Research Centre: DCU Water Institute


Level on Framework: Level 1

Post duration: 20 months Fixed Term Contract

Research Career Framework

As part of this role the researcher 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.

Overview

DCU Water Institute is a large, multidisciplinary research unit based in state-of-the-art facilities situated on the campus of Dublin City University. Arising from success in recent proposals we are now seeking applications for the following research position in DCU.

Background and Role

Applications are invited for a highly motivated and talented Post-Doctoral Researcher to conduct computational and laboratory based experimental research in micro bubble air flotation systems. The successful candidate will be responsible for the characterisation of existing units and the development of innovative and improved technical solutions. This post is part of a larger project conducted in partnership with the ABP Food Group and co-funded by Enterprise Ireland. The industrial partner is investing heavily in new technologies and research to improve the sustainability of its liquid waste treatment processes. The overall project aims to support research on four novel solutions for ammonia removal, suspended particle filtration, fine bubble particle flotation and biothermic digestion. This particular post will have responsibility for one workpackage working closely with a microbiologist and may require travel to the partner’s facilities in Cahir, Co. Tipperary.

Applicants should be qualified Chemical or Mechanical engineers and have a PhD in an appropriate discipline with research experience in at least one of the following areas: (i) experimental characterisation of gas and/or solid particle transport and/or (ii) Computational Fluid Dynamics of multiphase flow and (ii) hydraulic system design.

The successful candidate will join a multidisciplinary team of post-doctoral engineers and scientists from the Schools of Chemical Sciences, Biotechnology and Mechanical Engineering at DCU. The
The post is full-time and fixed term for 20 months. The role may involve travel between DCU and the Industrial Partner site at Cahir, Co. Tipperary.

**Principal Duties and Responsibilities**

Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Conduct, with a very high degree of technical competence a specified programme of research and scholarship under the supervision and direction of the Principal Investigator.
- Disseminate the outcomes of the research in which he/she is engaged including publishing in high quality peer reviewed journals of international standing.
- Support the PI and research group in the design and development and implementation of the broader research programme.
- Support if required, the development of proposals for research funding.
- Take responsibility as requested for day-to-day advice and support of graduate research students associated with your research group.
- Mentor, assist and train as appropriate and as directed, the research graduate students and more junior postdoctoral fellows within the group.
- Contribute to reporting, site visit preparation and other administrative management work associated with your programme of research and the research group.
- Contribute to teaching and outreach activities of the group.
- Liaise with stakeholders such as industry and collaborators.
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
- Carry out administrative work associated with the programme of research as necessary.

**Minimum Criteria**

The candidate should possess the following criteria:

- A PhD in Fluid Mechanics of multiphase flow. In addition a background in Particle Science would be an advantage.
- Research experience of computational modelling of multiphase flow using state of the art Computational Fluid Dynamics and CAD solutions;
- Research experience involving (gas or solid) particle transport characterisation using particle image analysis techniques such as shadow sizing;
- Research experience involving particle size characterisation using particle size analysers.
- Proven ability to working in teams, preferably cross-disciplinary teamwork;
- Excellent communication and writing skills are essential.

Salary: €37,750 per annum

Closing date: 18th April 2016

**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. Yan Delauré, School of Mechanical and Manufacturing Engineering, DCU, Dublin 9, Ireland
E-mail: yan.delaure@dcu.ie
Phone: +353 (0)1 7008886

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

Application Procedure

To apply for this role, applications should include a CV and covering letter and be submitted with the application form to the Human Resources Department as outlined below. Application forms are available from the DCU Current Vacancies (open Competitions) website at http://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 #300 Post-doctoral Researcher in Multiphase Flow specialising in the study of micro Bubble generation and transport in liquid waste streams.

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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