

Science for Humanitarian Emergencies & Resilience (SHEAR)

PhD Studentship: Serious games in the context of early warning for natural hazards in South Asia

This PhD Project (associated with LANDSLIP, <http://landslip.org>) will explore serious games in the context of early warning for natural hazards in South Asia, with a focus on landslides and those hazards that are triggers for or triggered by landslides.

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Department: Geography (<http://www.kcl.ac.uk/geography>)

Institution: King's College London (<http://www.kcl.ac.uk>)

1. Project Description

1.1 Project Introduction

A serious or applied game has a primary purpose other than pure entertainment. Over the last decade serious games have started to be used in the natural hazard community. This project will explore serious games in the context of early warnings for natural hazards in South Asia.

1.2 What are Serious Games for Natural Hazards?

Serious games can be used as a way (i) to inform the 'players' on given knowledge and theories related to natural hazards, (ii) to create scenarios for how a region might increase or decrease its response to a given hazard, (iii) to enable 'players' to understand something of the challenges involved in disaster management – e.g. evacuation decisions under uncertainty and the issue of 'false' alarms. Scenarios could have different beginning conditions in the physical or social environment, and then, through a series of steps in the game, players can change that environment (e.g., add mitigation measures). The game then has a dual purpose of educating and having the players think about their particular environment and the decisions necessary to manage it. Serious games can also be used as a method for an interviewer to better understand a given stakeholder's responses to different scenario situations. Serious games can range from paper (with cards drawn that include facts) to sophisticated computer games or applications that can be downloaded to a smart phone.

1.3 In this PhD project the student will:

- (i) Do a review of current serious or applied games to do with natural hazards, with a focus on landslides or natural hazards that cause landslides (e.g., earthquakes, floods).
- (ii) In discussion with the supervisors and Practical Action India and/or Nepal, decide on a suitable game that might be trialled. This game might use or be based on an existing one (e.g., volcano girl) or, depending on the student's skills, be a design of a new one (e.g., on landslide mitigation and early warning).
- (iii) Trial the project for different stakeholder groups (e.g., in India or Nepal study areas of two of the SHEAR grants), and for different purposes. This would involve interviewing participants

pre- and post-game, and recording their responses at different intervals. These data could then be combined with demographic data about the participants to examine patterns in use of the game. Interviews would also evaluate participants' prior knowledge, both scientific and experiential.



Figure: Example of a serious game for natural hazards, *Hazagora*, being played by citizens in Moroni. Figure from Mossoux *et al.* (2016) *NHESS*.

2. Skills and Experience:

This project would suit a broad range of skills and experience but will need originality, interest in the environment, potentially some computational skills, and use of social methodologies for interviewing and communications.

3. Studentship Application Stages

This SHEAR PhD studentship would be based at King's College London. For this SHEAR Student Consortium (SSC) PhD studentships are available for UK/EU applicants (2/3 of the studentships) or overseas (1/3 of the studentships). This studentship project is one of a couple of dozen of potential projects, with primary supervisors at five different universities.

Stage A: Check your eligibility (see Section 4). Only apply if you are eligible.

Stage B: Fill out a SHEAR Student Consortium application (see Section 5, "How to Apply").

Stage C: Short-listed applicants will attend an interview (by Skype).

Stage D: Those successful at interview stage will fill out an entry application to King's College London (take particular note of items in 4.1 and 4.2 below).

Note that the SHEAR consortium application (**stage B**) is different from the King's College London application (**Stage D**). Both must be successful to start the PhD programme. If you are accepted for the studentship, please be ready to move onto the King's College London application rapidly. Preferred entry to King's College London would be for January 2018.

4. Eligibility and Funding:

4.1 General entry advice to King's College London

You should hold a Bachelor's degree with 1st class honours (or overseas equivalent) **and** a good Master's degree. At undergraduate level, a 2:1 (upper second class) honours degree (or international equivalent) may be acceptable depending on the candidate's academic background (e.g., strong performance (predicted or achieved) in a Master's degree, mature students with relevant workplace experience, mitigating personal circumstances). Non-UK entry qualifications is at: <https://www.kcl.ac.uk/study/postgraduate/apply/entry-requirements/International.aspx> (find your country, then go to the section "postgraduate research courses").

4.2 English language requirements for International Students

To follow this PhD programme successfully, you must have a good command of English and be able to apply this in an academic environment. Therefore, you are usually required to provide certificated proof of your competence in English before starting your studies (as part of the King's College London application process). The minimum English Language requirements are specified at <https://www.kcl.ac.uk/study/postgraduate/apply/entry-requirements/english-language.aspx>. Please note that for the purposes of this **Stage B** (SHEAR Student Consortium application), you do not need to show proof of English, but if you are successful for **Stage C** (shortlisting, and interview), then for **Stage D** (King's College London application) you will need to provide proof of English, depending on your country of origin.

4.3 Funding

The studentship will cover 3.5 years of Postgraduate Research tuition fees (at EU/UK or overseas rates) at King's College London and a stipend at Research Council UK rates, which for 2017/18 is currently £16,553.

5. How to apply (SHEAR Student Consortium application for this project):

To be considered for this SHEAR PhD studentship, please submit the following as ONE DOCUMENT to landslip.phd@gmail.com:

(i) a **cover letter (maximum 3 pages)** including, in any order you want the following:

- your relevant background and experience;
- how you meet (or will meet) the entry requirements listed in Sections 4.1 (grades and degrees—be specific here or in your CV) and 4.2 (English) above;
- motivation (e.g., why do you want to do a PhD? why this PhD?);
- why are you appropriate for this particularly studentship (plus any further thoughts you have about the proposal as written);
- names/contact details (e-mails) of two referees.

(ii) a **well-organized and detailed CV**.

If you are applying for more than one of the SHEAR PhD Studentships, please indicate this in your cover letter, including ranking the PhD proposals in order of your preference.

After submitting your SHEAR Student Consortium application (**Stage B**), a subset will be shortlisted and invited to interview (**Stage C**), and from these interviewees, the SHEAR consortia will select the top candidates. After selection, they will then complete the entry requirements for the university (**Stage D**). See Section 3 above for further explanation.

6. Contact: For informal discussion about this studentship please contact the listed supervisors.

7. Deadline: 15 October 2017 or until the position is filled.