Research Centres
The School of Biotechnology and the National Centre for Sensor Research (NCSR) at Dublin City University.

Position titles
Position 1: Senior Research Engineer (SRE1) for Biomedical Platform Development (Post-Doctorate Researcher)

Position 2: Research Engineer/Post doctoral researcher (RES2) for Biomedical Platform Development (Research Assistant or Post-Doctorate Researcher)

Candidate
Two innovative research engineers are required to assist in the development of a novel screening platform for biomedical applications. The successful candidates will be required to custom build a high precision opto-mechanical prototype bench top system incorporating both optical, electro-mechanical and microfluidic features. The candidates will also be required to write control software to automate the function of the individual components into one prototype device.

Project Summary
We were the first group (patent granted) to invent an extremely high-throughput microcapillary array microtool platform for the single cell analysis of millions of individual antibody-producing bacterial cells in 1.2nL volume bio-incubation chambers. The aim of this Enterprise Ireland (EI) funded Monoclonal Cell Array Technology (MONART) project is to develop a new drug discovery technology which will reduce the time and cost for drug development and has the potential to find new drug candidates that no other technology can. This platform will be used for the development of next generation cancer therapies.

The overall goal of this EI CF project is to establish a DCU spin out company fully focused on maximising the MONART opportunity in the market.

Requirements:
The candidates must have a primary degree in an engineering field (such as mechanical, electronic, mechatronic, biomedical or similar) and for the SRE1 position, a PhD in a related discipline. S/he should have experience with building, modifying and testing custom laboratory setups and prototypes. Proven knowledge of Labview (or equivalent software) and programming is required. Experience with micromachining and microfluidic systems is an advantage. Candidates should have an aptitude for problem solving and troubleshooting. A self-starting attitude and the ability to interact with a highly interdisciplinary team, including our tightly linked industrial partners are essential.

- **Minimum Criteria**
  - An M.Sc. / M.Eng. and / or Bachelor Degree in Mechanical Engineering/ Biomedical Engineering / Mechatronic Engineering / Physics or related Engineer/ Science degree and for the SRE1 position a PhD in a related discipline.

- **Advantageous.** One or more of the following will be advantageous to applicants:
Experience with the LabVIEW development environment or a strong willingness to learn. Application of LabVIEW to instrument control and/or image analysis is particularly advantageous.

- Experience using CAD software (preferably SolidWorks).
- Experience with common 3D printing techniques and familiarity with common laboratory fabrication techniques (desktop milling, photo-lithography, PDMS moulding etc).
- Experience in design and assembly of prototype laboratory instrumentation with an emphasis on microfluidics integration and/or systems integration (positioning stages, lasers, cameras, syringe pumps etc).
- Experience in developing prototype optical measurement instrumentation such as fluorescent detection
- Working experience in a research active environment
- Experience in working in a biological research laboratory and implementing / handling common biological material (i.e. cell culture, PCR, ELISA assays, antibody screening etc).

Research Career Framework: As part of this role the researcher can 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.

Location: This position will be based in the laboratory facilities of the National Centre for Sensor Research and the School of Biotechnology on the modern Dublin City University Glasnevin campus.

Salary:  
Position 1 (SRE1) €37,223-€43,029 (Post-Doctorate Scale)  
Position 2 (RES2) €22,109-€34,612 (Research Assistant Scale) or €37,223 - €37,757 (Post-Doctorate Scale)

Contract: 11 months Full Time in the first instance

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Applications: CV including two referees & cover letter, by email to paul.leonard@dcu.ie

Closing date: Monday 12th August 2019

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