Addressing Inequalities in Women’s Access to and Experience of Care during Pregnancy through Immersive and Interactive Technology

**Highlights**

- Unpacking the (technologically mediated and unmediated) practices and everyday life experiences of women living in complex social circumstances in the UK
- Examining the suitability of existing theoretical frameworks for technology design of health interventions, and will propose a conceptual framework for designing socio-technical interventions that account for women’s lived experience
- Co-designing and evaluating socio-technical prototypes with women, family members and healthcare professionals by exploring creative scenarios using immersive and interactive technologies, tools and services

**Overview**

Pregnant women and their partners engage in self-care by negotiating and shaping boundaries (e.g., objects, activities, places) in everyday life. What happens during pregnancy and women’s experiences of birth and the postnatal period has profound long-term consequences for parents and their social network (e.g., family and friends). For example, women often struggle to self-diagnose (distinguish between ‘normal’ pregnancy changes and complications), and self-triage (decide whether to seek help, where and how urgently) during pregnancy.

When seeking help from healthcare professionals, they can find it difficult to engage with, navigate and negotiate access to care, making it difficult to actively engage in care decisions. Women who live socially complex lives (e.g. young and single mothers, refugees, ethnic minority groups) are amongst those who are particular at risk of delayed access and uptake of services, increasing the chance of poor maternal and neonatal outcomes.

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<th>Level</th>
<th>PhD</th>
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<tr>
<td>First Supervisor</td>
<td>Dr Nervo Verdezoto</td>
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<td>Second Supervisor</td>
<td>Dr Nicola Mackintosh</td>
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<td>Application Closing Date</td>
<td>21st January 2019</td>
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**Subject Areas**

- Computer Science & IT
- Information Science
- Medical / Clinical Science
- Public Health & Epidemiology
- Software Engineering

A pregnant Chinese migrant women living in the UK accessing pregnancy-related information (the Chinese phrases on the notes say: breastfeeding, post-partum depression and gestational diabetes)
Digital technologies are creating opportunities to support pregnant women, relatives and healthcare professionals by facilitating access to information, remote communication and monitoring of health conditions (e.g., pre-eclampsia), recreating life experiences (e.g., through virtual worlds), helping to build self-confidence and sharing experiences, information and support with others. Although some work in maternal health has taken place in low-income countries, there is a lack of attention in understanding and designing technology to support the everyday life experience of pregnant women living in complex social circumstances in developed countries (i.e., UK).

**Aims**

To get an in-depth understanding of the lived experiences of pregnant women living in complex social circumstances and co-design socio-technical prototypes that can enable greater agency and engagement in self-care. The project is informed by theoretical frameworks for health interventions and a narrative review conducted by the supervisors on pregnant women’s use of technologies.

**Research Questions**

1. How do women living in complex social circumstances experience and practically cope with their everyday care needs and safety concerns during pregnancy?
   a. What are their technologically mediated and unmediated care practices?
2. What opportunities arise for technology to address the identified socio-cultural challenges?
3. How does technology shape the women and partner’s socio-cultural practices (intended and unintended consequences)?

**Methodology**

**Ethnography Study (Year 1)**: Ethnographic study of pregnant women living in complex social circumstances and the care network to further understand their care needs and safety concerns during pregnancy.

**Co-Design & Implementation (Year 2)**: Pregnant women and care network will engage in a co-design process of socio-technical prototype(s) to address the uncovered care needs. Interviews, workshops and focus groups will be conducted to determine what features would be most valued and to get iterative feedback.

**Evaluation (Year 3)**: The implemented prototype will be piloted with women and their care network for up to six months. Ethnographic methods, data logging, and questionnaires will be applied before, during and after the evaluation to further understand its use and potential impact.

Sampling will be informed by National Institute for Health and Care Excellence (NICE2010) guidance on care for pregnant women with complex social factors, and recruitment will be managed via community outreach networks.

**Critical Skills & Training Development:**

- Experience planning, conducting and documenting field-based qualitative research studies.
- Experience unifying and analyzing multiple forms of data from diverse research activities.
- Experience planning and facilitating participatory design activities and synthesizing the insights through visual forms e.g., scenarios, etc.
- Knowledge and experience in design and prototyping skills.
- Open to work with a multidisciplinary team of researchers.
Further Reading


Funding

This research project is one of a number of projects in the Department. It is in competition for funding with one or more of these projects. Usually the project which receives the best applicant will be awarded the funding.

Home/EU Applicants
This project is eligible for a fully funded College of Science and Engineering studentship which includes :

- A full UK/EU fee waiver for 3.5 years
- An annual tax free stipend of £14,777 (2018/19)
- Research Training Support Grant (RTSG)

International Applicants
This project is eligible for a fully funded College of Science and Engineering studentship which includes :

- A full international fee waiver for 3.5 years
- Research Training Support Grant (RTSG)
Application Instructions

The online application and supporting documents are due by **Monday 21st January 2019**.

Any applications submitted after the deadline will not be accepted for the studentship scheme.

References should arrive no later than **Monday 28th January 2019**.

Applicants are advised to apply well in advance of the deadline, so that we can let you know if anything is missing from your application.

**Required Materials**
1. Online application form
2. Two academic references
3. Transcripts
4. Degree certificate/s (if awarded)
5. Curriculum Vitae
6. CSE Studentship Form
7. English language qualification

Applications which are not complete by the deadline will not be considered for the studentship scheme. It is the responsibility of the applicant to ensure the application form and documents are received by the relevant deadlines.

All applications must be submitted online, along with the supporting documents as per the instructions on the website.

Please ensure that all email addresses, for yourself and your referees, are correct on the application form.

For more information, please visit our website at:
https://www2.le.ac.uk/colleges/scieng/research/postgraduate-opportunities/cse-2019/instructions