

PhD fellowships in Computer Science (Human movement analysis & Security) - University College Cork, Ireland

The School of Computer Science and Information Technology of the University College Cork (Ireland) is a partner in two Science Foundation Ireland Centres for Research Training (CRTs): [ADVANCE](#) and [AI](#). The centres will fund more than 200 PhD positions over 6 years, in areas ranging from communication networks to artificial intelligence, including human computer interaction (HCI) and cyber security.

Students admitted to these programmes will receive **full scholarships** to undertake a four year PhD programme. The scholarships include full payment of university fees and a monthly tax-free stipend of €1,500 per month for four years, as well as a budget for equipment, travel, and training.

Interdisciplinary PhDs on Human movement analysis & Security/Privacy

The School of Computer Science and Information Technology is currently inviting expression of interests for two fully-funded 4-year PhD positions in interdisciplinary themes in the areas of Human movement analysis & Security.

Technology that can detect and analyse people movements to extract high-level information (e.g., affective states, social bonds) is being increasingly investigated in HCI. With the advent of Internet-of-Things and communication technologies such as 5G, people movements will be subject to constant monitoring, which will introduce significant privacy challenges. We propose a joint inter-disciplinary research work, simultaneously focusing on the following 2 aspects of human movement analysis and security:

1. to develop a cloud-based software architecture allowing portable devices (e.g., smartphones or smart devices in general) to extract human movement data and perform socio-emotional analysis of users in real-time. To do that, we propose to investigate how computational models of socio-affective features can be implemented (e.g., as web services) in a cloud-based architecture.
2. to develop privacy-enhancing technologies that can be applied to the analysis of human movement data, in order to guarantee the privacy of the individual and the security of the data; the research will focus on secure computation and homomorphic encryption techniques, which can enable the HCI computation to be achieved without disclosing the underlying information.

All recruited PhD students will work on research at the intersection of HCI and security, in an interdisciplinary setting. However, the focus of each individual PhD can be more on HCI or more on security, depending on the background and interests of student.

How to apply

Interested candidates should write by email to Dr Paolo Palmieri (p.palmieri@cs.ucc.ie) and Dr Maurizio Mancini (m.mancini@cs.ucc.ie) for an initial discussion. Expressions of interest for the 2019-2020 call need to be received by **May 24th, 2019**.

Applicants should include: 1) a brief cover letter (1 page max) explaining their interest in the project topic, and mentioning any previous experience in HCI/security; 2) a curriculum vitae. Shortlisted students will be asked to submit a full application (including academic transcripts, evidence of English language proficiency, and references) at a later stage.