



Research Centre: I-Form, Advanced Manufacturing Research Centre
Post title: Postdoctoral Researcher
Post duration: 2 Years

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.

I-FORM Advanced Manufacturing Research Centre: The I-FORM Advanced Manufacturing Research Centre has been established by Science Foundation Ireland (SFI) to deliver high-impact, innovative science and engineering research. I-FORM has particular focus on additive manufacturing ('3D printing') combined with advanced digital technologies applied in a precision manufacturing environment, see <http://www.i-form.ie/>

The Centre brings together a multi-disciplinary team of over 80 PhD and Post-Doc researchers in manufacturing engineering, materials and data science, in a cross-disciplinary and translational research environment. I-FORM operates in close collaboration with a global network of companies and collaborators.

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. The role may include teaching duties in support of module delivery. The work relating to teaching activities and forms part of the development of the individual within the Research Career framework that is operated in the Faculty.



Principle Duties and Responsibilities

The primary focus of the Postdoctoral Research (PDR) will be performing research on an SFI I-Form targeted company project. In this project the research will develop a **data base of the metal Additive Manufacturing process parameters and corresponding properties of the produced metal components**. This includes the development of a detailed database mapping materials, process and product variables for metal Additive Manufacturing. For this, a range of materials will be used for characterisation, process monitoring and post process characterisation. Produced sample part properties that will be measured include microstructure, phase mapping, micro-hardness and nano-hardness, as well as some macro-scale properties.

Minimum Criteria

Applicants should have a PhD in a discipline relevant to material characterisation and manufacturing process monitoring techniques. A broad knowledge of materials processing and characterisation technologies is essential. It is preferable for the candidate to have experience with additive manufacturing. Experience with data analysis, data base development and sharing will be sought.

The team is looking for high performance aspiring applicants with a desire to discovering new knowledge and to drive forward advanced manufacturing technologies. Applicants are invited from high achieving graduates with the specific related backgrounds noted above. Ideally the applicant will have demonstrated:

- An ability to design and/or implement a substantial programme of research including initiating and leading new research programmes.
- Demonstrated ability in communicating their research nationally and internationally (for example by publishing in high quality peer reviewed journals of international standing, presentation at conference and through interaction with industrial partners).
- Experience in assisting with the supervision of postgraduate students would also be desirable as would financial management of a research project.
- A demonstrated ability of good communication skills will be sought.

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: 12th March 2020

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 research environment (e.g. funding bodies and company requirements) and the ability to contribute to grant applications.

Communication 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.

Application Procedure

Informal enquiries to:

Professor Dermot Brabazon, School of Mechanical & Manufacturing Engineering E-mail: Dermot.brabazon@dcu.ie Phone: +353 (0)1 700 8213

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://www.dcu.ie/vacancies/current.shtml> and also from the Human Resources Department, Dublin City University, Dublin 9. Tel:+353 (0) 1 7005149.

Please clearly state the role that you are applying for in your application and email subject line:

Postdoctoral Researcher, School of Mechanical & Manufacturing 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

