



School of Computing, Engineering, and the Built Environment Edinburgh Napier University

PHD STUDENT PROJECT

Funding and application details

Funding status: Self funded students only

Application instructions:

Detailed instructions are available at <https://blogs.napier.ac.uk/scebe-research/available-phd-student-projects/>

Prospective candidates are encouraged to contact the Director of Studies (see details below) to discuss the project and their suitability for it.

Project details

Supervisory Team:

- DIRECTOR OF STUDY: Peter Cruickshank (Email: P.Cruickshank@napier.ac.uk)
- 2ND SUPERVISOR: David Haynes

Subject Group: Applied informatics

Research Areas: Media & Communication (Information practices) and/or Human Computer Interaction

Project Title: Trust, risk and digital identity for digitally-unsure citizens

Project description:

There is an increasing research interest in security as a user experience issue (Zagouras et al, 2017), and some calls to examine the information practices around privacy and security (eg Dourish & Anderson, 2006). However, while there has been research into these areas, particularly by those designing systems, the focus has been on users working in an organisational context. There has been little academic research into activities in relation to digital identity, whereby digitally-unsure users ask for support to access systems (for instance to claim benefits (Lips, 2013; Whitley et al, 2014)) from their trusted social network (Cruickshank et al, 2020). These can range from information professionals such as librarians or

digital inclusion officers, but can also include family members (Buchanan et al, 2019; Levy & Schneier, 2020). There has been some research into how the risks are perceived (Haynes & Robinson, 2021) but there are gaps in research from the perspective of the digital or information literacies involved.

The work on the doctoral study PhD will focus on how these citizens perceive and manage the risks associated with their digital identity/ies, focussing on scenarios the less digitally confident share their details with others. The study will address the gap between (a) users' real-world information practices around sharing access to digital identifiers and (b) the assumptions of self-management that underpin many identity infrastructures.

The RQs that this project will address are:

1. What are the literacies involved in managing digital identity
2. What are the agency and trust decisions around sharing identity information
3. How do less digitally literate citizens perceive and manage the resulting risks

The research aspects of this project are information and people focussed. This project is for a student an interest in information practice research, but also ability to understand and explain the underlying technical solutions

The research will be conducted within the social informatics research group , where the PhD student can will join a lively and support community of researchers. The group was highly rates in the recent REF2021 assessment exercise, with a very strong research environment. We have excellent international links and a good track record of working collaboratively with partners in the UK and around the world. Our high profile digital identity and trust lab may also be of relevance to this project.

Perspective applicants are encouraged to contact the Supervisor before submitting their applications. Applications should make it clear the project you are applying for and the name of the supervisors.

References:

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- [2] Coles-Kemp, L., & Hansen, R. R. (2017). Walking the Line: The Everyday Security Ties that Bind. In T. Tryfonas (Ed.), *HAS 2017: International Conference on Human Aspects of Information Security, Privacy, and Trust* (pp. 464–480). https://doi.org/10.1007/978-3-319-58460-7_32
- [3] Cruickshank, P., Webster, G., & Ryan, F. V. C. (2020). Assisting information practice: from information intermediary to digital proxy. *Proceedings of ISIC: The Information Behaviour Conference Pretoria, South Africa, 28th September to 1st October, 2020*, 1–3. <https://doi.org/10.47989/irisic2017>
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- [5] Haynes, D., & Robinson, L. (2021). Delphi Study of Risk to Individuals who Disclose Personal Information Online. *Journal of Information Science*, <https://doi.org/10.1177/0165551521992756>
- [6] Kaczmarek, M., Shankar, S., & Nathan, L. P. (2019). Information practice, responsibility, and the ability to respond. *Proceedings of the Association for Information Science and Technology*, 55(1), 837–838. <https://doi.org/10.1002/pra2.2018.14505501138>

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- [10] Mosafar, H., & Sarabadani, J. (2021). Identity in the Digital Age: A Review of Information Technology Identity (ITID) Research in Information Systems. *Proceedings of the 54th Hawaii International Conference on System Sciences*, 2627–2636. <https://doi.org/10.24251/hicss.2021.321>
- [11] Rana, N. P., & Dwivedi, Y. K. (2015). Citizen's adoption of an e-government system: Validating extended social cognitive theory (SCT). *Government Information Quarterly*, 32(2), 172–181. <https://doi.org/10.1016/j.giq.2015.02.002>
- [12] Whitley, E. A., Gal, U., & Kjaergaard, A. (2014). Who do you think you are? A review of the complex interplay between information systems, identification and identity. *European Journal of Information Systems*, 23(1), 17–35. <https://doi.org/10.1057/ejis.2013.34>
- [13] Zagouras, P., Kalloniatis, C., & Gritzalis, S. (2017). Managing User Experience: Usability and Security in a New Era of Software Supremacy. In T. Tryfonas (Ed.), *HAS 2017: International Conference on Human Aspects of Information Security, Privacy, and Trust* (pp. 174–188). https://doi.org/10.1007/978-3-319-58460-7_12

Candidate characteristics

Education:

A first-class honours degree, or a distinction at master level, or equivalent achievements in information science, user experience or allied subject; alternatively cybersecurity (digital identity management)

Subject knowledge:

information practices or literacies, alternatively, cybersecurity (with a focus on digital identity management)

Essential attributes:

- Experience of fundamental concepts in information science research
- Competent in qualitative research techniques such as interviewing, document analysis and focus groups
- Knowledge of the concepts behind identity, privacy, security and trust.
- Good written and oral communication skills
- Strong motivation, with evidence of independent research skills relevant to the project
- Good time management

Desirable attributes:

- The ability to work comfortably a range of people, and with the technical concepts that will be encountered. Note that it is not expected that this project will involve and technical development