Research Unit	**School of Electronic Engineering**
Research Lab	**Performance Engineering Lab**
Post title	**Postdoctoral Researcher (2 Posts)**
Level on Framework	**Level 1**
Post Duration	**Up to 18 Month Fixed Term Contract**

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. 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

Dublin City University (DCU) is one of the largest universities in Ireland. Its student population is approximately 13,000, including 500 research postgraduates and over 1,800 taught postgraduate students, plus around 3,000 distance education students. DCU is a research-led university which has developed its own research specialists, established internationally recognized centres of excellence that have substantive collaborative links with leading universities and industrial partners.

DCU has a strong track record in attracting both Irish and European Union research funding under Horizon 2020 (and all previous Framework Programmes), Marie Curie Actions and Erasmus. We offer a dynamic and internationally-focused environment in which to advance your academic career.

The Performance Engineering Laboratory (PEL) at DCU is a research group which aims at developing performance-based solutions for next generation information and communication technology (ICT) systems. The research carried out in this lab combines engineering research in the areas of Mobile and Wireless Communications, Quality-aware Multimedia Delivery, Adaptive E-learning and Energy-aware Networking. These all reflect the synergy between electronics,

informatics and software engineering in the development of ICT in the 21st century. Researchers from different cultural backgrounds, including: Ireland, Romania, China, Brazil and Bosnia and Herzegovina, are working together and sharing their valuable expertise with each other and industry partners. PEL at DCU has various collaborations with major multinational companies such as Ericsson, IBM, Microsoft, Samsung, and Disney Research and with Irish SMEs such as Citadel 100, Everseen, Openmind Networks and Wowfli. The alumnus of this lab have top research, development or management positions worldwide including Ireland, UK, Korea, China, India and Vietnam.

The Project

NEWTON is a large scale European-funded international project which involves 14 partners from 7 countries. NEWTON will develop, integrate and disseminate innovative technology-enhanced learning (TEL) methods and tools, to create new or inter-connect existing state-of-the art teaching labs and to build a pan-European learning network platform that supports fast dissemination of learning content to a wide audience in a ubiquitous manner. NEWTON focuses on employing novel technologies in order to increase learner quality of experience, improve learning process and increase learning outcome. The NEWTON project goals are to:

- Develop and deploy a set of new TEL mechanisms involving multi-modal and multi-sensorial media distribution
- Develop, integrate, deploy and disseminate state of the art technology-enhanced teaching methodologies including augmented reality, gamification and self-directed
- learning addressed to users from secondary and vocational schools, third level and further education, including students with physical disabilities
- Build a large platform that links all stakeholders in education, enables content reuse, supports generation of new content, increases content exchange in diverse forms, develops and disseminates new teaching scenarios, and encourages new innovative businesses
- Perform personalisation and adaptation for content, delivery and presentation in order to increase learner quality of experience and to improve learning process
- Validate the platform impact and the effectiveness of the teaching scenarios in terms of user satisfaction, improvement of the learning and teaching experience, etc. and the
- underlying technology through an European-wide real-life pilot

Principal Duties and Responsibilities

The primary focus of the Postdoctoral Researcher (PDR) will be performing research on the EU-funded project NEWTON; however PDR's activity will be broader and the PDR is expected to:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator
- Engage in appropriate training and professional development opportunities as required

by the Principal Investigator, School or University in order to develop research skills and competencies

- Gain experience and contribute to grant writing with the support of and under the supervision of the Principal Investigator
- Engage in the dissemination of the results of the research in which they are engaged, as directed by, with the support of and under the supervision of the Principal Investigator.
- Acquire generic and transferable skills (including project management, business skills and postgraduate mentoring/supervision)
- Engage in the wider research and scholarly activities of the research group, School or University
- Interact closely with postgraduate research students associated with the same research group and possibly have an agreed role in supporting these students in their day to day research in conjunction with an academic supervisor
- Take leadership and contribute to generation of papers, reports and funding proposals.
- Actively publish research findings in high impact journals and at key conferences as part of the research group effort to disseminate research outputs
- Carry out administrative work to support the programme of research where required, including regular funding agency reports and internal reports etc…
- Carry out additional duties as may reasonably be required within the general scope and level of the post
- Contribute to costing research grant proposals and assist in the financial management of a research project
- Support collaboration with industry in areas relevant to the research group
- Liaise with different DCU units such as STEP, RIS, Finance, Registry in aspects related to the research activities performed
- Contribute to broader outreach and engagement activities such as organising technical meetings, outreach to schools and other interested parties etc.

Criteria

- PhD qualification normally required, preferably in a computer networks-related discipline
- Appropriate technical competence and research experience in areas related to computer networks, such as:
  - Quality-oriented network delivery of content
  - Protocols at different network layers
  - Network selection and handover

- o Adaptive multimedia delivery
- o Multi-sensorial media delivery
- o Energy-aware networking
- o Internet of Things (IoT)
- o Performance of wireless networking
- o User profile-based personalisation of services
- o Network modelling and simulation
- o Network system prototyping
- o Subjective testing
- Evidence of accomplishment in research and development in the area of computer networks
- A capability of working within a project team to achieve group-oriented results in parallel to individual productivity and top quality publications
- Good communication, organisation and interpersonal skills are required
- Experience in presentations to international conferences are preferable
- A commitment to gaining practical experience working on a research project

Salary: *€36,488 - €47,255

Appointments will be commensurate with qualifications and experience, and will be made on the appropriate point of the salary scales, in line with current Government pay policy

Closing Date: 19th August 2017

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 project including the supervision of undergraduate/postgraduate students.

Informal Enquiries to:

Dr. Gabriel-Miro Muntean, School of Electronic Engineering, Dublin City University, Dublin 9, Ireland

E-mail: gabriel.muntean@dcu.ie Tel: +353 (0)1 700 7648

Please do not send applications to this email address, instead apply as described below.

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.

Please clearly state the role that you are applying for in your application and email subject line: Job Ref # 605 : Postdoctoral Researcher, School of Electronic Engineering

Applications should be submitted by email to hr.applications@dcu.ie or by Fax: +353 (0) 1 7005500 or by post to the Human Resources Department, Dublin City University, Dublin 9.

Dublin City University is an equal opportunities employer