



**Research Centre**

Insight SFI Research Centre for Data Analytics

**Post title**

Postdoctoral Researcher  
Specialist in Multimedia Networking

**Level on Framework**

Level 1

**Post duration**

Fixed Term Contract up to 36 months

**Dublin City University**

Dublin City University (DCU) is a leading innovative European University. It is proud to be one of the world's leading Young Universities and is among the world's top 2% globally. DCU is known as Ireland's University of Impact, with a mission to 'transform lives and societies' and focuses on addressing global challenges in collaboration with key national and international partners and stakeholders.

DCU has over 20,000 students in five faculties spread across three academic campuses in the Glasnevin-Drumcondra area of North Dublin. Thanks to its innovative approach to teaching and learning, the University offers a 'transformative student experience' that helps to develop highly sought-after graduates. DCU is currently No. 1 in Ireland for Graduate Employment Rate, and for graduate income (CSO).

DCU is a research-intensive University and is home to a number of SFI-funded Research Centres. The University participates in a range of European and international research partnerships. DCU is also the leading Irish university in the area of technology transfer as reflected by licensing of intellectual property.

As a 'People First' institution, DCU is committed to Equality, Diversity and Inclusion - a University that helps staff and students to thrive. The University is a leader in terms of its work to increase access to education, and is placed in the world's Top 10 for reducing inequalities in the Times Higher Education Impact Rankings.

**The Insight SFI Research Centre for Data Analytics**

The Insight SFI Research Centre for Data Analytics (<http://www.insight-centre.org>) is an SFI funded Research Centre, which brings together researchers from University College Dublin, NUI Galway, University College Cork, and Dublin City University, as well as other partner institutions, Trinity College Dublin (TCD), University of Limerick (UL), Maynooth University (MU) and Tyndall National Institute. It creates a critical mass of more than 400 researchers from Ireland's leading ICT clusters to carry out research on a new generation of data analytics technologies in a number of key

application domain areas, such as Health and Human Performance, Smart Communities, Internet of Things, Enterprise and Services and Sustainability and Operations.

The €150m Centre is funded by Science Foundation Ireland and a wide range of industry and European Union partners. Insight's research focus encompasses a broad range of data analytics technologies from machine learning, decision analytics and social network analysis to linked data, recommender systems and the sensor web. Together, with more than 220 partner companies, Insight researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy.

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 within PEL@DCU focuses on the areas of Mobile and Wireless Communications, Quality, Performance and Energy-aware Rich Media Content Delivery and Adaptive Technology-enhanced Learning and reflects the synergy between electronics, informatics and software engineering for ICT progress in the 21st century.

### **The Project and Role**

The employee will perform research on the SFI-funded project FRADIS, whose goal is to design, develop and test a framework for performance-aware differentiated multimedia-rich innovative services. This involves proposing a set of novel algorithms and protocols to perform dynamic performance, energy consumption and quality trade-off according to specific service requirements when supporting differentiated services in a 5G and beyond heterogeneous network delivery environment.

### **Duties and Responsibilities: Principal Duties and Responsibilities**

Specific duties include:

- Report to his/her Principal Investigator.
- Conduct research, software development, deployment and testing under the supervision and direction of the Principal Investigator.
- Engage in appropriate training and professional development opportunities as required by the Principal Investigator, Centre, 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, Centre, School or University.
- Provide support and advice to PhD students working on similar topics.
- Take leadership and contribute to generation of top quality papers, reports and funding proposals, in collaboration with the Principal Investigator.
- Carry out additional duties, including administrative work, as may reasonably be required within the general scope and level of the post.
- Participate in Insight Centre activities, including industry showcases, annual reviews and industry and agency visits to the Insight labs.

### **Qualifications, Skills and Experience Required**

Applicants must have a PhD in Computer Science, Engineering or a related discipline with strong software and programming skills and relevant experience in telecommunications or networking-related areas.

#### **Criteria**

- An appropriate technical competence and research experience in areas related to computer networks, rich media processing and analysis, rich media content delivery, quality of service, quality of experience.
- Good knowledge of programming languages e.g. Java and/or C/C++.
- Experience with modelling and simulations.

#### **Skills**

- Excellent written and oral proficiency in English (essential).
- Excellent written and verbal communication and interpersonal skills.
- Proven ability to prioritize workload and work to strict deadlines.
- Ability to work in a team and to take responsibility to contribute to the overall success of the team.
- Strong problem solving abilities.

#### **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 students

#### **Essential Training**

Training required for the role should be entered here. At a minimum, the following should be entered in addition to other applicable, role specific mandatory training:

The postholder will be required to undertake the following essential compliance training: Orientation, Health & Safety and Data Protection (GDPR). Other training may need to be undertaken when required.

