

Research Centre: Lero – the Irish Software Research Centre

Post title: Postdoctoral Researcher in IT Architecture and Service Analysis (2 Posts)

Level on Framework: Level 2A

Post duration: 2 Year Fixed Term Contract (with a possibility to extend for another year)

As part of their role the researchers will be required to participate in the DCU Research Career Framework. 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 Irish Software Research Centre Lero (<http://www.lero.ie>) brings together leading software research teams from Universities and Institutes of Technology in a coordinated centre of research excellence with a strong industry focus. Lero has raised the level and profile of Irish software research with such effect that it is now one of the best known and highly regarded software research centres in the world. Lero specifically focuses on the key challenges of Evolving Critical Systems.

Role

As a result of a new research centres grant, two vacancies exist for the positions of postdoctoral researchers who will be involved in undertaking software research relating to smart cities and cloud computing analysis. The researchers will be based in the School of Computing at DCU and will work under the supervision of Dr. Markus Helfert and Dr. Claus Pahl, two Lero Investigators at DCU. The researchers will join a team of five Lero PhD students as well as researchers and developers in partner companies.

The ideal candidates will have research experience in the area of Software and Systems Architecture (Position 1) or Software Architecture Analysis (Position 2) or a related technology field. Experience in empirical methods would also be an advantage.

- **Position 1 - Position ID: A3-02, Project Leader: Dr. Markus Helfert**
The objective of this research project is to develop an Urban IT Reference Architecture. The postdoctoral researcher will have specific responsibility for establishing an IT Architectural Design Process and Framework, and examining its application and impact in smart cities. The postdoctoral researcher will have specific responsibility for establishing an IT Architectural Design Process and Framework, and its application and impact in smart cities. The researcher should have previously acquired knowledge of Enterprise Architecture and related Frameworks (e.g. TOGAF), Process Modelling coupled with experience in the Smart City domain. The research will be in close collaboration with Lero's industry partners, and will work in a team of postdoctoral researchers and PhD students under the supervision of Dr. Markus Helfert.
- **Position 2 - Position ID: TP-7-01, Project Leader: Dr. Claus Pahl**
The project goal is to investigate user-level usage analysis in the cloud space, focusing on customer usage data mining for cloud on/off-boarding trends, trajectories, risk assessments, tenant/cross-tenant patterns to infer usage confidence. Mining components and dashboards to visualise results are the artefacts the researcher will be working on.
The researcher should have an in-depth understanding of software engineering and cloud technology in general, and have extensive expertise on usage analytics in particular. The researcher can be involved in a co-supervisory capacity for a Ph.D. student associated with the Project. The researcher will have specific responsibility for investigating pattern-based solutions for usage analytics in cloud SaaS infrastructures.

Important: In your application, please state the Position ID you apply for! You can apply for both positions, in which case you should indicate your first and second preference.

Principal Duties and Responsibilities

Reporting to his/her project coordinator, the Postdoctoral Researcher main duties will include:

- To contribute to literature reviews and the development of the research design
- To collect and collate the research data
- To analyse and support the interpretation of the research data
- To maintain accurate project records and project confidentiality
- To contribute to academic articles, conference papers and other publications
- To engage and support other researchers working on projects affiliated to the Centre's research programme

Minimum Criteria

Applicants should have a PhD in a relevant discipline, evidence of strong empirical research skills and a knowledge of some of the relevant academic literature on software architecture and analysis. In addition, it is desirable that the candidate has experience in the respective application domains smart cities and cloud computing.

Candidates should have skills in the design, management and conduct of research, a high level of interpersonal skills, team working skills, report writing, time management skills and ability to work to deadlines. Desirable attributes include experience in industry-led research, presentation skills and academic article writing skills.

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.

Informal enquiries to:

Dr. Markus Helfert, DCU School of Computing - Email: markus.helfert@computing.dcu.ie, Tel: +353 (0)1 700 8727

Dr. Claus Pahl, DCU School of Computing - Email: claus.pahl@dcu.ie, Tel: +353 (0)1 700 5620

Salary scale: €37,750 - €46,255
Appointment will be commensurate with qualifications and experience.

Closing date: 15th January 2015

Application Procedure:

Application forms are available from: www.dcu.ie/vacancies/current.shtml

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. Tel: +353 1 700 5149; Fax: +353 1 700 5500; Email: hr.applications@dcu.ie

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