Project	Coordinator	Amount	Description
Seventh Framework Programme (FP7) COORDINATOR - SOFIA UNIVERSITY			
Beyond Everest - Development of the research potential of the Faculty of Chemistry, Sofia University, in the area of advanced functional materials for successful participation in world-class research at EU level Project Acronym:EVEREST **ProgrammeAcronym:** FP7-REGIONS Project Reference:001858 Start date:2011-10-01 End date:2015-03-31	Tony SPASSOV (Professor)	Project cost: 4260380 EURO Project Funding: 3799998 EURO	This project aims to focus the research potential of the Faculty of Chemistry in Sofia University for performing world-class research in the area of Advanced Functional Materials. The Faculty is leading scientific centre in this area in Bulgaria and in the region, with recognized contributions in the design and characterization of materials with desired chemical, catalytic, biological and optical properties. The high research level in the Faculty was recently acknowledged by the National ranking of Universities - the Chemistry in Sofia University received the highest rank among all research fields in all Bulgarian universities. European evaluators, in the frame of FP7 project EVEREST, estimated highly the research achievements of the Faculty and noted that the studies in the area of Advanced Materials have the potential to be developed to the level comparable to that of the leading European centres. Based on a thorough SWOT analysis, an institutional strategic plan is defined and implemented in this proposal, aimed at boosting the Faculty excellence and creativity, and building a unique Research and Educational Centre on Advanced Functional Materials in Bulgaria. This objective will be attained by building strategic partnership with leading European research centres: TU Munich (DE), Oxford University (UK), MPI for Polymer Research (DE), University of Turin (IT), ESPCI Paris (FR); recruitment of five experienced researchers, complementing the Faculty expertise; extending the existing infrastructure with new NMR, TEM and catalytic equipment, needed for cutting-edge research in this area.

			The project content fits within the thematic priorities of FP7 (NMP) and within the national priority Materials science and Nanotechnology.
Exploitation of ground-based Global Navigation Satellite Systems (GNSS) for Meteorology and Climate studies in Bulgaria/Southeast Europe Programme Acronym: FP7-PEOPLE Project Acronym: GNSS METEOROLOGY Project Reference: 268135 Start date: 2011-01-01 End date: 2014-12-31	Bojil DOBREV	Project cost: 100000 EURO Project Funding: 100000 EURO	The Global Navigation Satellite Systems (GNSS), a new technology that revolutionised the navigation, is becoming an indispensable part of our daily life with millions of chips installed in portable car navigation devices and mobile phones. Beside the numerous civilian and commercial applications, GNSS proved to be an accurate sensor of the most abundant greenhouse gas, namely atmospheric water vapour. Application of GNSS in Meteorology is a well established research field in Europe and GNSS data from 1,200 stations are available for model validation and assimilation in state-of-the-art models used for operational weather prediction by the National Meteorologic Services. Advances in GNSS data processing is making possible to also use the GNSS data for climatic trend analysis, an emerging new area of research that is both attractive and important. This project is a first step towards application of GNSS for Meteorology and Climatic studies in Bulgaria and Southeast Europe. The work will be conducted in close collaboration with the University of Bern, Switzerland and the Delft University of Technology, Netherlands. It is expected to foster national links that will lead to integration of the GNSS data from Bulgaria in the European data exchange within EUMETNET - EGVAP project. A user friendly water vapour database will be developed and used for (1) cross-validation of ground-based and satellite observations and derivation of systematic biases, (2) validation of numerical models used for research and weather prediction, (3) study of water vapour distribution in Bulgaria and Southeast Europe, (4) detection of long term trends in water vapour and links to heat waves, droughts and changes in the pathway of the Atlantic Cyclones, and (5) studies of accuracy of state-of-the-art climate models for Bulgaria and Southeast Europe.
Regime and Society in Eastern Europe (1956 - 1989). From Extended Reproduction to Social and	Dimiter DIMOV	Project cost: 1026120 EURO Project Funding:	The ambition of this project rests on the long-established tradition of the comparative politico-historical and interdisciplinary studies of the totalitarian regimes and on the theoretical efforts to elucidate the social dynamics and social change in Eastern Europe during the so called "real

Political Change Start date: 2011-06-01 End date: 2015-05-31 Programme Acronym: FP7-IDEAS-ERC Project Acronym: RESOCEA **Programme Acronym:** FP7-IDEAS-ERC Project Reference: 269608		1026120 EURO	socialism". It will deal with the relations between regime and society in an attempt to highlight the growing tensions between them. Without neglecting the important role of the geopolitical confrontation and the dissident movements, this work will search the key factors for the disintegration of communist societies in the common people The project involves one PI who will organise and supervise the work of four senior researchers from the ex-socialist countries while each of them deals with the local aspects of the issue. The PI will study these phenomena in Bulgarian context and at the same time will provide a comparative narrative linking all five case studies. The comparative analyses of different social practices and dynamics in similar political environments will help us understand the various courses Eastern-European countries took in overcoming their communist past and can serve as a basis for a follow-up research of the Transition process.
The Spectrum of Relative Definability Start date: 2012-08-16 End date: 2015-08-15 Project Acronym: STRIDE **Programme Acronym:** FP7-PEOPLE Project Reference: 298471	Ivan SOSKOV (Professor)	Project cost: 233465 EURO Project Funding: 233465 EURO	One of the principal threads in Mathematical Logic is to give a mathematical analysis of the notion of definability. Of particular interest is the relative definability of real. Based on the fineness of ingredients that come into a particular definability notion, we obtain a whole spectrum of relative definability: effective translation (many-one reducibility), computation (Turing reducibility), existential definability (enumeration reducibility), number theoretic definability (arithmetic reducibility), and definability by the Borel operations (hyper-arithmetic reducibility). We propose to study the spectrum of relative definability between subsets of the natural numbers. At the two endpoints, many-one and hyper-arithmetic, we do have complete accounts and those accounts are completely different. We have only partial understanding of the spectrum between these two extremes and many important open questions. The main objective of this project is to study the to understand where in the spectrum moving from top to bottom the difference occurs. A special focus in this project will be the pair of the Turing and Enumeration degrees which is expected to hold the key for understanding this central question. The proposed project is inter-sectoral in its essence, as it examines the connection between structures

			that arise from Computability Theory with the structure of Second Order Arithmetic. The methodology used for these investigations place them at the intersecting point between the Computability Theory, Set Theory and Descriptive Set Theory.
Seventh Framework Programme (FP7) **PARTNER - SOFIA UNIVERSITY**			
CULTivating Understanding and Research through Adaptivity Start date: 2011-02-01 End date: 2014-01-31 Project Acronym: CULTURA **Programme Acronym:** FP7-ICT Project Reference: 269973	**Partner from SU**: Tinko TINCHEV (Professor) Coordinator: Deirdre SAVAGE **Organization name:** THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN	Project cost:3912222 EURO Project Funding:2869525 EURO	A key challenge facing curators and providers of digital cultural heritage across Europe and Worldwide is to instigate, increase and enhance engagement with digital humanities collections. To achieve this, a fundamental change in the way cultural artefacts are experienced and contributed to by communities is required. CULTURA will pioneer the development of next generation adaptive systems which will provide new forms of multi-dimensional adaptivity: -personalised information retrieval and presentation which respond to models of user and contextual intent -community-aware adaptivity which responds to wider community activity, interest, contribution and experience -content-aware adaptivity which responds to the entities and relationships automatically identified within the artefacts and across collections -personalised dynamic storylines which are generated across individual as well as entire collections of artefacts CULTURA advances and integrates the following key technologies: -Cutting edge natural language processing, which normalises ambiguities in noisy historical texts -Entity and relationship extraction, which highlights the key individuals, events, dates and other entities and relationships within unstructured text -Social network analysis of the entities and relationships within the content, and also of the individuals and broader community of users engaging with the content -Multi-model adaptivity to support dynamic reconciliation of multiple dimensions of personalisation

			CULTURA will deliver innovative adaptive services and an interactive user environment which dynamically tailors the investigation, comprehension and enrichment of digital humanities artefacts and collections. Through the provision of such functionality, CULTURA can empower all users to investigate, comprehend and contribute to digital cultural collections. CULTURA will provide rigorous evaluation and validation of its adaptive services using high impact, contrasting, multicultural digital cultural heritage collections and diverse user communities and individuals. The CULTURA use cases, defined in collaboration with real users, will clearly illustrate how the adaptive environment will offer genuine user empowerment and unprecedented levels of engagement with these collections and communities. The CULTURA consortium has a strong emphasis on meeting real end-user needs, maximising societal impact and laying a foundation for successful commercialisation. Thus, the project has a strong scientific foundation, informed by two significant digital cultural resources and associated communities, and supported by experienced and effective project management.
European Network of National Contact Points for Research Infrastructures moving forward Start date: 2011-10-01 End date: 2013-09-30 Project Acronym: EURORIS-NET+ **Programme Acronym:** FP7-INFRASTRUCTURES Project Reference: 283663	**Partner from SU**: Victoria DAMYANOVA Coordinator: Theodora FARMAKI Organization name: ETHNIKO IDRYMA EREVNON	Project cost:1199043 EURO Project Funding:949984 EURO	The main objective of EuroRIs-Net+ is to provide value-added services, through the Network of NCPs for Research Infrastructures. These services will facilitate transnational cooperation of NCPs, promoting the effective implementation of the RI programme, highlighting opportunities offered by Research Infrastructures - at the European and international level - and their impact on e-science. The Network will develop observatory functions for EC and national Research Infrastructures policies, programmes and initiatives, supported by an efficient dialogue scheme for RI NCPs with the RI ecosystem and a sustainable and comprehensive RI Knowledge Repository. Specifically: Provision of high level services to our clients (RI scientific communities, industry and public stakeholders) and promotion of best RI NCP practices will be supported through training, peering and helpdesk activities for all RI NCPs, whereas development of systematic partnering activities will increase collaboration among RI stakeholders Increased

			visibility of the RI programme to all thematic areas of FP7 will empower and support bottom-up approaches for scientific and user communities in the RI programme, facilitated through cooperation with other NCP networks, with direct benefit on focused scientific communities. Moreover, the network will implement targeted dissemination activities to improve visibility of the projects services and the RI programme, contributing to the broader use of Research Infrastructures An interactive platform for communication among the Network, EC, RI policy bodies and RI stakeholders will constructively support policy design, through a dialogue - among RI ecosystem actors - which will facilitate diffusion of RI policy bodies recommendations to the relevant public authorities and, vice-versa, will permit collection and analysis of integrated data on countries participation in Research Infrastructures, to support, wherever possible, their integration within the ERA
UpgradiNg ICT excellence by strengthening cooperation between research Teams in an enlarged Europe Start date: 2010-02-01 End date: 2013-01-31 Project Acronym: UNITE **Programme Acronym:** FP7-ICT Project Reference: 248583	**Partner from SU:** Bojil DOBREV Coordinator: Steiger Garção ADOLFO SANCHEZ (Professor) **Organization name:** UNINOVA - INSTITUTO DE DESENVOLVIMENTO DE NOVAS TECNOLOGIAS	Project cost:560222 EURO Project Funding:495995 EURO	UNITE develops a set of activities to reinforce the cooperation between research teams and improve the level of excellence of ICT research across an Enlarged Europe, in the federated theme of 'Future of the Internet'. The project takes benefit from the large experience of the consortium in research oriented collaborative activities, and uses the collaborative platform of I-VLab to support its activities. Secondment is the priority for UNITE, taking most of the project budget. Moreover, UNITE will not develop its secondment activities from scratch, as relevant preparatory work with effective results was already done during the project proposal preparation. UNITE consortium sent out in advance a call to organizations around the Enlarged Europe, and got 121 written interests to participate in the UNITE secondment activities, i.e., UNITE has at project starting time a committed offer/demand matrix that identifies organizations interests and contact responsibles within the UNITE secondment. Thus, UNITE proposes to start the secondment activities as soon as the project begins, based on the pre-elaborated secondment matrix involving now already more than 120 institutions across the enlarged Europe, and containing

			863 send and 1000 receive requests. To save project budget, and increase the number secondment activities, whenever possible the ERASMUS programme will be considered. UNITE organizes open 2 doctoral symposiums that provide the opportunity to enlarge the community in collaboration with both the sending and receiving institutions. A restrict management will be put in place, to control the costs in a correct timing and progress control of each work package; and regulate and manage the Secondment activities. For ensuring a long-term cooperation and the pursuit of the secondment actions, UNITE creates an 'Eastern Europe' INTEROP-VLab Pole, enabling to build up consortiums to widen the participation of enlarged Europe in EC ICT research projects.
Pan-European coordination action on CO2 Geological Storage Start date: 2010-11-01 End date: 2013-10-31 Project Acronym: CGS EUROPE **Programme Acronym:** FP7-ENERGY Project Reference: 256725	**Partner from SU: Georgi GEORGIEV (Professor)** Coordinator: Isabelle CZERNICHOWSKI-LAURIOL (Dr) **Organization name:** BUREAU DE RECHERCHES GEOLOGIQUES ET MINIERES	**Project cost:**2619558 EURO **Project Funding:**2236837 EURO	The EU has made significant progress in CCS as a bridging technology for combating climate change, but this must now accelerate and be spread evenly throughout EU Member States and Associated Countries. In this context, CO2GeoNet, CO2NET EAST and ENeRG are joining forces, pooling their expertise and building on their Networking experience to form CGS Europe, a unique concerted European reference point on CO2 storage. The objective of CGS Europe is to build a credible, independent and representative pan-European scientific body of expertise on CO2 geological storage that will: (i) create a durable networking of research capacity on CO2 storage in Europe, (ii) liaise and coordinate its activities with other stakeholders, including the ZEP Technology Platform, (iii) facilitate the large-scale demonstration and industrial deployment of CCS, (iv) support the implementation of the EU Directive on the geological storage of CO2 and other regulatory regimes. This will be achieved by: (i) setting up coordination and integration mechanisms between the CO2GeoNet Association and the 23 other participants, thus covering most of Europe with 24 EU Member States and 4 Associated Countries, (ii) setting up links and cooperation with other initiatives at national, European and international levels, (iii) preparing a framework enabling the consortium to be independent from EC funding after the end of the project.

			CGS Europe will strive to compile and structure the existing research results, policy and regulations in a centralised knowledge repository to enable stakeholders to easily find pertinent information. Knowledge development will be ensured by the sharing of good practices, the assessment of research needs and the fostering of new research projects. A major effort will be dedicated to knowledge dissemination and capacity building, aiming at giving impartial and understandable information to the different stakeholders, according to their specific needs in each country.
Increasing the impact of Central-Eastern European environment research results through more effective dissemination and exploitation Start date: 2011-01-01 End date: 2013-06-30 Project Acronym: ENVIMPACT **Programme Acronym:** FP7-ENVIRONMENT Project Reference: 265275	**Partner from SU:** Bojil DOBREV Coordinator: Dora GROO (Dr) **Organization name:** TUDOMANYOS ES TECHNOLOGIAI ALAPITVANY	Project cost:1011868 EURO Project Funding:851584 EURO	Based on indications from EC and FP7 statistics, the Central and Eastern European (CEE) countries participate at low rate in the FP7 Environment theme. On the other hand air pollution, chemical pollution and environmental risks should be handled with expressed interest in this region, due to severe environmental damages caused by decades of negligence and mishandling. CEE researchers have been conducting research in the mentioned fields since the middle of the 20th century, however, their results did not reach and influence - either the policy makers of their own country, or their academic counterparts in EU-15. The main objective of ENVIMPACT is to enrich the EU knowledge base with the environment-related results of the CEE researchers, thus inducing new collaborations under FP7/FP8 which may lead to innovative solutions for the lasting protection of our environment. Using local contacts, knowledge and the insight of expert groups consisting of relevant academic, industrial/ETP and policy representatives, the innovative environmental research practices and results originating from Central and Eastern Europe will be identified, mapped and made available for the governmental, academic and industrial stakeholders all over Europe. After analysing the presently applied dissemination and exploitation practices of CEE research results (by SWOT analysis), good and bad practices will be presented in an online catalogue. Recommendations will be prepared for the development a tailor-made toolkit. To close the communication gap, CEE researchers will be offered trainings and online mentoring services, based on the recommendations for communication and exploitation of

			research results. Partners from 7 NMSs will ensure the availability of local research results, while representatives from 4 EU-15 countries will help to identify and match the needs in terms of communication of CEE/EU-15 researchers and will provide the expertise in reaching the relevant stakeholders.
Smart light collecting system for the efficiency enhancement of solar cells Start date: 2009-02-01 End date: 2013-01-31 Project Acronym: EPHOCELL **Programme Acronym:** FP7-ENERGY Project Reference: 227127	**Partner from SU:** Asen PASHOV (Dr) Coordinator: Cristina BARRAGAN (Ms.) **Organization name:** ACONDICIONAMIENTO TARRASENSE ASSOCIACION	Project cost:3418683 EURO Project Funding:2500293 EURO	The main objective of this project is the study of the various intra and intermolecular energy transfers with the aims to modify the solar spectrum by means of an adequate molecular system. This will permit to improve the similitude between the solar radiation and the absorbance of the photovoltaic materials. This change of spectrum must be realized without significant loss of energy by means of energy up and down-conversion cascades supported by a photoluminescent compound able to emit in the maximum absorption band of the photovoltaic material. The concentration of the solar light wavelength in the absorption band of the photovoltaic material may determine an increase in the number of photons able to excite the photovoltaic compound. This will result in an improvement of the electrical energy delivered by the solar cell. The research and development to be realized during this project will be essentially centred on the studies of molecular mix able to generate adequate energy cascades and their evaluation in terms of efficiency and chemical stability. Another part of the work will consist in the development of coatings or plastics containing such molecular systems to be directly applied on the solar cells superficies for an in situ evaluation of the results and for a quick emergence of such light concentrating devices.
A high intensity neutrino oscillation facility in Europe Start date: 2008-09-01 End date: 2012-08-31 Project Acronym: EURONU	**Partner from SU:** Vassil KALKANDZHIEV (Dr) Coordinator: Tony WELLS **Organization name:** SCIENCE AND	Project cost: 13490368 EURO Project Funding: 4000000 EURO	The recent discovery that the neutrino changes type (or flavour) as it travels through space, a phenomenon referred to as neutrino oscillations, implies that neutrinos have a tiny, but non-zero mass. This implies that the Standard Model of particle physics is incomplete. The implications are far reaching: e.g. neutrino interactions may be responsible for the removal of all the anti-matter created in the Big Bang from the early Universe and that the neutrino may have played a crucial role in the birth of the Universe itself. Knowledge of the contribution of neutrinos in these areas requires precise measurements of parameters governing

Programme Acronym: FP7-INFRASTRUCTURES Project Reference: 212372	TECHNOLOGY FACILITIES COUNCIL		neutrino oscillations, which will require new high intensity neutrino oscillation facilities in which neutrino beams are generated using new and highly challenging concepts. The construction of such a facility in Europe would reassert Europe s position as the lead region for high energy particle physics and it would be in line with the strategy for the future of European particle physics, as recommended by the CERN Scientific Policy Committee. The design study will review the three currently accepted methods to realize such a neutrino facility (the so-called neutrino Superbeams, Beta Beams and Neutrino Factories) and do detailed studies of potential show stoppers, it will define the detector options necessary to measure the neutrino oscillation parameters and it will perform a critical physics evaluation of these facilities. The design study will also perform a cost assessment, that coupled with the physics performance, will permit the European research authorities to make a timely decision on the lay-out and construction of the future European neutrino oscillation facility. Doing this work now will enable Europe to secure the lead in this field.
Inter-sectoral mobility of researchers in South-Eastern Europe Start date: 2009-01-01 End date: 2012-06-30 Project Acronym: I-SEEMOB **Programme Acronym:** FP7-REGIONS Project Reference: 234629	**Partner from SU:** Roumen NIKOLOV (Professor) Coordinator: George ADAMOPOULOS **Organization name:** GENIKI GRAMMATIA EREVNAS KAI TECHNOLOGIAS, YPOURGIO PAIDIAS, DIA VIOU MATHISIS & THRISKEVMATON	Project cost: 767744 EURO Project Funding: 658160 EURO	The I-SEEMob project is a bottom-up policy coordination initiative undertaken by 8 countries in the region of South-eastern Europe (SEE). The proposal focuses on the specific research policy issue of enhancing the career development and the inter-sectoral mobility of R&D personnel in SEE. The aim of the project is to develop a set of policy recommendations targeting national governments for the removal of existing legal and policy obstacles hampering the inter-sectoral mobility of researchers and their career development towards the realization of the Lisbon Strategy goals. The main activities that are foreseen to be carried out are: a mapping exercise on the current state of industrial representation on R&D sector in SEE and its respective needs; a legislation gap analysis; an exploration of synergies with other networks or initiatives in SEE and EU and, finally, the development of a set of policy guidelines for national governments so as to formulate research policies based on the EC reforming processes of Lisbon Strategy and its relevant policy tools. The impact of the project is expected to be the formulation of national

			research policies that will take under consideration the results of the I-SEEMob project towards the removal of existing inter-sectoral mobility obstacles in SEE countries, the enhancement of cooperation between industry-academia, and, accordingly, the realization of the ERA goals in the region.
Advanced European Infrastructures for Detectors at Accelerators Start date: 2011-02-01 End date: 2015-01-31 Project Acronym: AIDA **Programme type:** Seventh Framework Programme Project Reference: 262025	**Partner from SU:** Roumen Tsenov Coordinator: Svetlomir STAVREV (Dr) Organization name: EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH	Project cost: 26003137 EURO Project Funding: 8000000 EURO	AIDA (http://cern.ch/aida) addresses the upgrade, improvement and integration of key research infrastructures in Europe, developing advanced detector technologies for future particle accelerators, as well as transnational access to facilities that provide these research infrastructures. In line with the European Strategy for Particle Physics, AIDA targets the infrastructures needed for R&D, prototyping and qualification of detector systems for the major particle physics experiments currently being planned at future accelerators. By focusing on common development and use of such infrastructure, the project integrates the entire detector development community, encouraging cross-fertilization of ideas and results, and providing a coherent framework for the main technical developments of detector R&D. This project includes a large consortium of 37 beneficiaries, covering much of the detector R&D for particle physics in Europe. This collaboration allows Europe to remain at the forefront of particle physics research and take advantage of the world-class infrastructures existing in Europe for the advancement of research into detectors for future accelerator facilities. The infrastructures covered by the AIDA project are key facilities required for an efficient development of future particle physics experiments, such as: test beam infrastructures (at CERN, DESY and LNF), specialised equipment, irradiation facilities (in several European countries), common software tools, common microelectronics and system integration tools and establishment of technology development roadmaps with a wide range of industrial partners.
Policy-oriented marine Environmental Research in the Southern EUropean Seas	**Partner from SU:** Joanna STANEVA (Dr)	Project cost: 16947071 EURO	The overall scientific objectives of PERSEUS are to identify the interacting patterns of natural and human-derived pressures on the Mediterranean and Black Seas, assess their impact on marine ecosystems

Start date: 2012-01-01 End date: 2015-12-31 Project Acronym: PERSEUS **Programme Acronym:** FP7-ENVIRONMENT Project Reference: 287600	Coordinator: Evangelos PAPATHANASSIOU (Dr) Organization name: HELLENIC CENTRE FOR MARINE RESEARCH	Project Funding: 12973123 EURO	and, using the objectives and principles of the Marine Strategy Framework Directive as a vehicle, to design an effective and innovative research governance framework based on sound scientific knowledge. Well-coordinated scientific research and socio-economic analysis will be applied at a wide-ranging scale, from basin to coastal. The new knowledge will advance our understanding on the selection and application of the appropriate descriptors and indicators of the MSFD. New tools will be developed in order to evaluate the current environmental status, by way of combining monitoring and modelling capabilities and existing observational systems will be upgraded and extended. Moreover, PERSEUS will develop a concept of an innovative, small research vessel, aiming to serve as a scientific survey tool, in very shallow areas, where the currently available research vessels are inadequate. In view of reaching Good Environmental Status (GES), a scenario-based framework of adaptive policies and management schemes will be developed. Scenarios of a suitable time frame and spatial scope will be used to explore interactions between projected anthropogenic and natural pressures. A feasible and realistic adaptation policy framework will be defined and ranked in relation to vulnerable marine sectors/groups/regions in order to design management schemes for marine governance. Finally, the project will promote the principles and objectives outlined in the MSFD across the SES. Leading research Institutes and SMEs from EU Member States, Associated States, Associated Candidate countries, non-EU Mediterranean and Black Sea countries, will join forces in a coordinated manner, in order to address common environmental pressures, and ultimately, take action in the challenge of achieving GES.
Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential.	Partner from SU: Joanna STANEVA (Dr) Coordinator: Annamaria TONCINI (Dr)	Project cost: 11360729 EURO Project Funding: 9000000 EURO	Environmental policies focus on protecting habitats valuable for their biodiversity, as well as producing energy in cleaner ways. The establishment of Marine Protected Area (MPA) networks and installing Offshore Wind Farms (OWF) are important ways to achieve these goals. The protection and management of marine biodiversity has focused on placing MPAs in areas important for biodiversity. This has proved

Start date: 2012-02-01 End date: 2016-01-31 Project Acronym: COCONET **Programme Acronym:** FP7-ENVIRONMENT Project Reference: 287844	Organization name: CONSIGLIO NAZIONALE DELLE RICERCHE		successful within the MPAs, but had little impact beyond their boundaries. In the highly populated Mediterranean and the Black Seas, bordered by many range states, the declaration of extensive MPAs is unlikely at present, so limiting the bearing of protection. The establishment of MPAs networks can cope with this obstacle but, to be effective, such networks must be based on solid scientific knowledge and properly managed (not merely paper parks). OWF, meanwhile, must be placed where the winds are suitable for producing power, but they should not have any significant impact on biodiversity and ecosystem functioning, or on human activities. The project will have two main themes: - identify prospective networks of existing or potential MPAs in the Mediterranean and the Black Seas, shifting from a local perspective (centred on single MPAs) to the regional level (network of MPAs) and finally the basin scale (network of networks). The identification of the physical and biological connections among MPAs will elucidate the patterns and processes of biodiversity distribution. Measures to improve protection schemes will be suggested, based on maintaining effective exchanges (biological and hydrological) between protected areas. The national coastal focus of existing MPAs will be widened to both off shore and deep sea habitats, incorporating them into the networks through examination of current legislation, to find legal solutions to set up transboundary MPAs. - explore where OWF might be established, producing an enriched wind atlas both for the Mediterranean and the Black Seas. OWF locations will avoid too sensitive habitats but the possibility for them to act as stepping-stones through MPAs, without interfering much with human activities, will be evaluated. Socioeconomic studies employing ecosystem services valuation methods to develop sustainable approaches for both MPA and OWF development will also be carried out, to complement the ecological and technological parts of the project, so as to provide guidelines to design, manage and monitor networks of MPA...
Development of high	Partner from SU:	Project cost:	Buildings account for 40% of total energy consumption in the European

EFFiciency Stirling HEAT pump Start date: 2011-10-01 End date: 2013-09-30 Project Acronym: EFFIHEAT **Programme Acronym:** FP7-SME Project Reference: 286814	Stoyan GUTZOV (Dr) Coordinator: Danguole DRAGUNIENE Organization name: UAB PRECIZIKA METROLOGY	1561327 EURO Project Funding: 868100 EURO	Union and the sector is expanding. Therefore, reduction of its energy consumption (by 20% by 2020) and the use of energy from renewable sources constitute important measures needed to reduce EU energy dependency and greenhouse gas emissions. A significant number of buildings must become energy positive integrating renewable energy sources. One of the main energy saving measure is the improvement of energy conversion in buildings by substitution of the less efficient technologies (EE) with more efficient ones: the most prominent growth of market share occurs for solar heating and heat pumps. However, high initial costs and long return on investment time caused by insufficient efficiency of heat pumps are limiting the penetration of market for this EE technology. The efficiency of heat pumps is mainly determined by the background technology thermodynamic cycle realisation employed. The proposed project focuses on development of ground source heat pump technology (GHP) enabling up to 75% energy savings and reduced costs for heating energy consumption. To achieve this goal EFFiHEAT will develop, prototype, test and validate cost-efficient Stirling cycle based GHP with 25% higher COP comparing to technologies in operation. This and 30% of initial cost savings achieved due to innovative Stirling engine design concept will increases consortium competitiveness in high growth GHP market. Application of the EFFiHEAT GHP has potential savings of over 0.03 billion EUR annually. Such savings will contribute to EU targets on reduction of energy consumption and CO2 emissions. The consortium combines know how on electro-mechanical design, process control and material research. Contract research will be performed by a Lithuanian, Spanish and Bulgarian research institutions which provide a unique integration of know how on high efficiency Stirling engine based GHP development
Working Environment with Social and Personal Open Tools for inquiry based learning.	Partner from SU: Krassen STEFANOV (Dr) Coordinator:	Project cost: 3738930 EURO Project Funding:	weSPOT aims at propagating scientific inquiry as the approach for science learning and teaching in combination with today's curricula and teaching practices. It lowers the threshold for linking everyday life with science teaching in schools by technology. weSPOT supports the

Start date: 2012-10-01 End date: 2015-09-30 Project Acronym: WESPOT **Programme Acronym:** FP7-ICT Project Reference: 318499	Jos VAN DEN BROEK Organization name: OPEN UNIVERSITEIT NEDERLAND	2899996 EURO	meaningful contextualization of scientific concepts by relating them to personal curiosity, experiences, and reasoning. weSPOT addresses several challenges in the area of science learning and technology support for building personal conceptual knowledge. The project focuses on inquiry-based learning with a theoretically sound and technology supported personal inquiry approach. In inquiry based-learning learners take the role of an explorer and scientist and are motivated by their personal curiosity, guided by self-reflection, and develop knowledge personal and collaborative sense-making and reasoning. weSPOT will work on a meta-inquiry level in that it will (a) define a reference model for inquiry-based learning skills, (b) create a diagnostic instrument for measuring inquiry skills, and (c) implement a working environment that allows the easy linking of inquiry activities with school curricula and legacy systems. The foreseen weSPOT Toolkit gives smart support for personal scientific inquiry to address a lack of scientific inquiry skills in an age group of 12-25. Furthermore, weSPOT will unleash support of triggering and leveraging curiosity that is missing in today's learning technology. weSPOT will develop: (1) An open source service framework for inquiry workflows; (2) Tools for mobile data collection and personal experience sampling. Additionally, it will develop: (3) learning analytics tools for collaborative and personal reflection; (4) a badge system for linking formal and informal learning activities via social media. These products will be customized and evaluated in at least 8 primary test-beds in a European wide approach in 8 European member states.