



Job Description

Research Fellow/Senior Research Fellow in Software System Analytics
Lero Research Centre
School of Computing
Faculty of Computing and Engineering
Fixed Term Contract up to 12 Months

Dublin City University www.dcu.ie is a young, ambitious and vibrant University, with a mission 'to transform lives and societies through education, research, innovation and engagement'. Known as Ireland's 'University of Enterprise and Transformation', we are committed to the development of talent, and the discovery and translation of knowledge that advances society and the economy.

In our state of the art Research Centres, we bring together a critical mass of multidisciplinary researchers, often with external partners, to tackle today's major research challenges.

We are now looking for a Research Fellow/Senior Research Fellow to join a ground breaking project in our Lero Research Centre <https://lero.ie>. The project addresses a key emerging need in the global software business: how to migrate existing ICT systems to serverless microservices based architectures.

The project, **Future Software Systems Architectures** (FSSA) is jointly funded by the Disruptive Technology Innovation Fund (established by the Department of Business, Enterprise & Innovation), **FINEOS**, a global market leader in core systems for life, accident and health insurance and, **FourTheorem**, software architectural specialists and noted software innovators.

In this dynamic and collaborative environment you will be positioned to do your best work, with an opportunity to work with leading-edge software architecture and machine learning techniques. This is an excellent opportunity to grow a research profile in a new and exciting domain that bridges the fields of software engineering and data analytics. Two Science Foundation Ireland research centres, Lero and Insight, have active representation on the project at Principal Investigator level. The project has already received a best research paper award and expects to publish in leading international journals over the coming year. Support for academic career development is also facilitated through the university's career development framework.

Principal Duties and Responsibilities

Reporting to the Principal Investigator, the Research Fellow/Senior Research Fellow will:

- Take a lead role in the selection and implementation of data science/analysis requirements
- Disseminate the outcomes of the research in which they are engaged including publishing in high quality peer reviewed journals of international standing
- Supervise junior research staff

- Develop new research collaboration models
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre or the University
- Engage in teaching and teaching support as assigned by the Head of School under the direction of the Principal Investigator
- Manage and conduct administrative and management tasks associated with programme of research.

Minimum Criteria

Candidates should have a PhD in Software Engineering or a strongly aligned discipline, with at least 4 years' postdoctoral research experience.

Excellent written and verbal communication and interpersonal skills are essential.

In addition, it is beneficial if candidates have experience in some of the following areas:

- Coordinating/Directing a research team or research collaborators on research efforts leading towards submission to high ranking international conferences and journals in the fields of software engineering or data analytics.
- Knowledge and understanding of architectural patterns for object-oriented monolith and distributed software architectures
- Medium to Large scale java object-oriented or .NET project implementations
- Understanding of statistical analysis and/or AI principles as applied in software development, e.g. reinforcement, supervised and unsupervised learning.
- Backend development, server-side development including database layer (e.g. Python, Django/Flask, Node.js)
- Cloud skills / deployments including dev-ops (e.g. Nginx, Puppet, Ansible)
- Microservice and/or Function as a Service implementation.

Candidates will be assessed on the following competencies:

Research Fellow

https://www.dcu.ie/sites/default/files/hr/docs/competency_guidelines_research_fellow_level_2.pdf

Senior Research Fellow

https://www.dcu.ie/sites/default/files/hr/docs/competency_guidelines_senior_research_fellow_level_3.pdf

Essential 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.