Post title: Postdoctoral Researcher Level 1 in Exercise Behaviour Change and Mobile Health Interventions (mPATHway)

Post duration: 3 years

Research Career Framework:

As part of this role the researcher will be required to participate in the DCU Research Career Framework [http://www.dcu.ie/hr/ResearchersFramework/index.shtml](http://www.dcu.ie/hr/ResearchersFramework/index.shtml). This framework is designed to provide significant professional development opportunities to Researchers and offer the best opportunities in terms of a wider career path.

Background:

The Insight Research Centre for Big Data Analytics ([http://www.insight-centre.org](http://www.insight-centre.org)) is a joint initiative between researchers at University College Dublin, NUI Galway, University College Cork and Dublin City University, as well as other partner institutions. It will bring together a critical mass of more than 200 researchers from Ireland’s leading ICT centers to develop a new generation of data analytics technologies in a number of key application areas.

The €85m center is funded by Science Foundation Ireland and a wide range of industry partners. Insight’s research focus encompasses a broad range of data analytics technologies and challenges, from machine learning, decision analytics and social network analysis to linked data, recommender systems and the sensor web. With more than 30 partner companies, Insight researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy.

MedEx is a unique and new model of community-based chronic illness rehabilitation. Developed by Dublin City University in 2006; it is a partnership between a third level educational institution and the healthcare setting. MedEx’s core concept is the provision of quality evidence-based exercise rehabilitation, supported by medical supervision, for people with diverse chronic illnesses. In 2014, MedEx caters for 500 patient visits per week across 5 separate chronic illness programmes. These programmes are HeartSmart (cardiac rehabilitation), BreatheSmart (pulmonary rehabilitation), Smart Steps (claudication rehabilitation), Diabetes Health Steps (diabetes care) and Move On (cancer rehabilitation). MedEx’s long term aim is to ensure that MedEx participants will have access to the best care possible, research is essential in making this happen. The MedEx Research Cluster is a
dynamic multi-disciplinary team of experts in physical activity, health and disease prevention spanning disciplines including psychology, health promotion, physiology, biomechanics and connected health. It is part of the Centre of Preventive Medicine, located within the School of Health and Human Performance.

The Project:
mPATHway (mobile Physical Activity Towards Health) is a project designed to utilise the expertise of Insight and MedEx to provide individualised mHealth rehabilitation pathways for individuals living with established cardiovascular disease. Its mission is to provide a personalized comprehensive lifestyle intervention to empower participants to better understand and manage their cardio-vascular disease (CVD) and ultimately benefit from leading a healthier lifestyle. The primary aim is to increase minutes of daily physical activity through a selection of options (self-directed programmes or structured-exercise programmes), underpinned by behavioural change theory and using cutting edge technology for intervention delivery. The secondary aims are i) to improve other lifestyle related behaviours - diet, stress management, smoking cessation, alcohol moderation and medication compliance – associated with improved CVD score, ii) to understand the optimal use of technology for achieving these improvements in behaviour and for encouraging social interaction between participants as they engage in the programme, and iii) to develop an efficient communication system for providing regular accessible feedback to the participant, but also for providing progress reports to the participant’s primary healthcare provider.

The intervention will use technology to develop a mobile phone enabled, sensor-based, home and outdoors exercise and physical activity platform. This will allow remote participation in physical activity programs. The programmes will be designed to encourage individual or group-based participation via the technology; they will be accessible at a time, day and for a duration selected by the participant. Feedback will be provided to the participant; the method and mode of this is to be designed within the study. Information will also be communicated, via the technology, to the healthcare professional responsible for long term care of the participant. In this way, underpinned by behavioural change theory, we hope to sustain motivation and increase long-term adherence to the technology enabled physical activity programmes designed specifically for patients with established CVD.

Principle Duties and Responsibilities:
Reporting to the Principal Investigator, Catherine Woods, the Postdoctoral Researcher will:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator focused on extending the current state of the art with respect to technology enabled health behaviour change for CVD patients, strategies for overcoming barriers to use of technology solutions amongst CVD patients and understanding healthcare providers needs and wants in relation to mHealth
- Assist in identifying and developing future research and funding initiatives
- Engage in the dissemination of the results of the research in which s/he is engaged, with the support of, and under the supervision of the Principal Investigator
- Supervise and assist undergraduate and postgraduate students working in this area with their research
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University
- Liaise with both internal and external project stakeholders including industry and academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary
**Minimum Criteria:**
Applicants should have a PhD in physical activity and health, psychology, sport science and health or a cognate area. In addition, it is desirable that the candidate has:

- Good experience in behaviour change, intervention design, development and evaluation within community-based settings
- Proven experience in both quantitative and qualitative research methods
- Knowledge or experience of technology solutions for addressing physical inactivity or promoting health behaviours among general population, or clinical groups, would be of benefit.

Candidates will be assessed on the following competencies:

**Discipline knowledge and Research skills** – Demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline.

**Understanding the Research Environment** – Demonstrates an awareness of the research environment (for example funding bodies) and the ability to contribute to grant applications.

**Communicating Research** – Demonstrates the ability to communicate their research with their peers and the wider research community (for example presenting at conferences and publishing research in relevant journals) and the potential to teach and tutor students.

**Managing & Leadership skills** - Demonstrates the potential to manage a research projects including the supervision of undergraduate students.

**Closing date:** 15th January 2015
(Successful applicants will be invited for interview in late January)

**Salary scale:** €33,975 - €37,063
Appointment will be commensurate with qualifications and experience

**Informal enquiries to:**
Dr. Catherine Woods, Senior Lecturer, School of Health and Human Performance, Dublin City University, Dublin 9, Ireland. Tel: 00353-1-7008008, Email: Catherine.Woods@dcu.ie, Web: http://www.dcu.ie/shhp/index.shtml.

**Application Procedure:**
Application forms are available from the DCU Current Vacancies (Open Competitions) website at http://www4.dcu.ie/hr/vacancies/current.shtml and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353(0)1 700 5149; Fax: +353(0)1 700 5500 Email: hr.applications@dcu.ie

Applications should be submitted by e-mail to hr.applications@dcu.ie or by Fax: +353 (0)1 700 5500 or by post to the Human Resources Department, Dublin City University, Dublin 9.

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