Research Centre
Fraunhofer Project Centre for Embedded Bioanalytical Systems at Dublin City University (FPC@DCU) – a joint initiative of Science Foundation Ireland and Fraunhofer

Post title
Postdoctoral Researcher – Design and manufacture of microfluidic “Lab-on-a-Chip” systems

Level on Framework
Level 1

Post duration
Fixed Term contract up to 31 December 2019

Research Career Framework
As part of this role the researcher will be required to participate in the DCU Research Career Framework [http://dcu.ie/hr/ResearchersFramework/index.shtml](http://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.

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.

We offer an exciting research position in the applied-research driven “FPC@DCU” – the Fraunhofer Project Centre for Embedded Bioanalytical Systems at Dublin City University. In collaboration with the Fraunhofer Institute for Production Technology (IPT) in Germany, FPC@DCU’s translational research advances next-generation life-sciences technologies towards high-technology-readiness levels (TRLs) for the benefit of people and societies. FPC@DCU operates at the challenging crossroads of microsystems engineering and the life sciences. Common fields of application are in-vitro (“Point-of-Care”) diagnostics, (bio-)pharma, life-sciences research, agrifood and environmental monitoring.

Background & Role
Within an overarching “Quality-by-Design” (QbD) paradigm, you will develop microfluidics-based systems and scalable manufacturing processes for typically polymer-based microfluidic systems towards high TRLs. In this role you will have access to competent technical, infrastructural and administrative support and the opportunity to evolve a multi-faceted skillset in an environment where you closely collaborate with world-class Irish and international companies and research organisations.
Principal Duties and Responsibilities

Reporting to the director of FPC@DCU, or a manager appointed by him, your duties will include but will not be limited to:

- Conduct, with a very high degree of technical competence, a specified research and technology development programme under the supervision of the Director / Principal Investigator.
- Development of advanced manufacturing processes for polymer-based microfluidic “Lab-on-a-Chip” systems, guided by the principle of design-for-manufacture (DFM) and partnering with Fraunhofer IPT to address challenges in:
  - Pattern generation & tooling, e.g. ultra-precision milling or lithography;
  - Replication, e.g. injection moulding, casting or hot embossing;
  - Bonding & assembly of multi-component, typically polymer systems;
  - “On-board” reagent storage, e.g. pouches for liquids;
- Support of project management, reporting and interactions with partners;
- Support of project acquisition from industry and funding agencies;
- Authoring of scientific publications, technical reports and marketing activities;
- Take responsibility as requested for day-to-day advice and support of graduate research students associated with your research group;
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University;
- Related administrative tasks.

Minimum Criteria

A PhD (at least thesis submitted and viva scheduled) and / or and relevant experience on topics related the advanced design and manufacture of typically polymer-based microfluidic Lab-on-a-Chip systems for bioanalytical testing is desirable.

Salary: *€36,854 - €47,728

*Appointment will be commensurate with qualifications and experience will be made on the appropriate point of the salary scale, in line with current Government pay policy.

Closing date: 5th April 2018
Candidates will be assessed on the following competencies:

**Discipline specific knowledge and Research Skills** (demonstrates knowledge of a research discipline and the ability to conduct a specific programme of research within that discipline)

**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)

**Understanding the Research Environment** (demonstrates an awareness of the research environment (e.g. funding bodies) and takes responsibility for how their research is conducted)

**Informal enquiries to:** Prof. Jens Ducrée ([jens.ducree@dcu.ie](mailto:jens.ducree@dcu.ie))

**Application Procedure:**

Application forms are available from the DCU Current Vacancies (Open Competitions) website at [http://www4.dcu.ie/hr/vacancies/current.shtml](http://www4.dcu.ie/hr/vacancies/current.shtml) and also from the Human Resources Department, Dublin City University, Dublin 9. Tel: +353 (0)1 700 5149; Fax: +353 (0)1 700 5500 Email: [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie)

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

**Job Ref# 830 Postdoctoral Researcher – Design and manufacture of microfluidic “Lab-on-a-Chip” systems**

Applications should be submitted by e-mail to [hr.applications@dcu.ie](mailto:hr.applications@dcu.ie) or by Fax: +353 (0)1 700 5500 or by post to the Human Resources Department, Dublin City University, Dublin 9.

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*Dublin City University is an equal opportunities employer*