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 – Polymer microfabrication for microfluidic “Lab-on-a-Chip” systems

Level on Framework
Level 1

Post duration
Fixed Term up to 18 Months

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. 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 a very innovative, applied research driven 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” engineers next-generation life-science technologies 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, pharma, life-science research, agrifood and environmental monitoring.

Background & Role
You will develop advanced manufacturing processes for typically polymer-based microfluidic systems towards high technology readiness levels (TRLs) within FPC@DCU. 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 FPC director or a manager appointed by him. Duties will include but will not be limited to:

- Conduct, with a very high degree of technical competence a specified programme of research and scholarship under the supervision and direction of the Director / Principal Investigator
- Development of advanced manufacturing processes for high-TRL, 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

Applicants must have a PhD and relevant experience on topics related the advanced manufacture and design of polymer-based microfluidic Lab-on-a-Chip solutions for bioanalytical testing is desirable.

Salary: *€36,488 - €47,255

*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: 17th November 2017

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:**

Applications should include a CV and covering letter and be submitted with the application form as outlined below.

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#675 Postdoctoral Researcher – Polymer microfabrication for 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.

*Dublin City University is an equal opportunities employer*