence of the physical, optical, and biological sciences at the nanoscale within the context of optical molecular sensing with nanoscopic structures. This will be achieved throughout a series of open workshops, schools, and exchange visits between leading European groups and end-users on the international arena, and interfaces with clusters of excellence in North America and far-East Asia. The advent of nanotechnology has opened up the fascinating possibility to interface (bio)molecules with designed nanostructures, thereby creating new functionality for photonic, electronic, and health-care applications in a highly integrated environment. At the same time, the recent fast development of plasmonics is providing clear guidelines to focus light to the nanometre scale, i.e. true nano-optics, far beyond the diffraction limit of conventional optics. It is the intention of this network to exploit the unique potential of combining nano-optical technology with plasmonics and initiate a decisive advance in European-wide research in nanotechnology at the biological interface, with a focus on the development of truly nanoscale optical biosensors allowing ultimately routine detection and recognition of single molecules in their natural environment. Given the significant European expertise in the areas of nanotechnology, single-molecule science, biophysics and plasmonics, the essential infrastructure for the development of easy-to-use highly integrated biosensors is present. Still focused action is required, together with the inclusion of concrete end-users, to generate a multidisciplinary interface of the physical and engineering sciences with chemistry and biology. Our network, including both the European academic key players in the field and one internationally leading nanotech company (Oxonica), aims to create such synergy in order to establish Europe as a leader in photonic bionanotechnology.

ESF Research Networking Programmes – 2008 Call for Proposals –
Final list of all Proposals recommended by SCs for funding to MOs and planned launch in 2010

	Project Nr	Unit	Leading Unit	Project
17.	08-RNP-112	PESC	PESC	**New frontiers in millimetre / sub-millimetre waves integrated dielectric focusing systems (NEWFOCUS)** Ronan Sauleau (FR) *Keywords*: Information and Communication Technologies (ICT); Dielectric focusing systems; Computational electromagnetics; Electromagnetic synthesis / optimisation; Integrated sensors Abstract: This 5-year research Network gathers the most qualified teams in Europe with unique and strong background and expertise on “integrated dielectric focusing systems at millimetre and sub-millimetre waves”. The whole spectrum of the fundamental know-how required to push the frontiers in the area covered by the Network will be assembled to strengthen, consolidate and produce a significant added value at the European level in terms of research and education. These fields of expertise include (1) Advanced analytical and numerical modelling techniques in electromagnetic theory using complementary formulations (full-wave modelling in time and frequency domains, high-frequency and asymptotic techniques, spectral approaches) for the analysis, the synthesis and the optimisation of integrated dielectric focusing systems, (2) Powerful computer-aided-design tools developed by the partners of the Network, and (3) Unique measurement facilities at millimetre and sub-millimetre waves. In its present form, the Network gathers 15 academic partners from 12 countries (Croatia, Finland, France, Germany, Greece, Italy, Portugal, Switzerland, The Netherlands, Turkey, UK, and Ukraine). The main expected achievements are the following: (1) Coordination, consolidation and exploitation of the research expertise in Europe, (2) Advanced education (creation of courses for the post-graduate European School of Antennas), (3) Inciting mobility and researcher exchanges (travel grants for short term scientific missions), (4) Sharing existing expertise and overall benchmarking, (5) Development of new design techniques / tools and innovative antenna concepts, and (6) Dissemination of know-how (creation of a website, organisation of scientific workshops and special sessions in international conferences, publication of one reference book, publications in scientific journals and international conferences).
18.	08-RNP-118	PESC	PESC	**Gaia Research for European Astronomy Training (GREAT)** Nicholas Walton (UK) *Keywords*: Astronomy, Astrometry, Galaxy, Stellar Evolution, Solar System Physics Abstract: The next ESA 'Cornerstone' mission Gaia is scheduled for launch in late 2011. It is designed to map over one billion stars with three instruments to collect astrometric, photometric and spectroscopic data on stars in the Milky Way and in galaxies belonging to the Local Group, distant galaxies, quasars and solar system objects. Gaia builds on the expertise established in Europe through the successful ESA Hipparcos mission, building on that base of European expertise. A broad community of nearly 400 European scientists and engineers are working together to prepare and carry out the extremely challenging mission data processing. The overall objective of GREAT is to prepare the wider community for the science exploitation of the Gaia mission by supporting a science-oriented network which will address the scientific issues in which Gaia will have a major impact. This network will fund community training events, workshops and major conferences, proceedings, grants for short and exchange visits, and outreach material. It will help build essential collaborative scientific cooperation across Europe and the wider world in turn delivering major advances in science around the main objectives of Gaia. Over 550 researchers in some 90 groups from 17 European countries and the European Space Agency (ESA), and covering all the science areas covered by Gaia have committed to participating in this network. GREAT is a pan European science driven research infrastructure which will facilitate, through focused interaction on a European scale, the fullest exploitation of this ESA cornerstone astronomy mission, enabling the European astronomy community to provide answers to the key challenges in our understanding of the Galaxy and Universe.

ESF Research Networking Programmes – 2008 Call for Proposals –
Final list of all Proposals recommended by SCs for funding to MOs and planned launch in 2010

	Project Nr	Unit	Leading Unit	Project
19.	08-RNP-121	PESC *RI*	PESC	**Common perspectives for cold atoms, semiconductor polaritons and nanoscience (POLATOM)** Georgios Kavoulakis (GR) *Keywords*: Bose-Einstein condensates; microcavity polaritons; novel light emitters, entanglement, parametric scattering, cold atoms, nanoscience, quantum liquids, superfluidity and quantum transport, atomtronics Abstract: The principal goal of the suggested Network is twofold. Firstly, to develop further the research fields of exciton/polariton condensates in semiconductor nanostructures, and that of cold atoms, promoting the collaboration between the scientists who work on these two fields. Secondly, to contribute to the development of technological applications, linking these two fields to nanotechnology. These areas have expanded dramatically in recent years, with remarkable achievements. The experimental developments in the field of cold atoms have made it possible to manipulate even single atoms, bringing future device design based on novel forms of matter within reach. The field of polaritons is at the forefront of condensed matter physics and is particularly rich in its interplay of theoretical predictions and their experimental realization. The present Network combines a number of groups working at the front of the two fields of polaritons and of cold atoms in Europe, with a good balance between theory and experiment, and all the necessary prerequisites that will allow us to establish the goals of the Network. The combined knowledge of the groups which participate, as well as the scientists who will become involved in the Network activities, will definitely promote research in Europe in these highly interdisciplinary fields. The goals will be met by the organization of annual workshops which will provide the main forum for information exchange. The workshops will include special pedagogical activities to aid development of postdoctoral scientists and research students. Delivery of results will be fostered by provision of bursaries for medium-term laboratory visits by researchers, in order to allow swapping of experimental and theoretical capabilities between project centres. Shorter discussion visits will also be funded to allow assessment and interpretation of results on a face-to-face basis. Our Network fits very well with the goals and the philosophy of the ESF Networks. It also is well in line with other activities that either take place right now, or have just been completed.
20.	08-RNP-122	PESC *RI*	PESC	**Random geometry of large interacting systems and statistical Physics (RGLIS)** Vladas Sidoravicius (NL) *Keywords*: Scaling Limits; Schramm-Loewner Evolution; Gaussian Free Field, Conformal Loop Ensembles; Random planar maps, Random networks in random environment, Self-interacting Random Walks, Renormalization Group, Super-Symmetry Methods, Non-equilibrium phase transitions and fluctuations Abstract: This proposal is for a major international research and education collaboration in several overlapping areas of Probability Theory, Statistical Physics, Complex Analysis and Geometry such as Schramm-Loewner Evolutions, Critical and near-critical Percolation, Random Networks, Self-Interacting Random Walks, and, more generally, geometric/stochastic aspects of Disordered Systems. The project concerns various aspects of random spatial processes, called “percolative systems”, in which macro-scopic phenomena are naturally expressed in terms of paths of microscopic events that percolate through space (or space-time). Scaling concepts and renormalization methods play an important role in the analysis of such processes, the nature of their phase transitions and critical behavior. Themes that will be studied are: - Scaling limits of two-dimensional percolation-type models and the Schramm-Loewner Evolution; - Random planar maps; - Quantum Gravity, Conformal Loop Ensembles (CLE) and the Gaussian Free Field; - Large scale phenomena and Universality in Random Networks; - RWREs, Self-Interacting Walks, Statistical Physics in Random Environment; - Rigorous Renormalization and Super-Symmetry methods in disordered systems; - Coarse Geometry of Random Systems; - Anomalous fluctuations in non-equilibrium systems. These and related problems are challenging, but are ripe for a collaborative attack combining the diverse expertise of the participants from Europe and abroad. One of the main goals of this proposal is to exhibit and clarify the close relationship between these questions. The collaborators of proposed network have been prime participants in some of the major progress in this field. The proposed Network will have partnerships with other European and Non-European Networks and Programs (PIRE-NSF), Prosul (CNPq-Brazil)). Training and extensive mentoring will be provided to postdoctoral, graduate and advanced undergraduate students from various backgrounds. This proposal aims to create a self-sustaining model of enhanced collaboration at faculty, postdoctoral and student levels not only between the European research institutions, but also between European, U.S. and Latin American universities.