

## **Doctoral Study at SEERC: Kosovo scholarships 2014**

### **1. The PhD programme**

The PhD programme is run jointly by the University of Sheffield and its International Faculty CITY College, under a joint supervision scheme. The programme is hosted by the South East European Research Centre (SEERC), a Research Centre of the University's International Faculty based in Thessaloniki, Greece.

### **2. Kosovo PhD scholarships**

The scholarships will be awarded to **five (5) qualified students for Full Time studies**. The duration of studies for the Full time programme is 3 years (with a 4<sup>th</sup> year available for writing up the thesis) and it requires full time commitment on the part of the PhD student, which means that one would have to be physically present at SEERC premises located in Thessaloniki. In the cover/motivation letter which will be included in the application folder, it should be clearly stated that the applicant can be located in Thessaloniki for the whole duration of the studies and he/she must be able to support this.

The scholarships cover the program fees for 3 years (full time). Students are expected to cover their travel and living expenses on their own.

### **3. Entry Requirements**

The University has clear minimum entry requirements. These are the following:

- A relevant first Degree (Normally with Distinction)
- A Master's Degree (Normally with Distinction)
- Proof of English Language Proficiency

A good command of the English language is essential for postgraduate study. If English is not your first language, you must provide evidence of your language ability. In all cases the English language test should have been taken within the preceding two years. Our Standard English requirement is a minimum IELTS 6.5 (with no less than 6 in each part) – or equivalent. However, please note that depending on the Department your application is addressed to, you might be asked to provide further English Language qualifications. PhD candidates who hold an official English Language qualification will submit it with the rest of the documents by **09/6/2014**. Those who do not hold an official English Language qualification are requested to take the University's English Placement Test. The date and the venue for the English Placement Test will be announced in due time.

### **4. Research topics**

We accept Research proposals in Business Administration & Economics, Computer Science and Psychology. We would also welcome proposals on similar or related topics. Prospective applicants are advised to check SEERC's Research Track activity at: [http://www.seerc.org/index.php?option=com\\_entities&view=track&Itemid=68](http://www.seerc.org/index.php?option=com_entities&view=track&Itemid=68)

<b>Business Administration &amp; Economics</b>	
Topic 1:	Organizational innovation: The interaction of external organizational networks with internal network patterns of collaboration.
Topic 2:	Removing obstacles to innovation using the Triple Helix Model: The case of SEE

<b>Computer Science</b>	
Topic 3:	Distributed and self-adaptive systems for acoustic scene understanding
<b>PSYCHOLOGY</b>	
Topic 4 :	Cognitive Neuroscience of emotions in older adults: Self-disgust.

A more detailed description of the topics is provided in the Annex

## 5. Submission of a proposal

PhD candidates need to initially submit an Application Pack which consists of: the [Application Form](#) (see also the [Guidance Notes](#)), a **Research Proposal** on the topic of their preference and a detailed **CV** along with the following supporting documents:

- Two reference letters
- English Language Qualifications,
- Copies of degrees,
- Cover/Motivation Letter (where it should be clearly stated that the candidate is capable of living in Thessaloniki for the whole duration of the studies).

**PLEASE NOTE that all documentation should be officially written or translated in English. All documents must be submitted to the Ministry of Science, Education & Technology in Prishtina.**

The Research Proposal should be typed, the length should be about 1,500 – 2,000 words (6 to 8 pages) and should include the following:

*a) Title of the proposed thesis*

*b) Background to research topic*

This section needs to introduce the topic before discussing it in relation to wider academic debates. The section might seek to situate the topic and highlight why the issue being addressed is important - this should be identified and justified as an important/interesting academic issue not simply in terms of current media/political/popular interest.

*c) Specific problem(s) to be examined*

In this section, the discussion of the topic needs to be more specific. The focus should include reference to the framework or conceptual approach that the research might seek to draw on. Also the discussion is likely to highlight and make reference to parallel, comparable and complimentary research. The aim of this section is essentially to set up the area of research specifically. The challenge is to ensure that the proposed research has a substantive empirical and conceptual focus, both of which are suitably grounded in contemporary academic debate with appropriate citations to relevant literature. By the end of the section a gap in existing knowledge needs to be highlighted and the research questions(s) that the thesis will address should be stated.

*d) Methods of research proposal, plan and timetable of work*

The research methods section needs to highlight what methods will be used and how, with an appropriate level of detail. In the case on quantitative research the data set to be accessed and used should be identified and the nature if proposed statistical analysis detailed. In the case of more qualitative research, the methods should be elaborated and proposed

stakeholders/populations to be interviewed/surveyed should be detailed. Due consideration should be given to accessing relevant data/interviewees. Proposals should also highlight ethical issues and potential limitations.

- e) Resources available and required (if any)
- f) Any other information in support of your proposal
- g) The proposal should include correct literature citations and a brief bibliography

Moreover, an electronic version of the Research proposal and the CV should be sent by email to SEERC at [phd\\_admissions@seerc.org](mailto:phd_admissions@seerc.org) by **9/6/2014**.

## 6. Selection procedure.

After the submission of the research proposals, students might be requested to present their proposal in an interview in front of the scholarship selection panel. The scholarships will be awarded based on an evaluation of their academic credentials, the merit of their proposal and the alignment of the proposal with SEERC's strategy and research interests.

## 7. Time – plan

Submission of Application Pack and electronic version of the CV and the proposal	9 June, 2014
English placement test	15 June, 2014
Interviews	Week June 30, 2014
Notification of scholarships awarded	July 15, 2014
Starting date	October 2013

## ANNEX: Description of indicative topics

### Business Administration & Economics

#### Suggested Topic 1: Organizational innovation: The interaction of external organizational networks with internal network patterns of collaboration.

Organizational innovation is a complex phenomenon, one that in many cases appears largely driven by serendipity. Despite this complexity, researchers have uncovered the importance of proximity for innovation as a significant factor bearing on firms' ability to generate novel ideas, processes, and products. Location near other organizations helps firms acquire knowledge by increasing chance encounters and by facilitating face-to-face interaction. Increasingly, researchers emphasize that the effects of proximity on innovation are moderated by whether a firm can pair information acquired locally and informally from neighbors with other more exclusive sources of new knowledge. Firms acquire such knowledge by establishing ties to distant collaborators, recruiting employees, embedding themselves in scientific communities, or forging other connections outside their boundaries. If a firm is proximate to many industry peers, then a cohesive network helps inventors' process knowledge spillovers and mobilizes support from colleagues for developing their ideas. By contrast, when a firm has few proximate organizations from which to capture spillovers, inefficient networks that are slow at diffusing information

are beneficial. Such networks provide opportunities for brokerage and parallel problem solving, which together help create and sustain the diverse ideas and perspectives needed for innovation (Burt, 2004). Despite these advances, theories of geography and innovation in organizations remain limited in several respects. Contemporary theories also do not address how, despite lacking the advantages of proximity, some firms that are relatively isolated geographically are able to produce important innovations. A recent approach to advancing theories of geography and innovation integrate insights from research on networks in organizations to demonstrate the importance of considering firms' local external environments and their internal patterns of collaboration in tandem (Funk, 2014). Beyond helping to account for innovation among firms in very different local environments, knowledge of collaborative structures within organizations is likely to have broader value for research on the geographic diffusion of knowledge. To the extent that patterns of collaboration within organizations vary among organizations, within and across regions, internal organizational networks should have consequences for broader knowledge flows because of differences in their capacity to absorb, transmit, and alter the information that diffuses to (and through) them geographically. Additionally, this point to the research need for systematic research on geographically isolated firms. Existing work on geography and innovation largely focuses on explaining the conditions under which proximity leads to maximum performance gains. Yet many innovative companies, even in knowledge-intensive sectors, are located far from peer organizations. Future analyses should seek to further explain the success of such companies given the disadvantages of isolation. Additional research in this area will both help to clarify the conceptual relationship between geography and innovation and also lead to valuable insights for practicing managers of firms in locations less proximate to industry peers.

### **Suggested Topic 2: Removing obstacles to innovation using the Triple Helix (TH) Model: The case of SEE**

This PhD proposal calls for project looking at how the TH Model might be applied to rebuilding and fostering a more resilient economy in SEE. We are interested in PhD proposals that will critically assess how the TH framework can be used to understand the opportunities and obstacles to develop SEE as a more innovative and entrepreneurial economy

### **Computer Science**

#### **Suggested Topic 3: Distributed and self-adaptive systems for acoustic scene understanding**

The last two decades the complexity or scale of some applications rose so fast that a single machine could not handle. The client server paradigm became unable to respond to the user demands in a reliable and efficient manner. Centralized systems are prone to a single point of failure and their overall efficiency was affected by the bottlenecks on the server side, together with lack of adaptability to cope with dynamic environments.

Two are the main advantages that distributed architectures offer compared to centralised approaches; avoidance of the single point failure problem and better scalability and utilisation of resources. Therefore it seems natural that in recent years systems operating within distributed environments have experienced considerable growth in size and diversity.

At the same time the development of Grid environments, the shift to service oriented architectures, the increased interconnectivity between computer networks, cloud computing, the introduction of the Internet of things leading to an explosive increase of the number of computers connected, moved distributed systems beyond the initial application of facilitating file exchange to a much broader range of domains

The last years there is a trend to be inspired by natural systems by introducing bio-inspired properties and behaviours, so that a distributed environment could become a complex adaptive system, in the sense that adaptation, resilience and self-organization will emerge as a result of simple interactions between peers.

This project will apply the principles of distributed and adaptive systems to the problem of acoustic scene understanding; put simply, the focus of the project is to build “machine listeners” that interpret complex mixtures of sound in the same way that human listeners do. Currently, machine listening systems generally assume that sound is collected from one or more static sensors. However, there is much to be gained from a distributed approach to solving the problem. For example, a number of autonomous robots, each with sound sensors, could collaborate in order to map the acoustic scene. This raises many interesting research questions; how should the robots best distribute themselves in the environment in order to separate the acoustic sources that are present? How can the sensors of the robots (e.g., distance sensors) be used to adapt to different reverberant environments?

The aim of this work will be to investigate all the above mentioned areas and propose a generic bio-inspired solution based on a set of emergent self-optimising and self-adaptive structures and processes which will be the major catalyst for efficiency, scalability and adaptability in a (fully) distributed network of autonomous robots, aiming to provide an efficient solution towards robust machine-listening systems. A case study should be devised that will be used to demonstrate the applicability of the approach, allowing the acoustic sources in an environment to be mapped without any human.

## Psychology

### Suggested Topic 4: Cognitive Neuroscience of emotions in older adults: Self-disgust.

With age there are changes in emotion although this domain is relatively unexplored as compared to other domains such as cognitive abilities. Thus, older adults show an overall decrease in the magnitude of their physiological emotional reactions, have greater emotional control and report fewer negative emotional experience. The bias of older adults towards positive information has been termed the *positivity effect*. This effect has been explained in terms of an adaptive strategy in the framework of socioemotional selectivity theories. That is, it has been proposed that older adults seek emotional stability and thus focus on positive emotions and/or avoid emotionally negative information (Carstensen, Mikels and Mather, 2006). Along with changes in emotions, studies suggest an age-trend in the prevalence of mood disorders such as depression; depression appears to decrease in older ages as compared to middle ages (George et al., 1988). Still, depression remains one of the main mental health problems associated with old age. In this framework, self-disgust may be an important emotion to study in relation to emotional and mood changes with aging. Disgust is increasingly recognised as playing a significant role in a range of mental health problems, such as specific phobias, contamination-based obsessive-compulsive disorder, eating disorders and post-traumatic stress disorder. Disgust itself is a heterogeneous construct, and recent research has discovered an important mediating role for disgust directed at the self – ‘self disgust’ – in depression, particularly in mediating the connection between dysfunctional depressive thoughts and depressive symptoms (Overton et al., 2008; Simpson et al., 2010). To date there are no full studies investigating self-disgust in older adults, however our own pilot data suggest that there is a negative correlation between age and self disgust. The reasons for a change in this emotion are likely to be multifarious – for example, aspects that contribute to self-disgust such as body image have been shown to change with age, and retirement may have complex effects on self-image. To try to unravel the complex relationship between emotions and depression in ageing, studies will be directed at the following questions: What is the relation between cognition and emotion? For instance it has been shown that there is a relationship between Executive functions and the positivity effect. Are there any changes in the neurophysiological indexes (e.g. Skin conductance, Heart rate, EEG) of emotions

with age? Is there any relationship between depressive thoughts and emotions like self disgust in older adults?