SEERC –
Call for PhD Applications from Kosovo 2015-2016.

Doctoral Study at SEERC: Kosovo scholarships 2015

1. The PhD Programme

The PhD programme is implemented jointly by the University of Sheffield and the 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. PhD scholarships (Full time studies only)

The scholarships will be awarded by the Ministry of Education and the International Faculty of the University of Sheffield, CITY College to five (5) qualified students for Full Time studies only. The scholarships cover the program fees for 3 years (full time programme). Students are expected to cover their travel and living expenses. **Scholarships will be offered for FULL TIME studies only:** The duration is 3 years (with a 4th year available for writing up the thesis) and it requires full time commitment on the part of the PhD student, which means that <u>one would have to be physically present at SEERC premises located in Thessaloniki.</u>

Students applying for the programme (Full time and Part time) must have an excellent academic record (normally Degrees with Distinction) and should possess a Master's Degree. Potential work experience, research training and publications play important role also. Applicants for part time positions must submit proposals that demonstrate a clear linkage between their current work and their PhD topic.

3. Research topics

This year the scholarships will be awarded as follows:

Research Track 1: Two (2) scholarships

Research Track 2: Two (2) scholarships

Research Track 3: One (1) scholarship

Priority will be given to proposals in line with the following topics, however we are open to other topics as well, which will be in line with our Research Tracks
http://www.seerc.org/new/index.php/component/entities/?view=track&Itemid=126 :

Research Track 1: Enterprise Innovation and Development	
Topic 1:	Exploring the current role of sustainability in the Balkans: An investigation into organisational practices and consumer behaviour
Research Track 2: Information and Communication Technologies	
Topic 2:	Cognitive sensor platforms for the realization of cyber-physical systems

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

Research Track 3: Society & Human Development Psychology, Politics, Sociology, and Education	
Topic 4:	Cognitive Neuroscience of emotions in older adults: Self-disgust
Topic 5:	Facilitating Health Communication: Understanding the Cognitive Processes Underlying Self-affirmation effects on health message acceptance

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

4. Submission of a proposal

In order to apply, PhD candidates need to download the **Application Form** along with the **Guidance Notes** from SEERC's web site[1], complete the application, and then submit the application folder to the Ministry of Education, Science & Technology in Prishtina.

Please note that incomplete applications will be disqualified from the process. Candidates have to ensure that all supporting documentation is included in the application. The application form and supporting documents should be accompanied by a **Research Proposal** and an updated **CV**. **The CV and the proposal of the PhD candidate should be sent electronically also, by e-mail at phd_admissions@seerc.org**

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) *Reference to one of the Specific Research Topics (section 6)*

  c) *Proposed mode of work (full time or part time)*

  d) *Proposed source of Funding: Fee Waiver (Full time Only), Personal funding, funded by any other institution/organization e.t.c.*

  e) *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.

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

In his 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

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[1] http://www.seerc.org/new/index.php/doctoral-programme/how-to-apply.html

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 and the research questions(s) that the thesis will address be stated.

g) *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, again 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.

h) *Resources available and required (if any)*

i) *Any other information in support of your proposal*

j) *The proposal should include correct literature citations and a brief bibliography*

All applications should be submitted at the Ministry by 22/6/2015 (PLEASE NOTE THAT ON THE ENVELOPE/FOLDER SHOULD BE CLEARLY WRITTEN <u>"SEERC-SHEFFIELD DOCTORAL PROGRAMME APPLICATION FOLDER"</u>).

Moreover, **an electronic version of the Research proposal and the CV should be sent by 22/6/2015 by email to SEERC at <u>phd_admissions@seerc.org</u>**.

Incomplete applications missing one or more documents or failure to submit the hard copies of the application at the Ministry (i.e. submission only of the proposal in electronic form) will result to the applications disqualifying.

The possible outcomes of your application are:

- Acceptance to read for a PhD

- Acceptance to read for a PhD with a fee waiver (FULL TIME candidates only)

- Rejection

All candidates will be informed on the outcome of the evaluation procedure, which will involve an interview at SEERC premises with the proposed supervisors.

A step-by-step guide to submitting your application	
Step 1:	Read in detail the requirements from this Call for Proposals
Step 2:	Download the application form
Step 3:	Read the Guidance Notes for completing it
Step 4:	Prepare Research Proposal and an Updated CV according to Guidelines

Step 5:	Prepare supporting documents for inclusion in the application pack
Step 6:	Send your application and all the supporting documents to the Ministry of Education, Science & Technology of Kosovo in Prishtina by **22/6/2015**
Step 7:	Send by **22/6/2015** the Research proposal and the updated CV by e-mail to phd_admissions@seerc.org

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 Qualifications

4. English Language Requirements

For # 1 Research topic and any proposals to Research Track 1, the standard English Language requirement is IELTS at 7.0 with a minimum of 6.0 in each component or equivalent.

For the # 2-5 Research Topics please see the English language requirements for prospective postgraduate students at The University of Sheffield:

http://www.sheffield.ac.uk/postgraduate/info/englang

For all other Research Proposals: 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. PhD candidates who hold an official English Language qualification will submit it with the rest of the documents by **22/6/2015.** Those who do not hold an up to date official English Language qualification are requested to take the English Placement Test. The exact dates that the English Test will take place, will be announced later.

5. 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.

6. Time – plan

Submission of Application Pack and electronic version of the CV and the proposal	June 22, 2015
Starting date	October 2015

ANNEX: Description of topics

Research Topics

Research Track 1: Enterprise Innovation and Development

Topic 1: Exploring the current role of sustainability in the Balkans: An investigation into organisational practices and consumer behaviour

The 2015 Post Development Agenda of the United Nations raised several important issues to be addressed in the near future, for the purpose of achieving overall greater global welfare. Consequently, the task of developing sustainable solutions in business has been highlighted, and given prominence due to recent incidents caused by unethical and unsustainable practices worldwide. Despite the fact that countries and firms are attempting to produce sustainable business models through corporate social responsibility schemes, it is undeniable that in the area of South East Europe sustainability is being addressed at a slow pace. Even in countries which have placed more emphasis on sustainability issues, there is a popular preconception that firms are implementing such schemes for marketing and branding purposes, rather than fully integrating it to address specific issues. The wider context of global consumerism which continually forces replacement of goods and an overall increase in consumption, creates a situation which contradicts the global United Nations plan. Therefore, it is pertinent to ask what is the exact role of sustainability in the 21st century, particularly in the Balkan area where its significance has possibly not been fully comprehended to date.

Proposed supervisor from the International Faculty: Dr Alexandros Kapoulas

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Research Track 2: Information & Communication Technologies

Topic 2: Cognitive sensor platforms for the realization of cyber-physical systems

Latest trends in networking and communications dictate the creation of distributed systems formed by a vast number of autonomous entities that are able to interchange data, providing, forwarding or consuming information. The participating entities may be "things" (devices) or even real users. It is important that the communicating devices have cognitive properties, so they are able to perform self-* tasks (such as self-adaptation, self-management, self-healing). The most representative example of such a system is provided by the IoT (Internet of Things) paradigm. Each "thing" actually constitutes a cyber-physical element intelligent enough to interact with the environment and communicate with other "things" typically in an M2M (Machine-to-Machine) manner. Probably the most promising candidate for the realization of such cyber-physical systems is wireless sensor technology.

The main aim of this project is the development of a complete cyber-physical system based on different cooperative sensor platforms. A variety of technologies related with the implementation of communicating sensing devices using state-of-the-art small-sized computing platforms, enhanced with intelligent features for efficient collaboration, energy conservation, and self-adjustment need to be thoroughly researched. The introduction of novel schemes for effective communications, focusing on the lower layers of the protocol stuck, is considered important. By the end of the project, a working prototype that may also include mobile autonomous elements (as special type cyber-physical elements) should be developed and evaluated. Skills/experience on the following fields would be appreciated:

- wireless sensors

- networking modeling

- communications protocols

- agent-based systems

- computing platforms (such as Arduino or Raspberry Pi)

- mobile autonomous platforms (such as robots or drones)

- mobile computing/programming

Proposed supervisor from the International Faculty: Dr Thomas Lagkas

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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.

Proposed supervisor from the International Faculty: Dr George Eleftherakis (eleftherakis@city.academic.gr)

Research Track 3: Society & Human Development Psychology, Politics, Sociology, and Education

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?

Proposed supervisor from the International Faculty: Dr Ana Vivas

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Topic 5: Facilitating Health Communication: Understanding the Cognitive Processes Underlying Self-affirmation effects on health message acceptance

Over 50% of global mortality in developed countries is attributed to health decision-making processes. Obesity, tobacco use, unhealthy diets and physical inactivity are amongst the leading causes of preventable death in the world, and some of the most serious impediments to healthy and active ageing. Health communication and information campaigns can promote healthier habits and enable health-protective decision-making. However, health messages should be carefully designed and communicated. Research on self-affirmation has shown that allowing people to self-affirm reduces defensive processing of personally relevant health-risk information, and increases health protective behaviours. Nevertheless, there is still a gap in the literature about the processes that explain how self-affirmation works, and how its effect can be further optimised. The proposed Call for PhD research should explore the underlying cognitive/attentional/emotional processes that explain the self-affirmation mechanism, through a series of experimental studies. This research is will lead to innovative results that can be directly applied to health promotion campaigns, and help in the development and implementation of online health promotion interventions and tools.

Proposed supervisors from the International Faculty: Dr Lambros Lazuras

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