Research Centre  

INSIGHT

Post title  

Postdoctoral Researcher (PD_IN01)

Materials Chemistry and Microfluidics

Level on Framework  

Level 1

Post duration  

Fixed Term Contract - Up to 4 years

Background

The INSIGHT Research Centre for Big Data Analytics is a joint initiative between researchers at University College Dublin, NUI Galway, University College Cork, and Dublin City University, as well as other partner institutions. It will bring together a critical mass of more than 200 researchers from Ireland's leading ICT centres to develop a new generation of data analytics technologies in a number of key application areas.

The €70m centre is funded by Science Foundation Ireland and a wide range of industry partners. INSIGHT's research focus encompasses a broad range of data analytics technologies and challenges, from machine learning, decision analytics and social network analysis to linked data, recommender systems and the sensor web. And together with more than 30 partner companies INSIGHT researchers are solving critical challenges in the areas of Connected Health and the Discovery Economy. The Discovery Economy refers to novel products and services based on a better understanding of short and long-term user needs. It combines ideas from personalization and recommender systems with location-based services and the real-time social web. Connected Health advocates a technology-based model for healthcare delivery to maximize healthcare resources and provide increased, flexible opportunities for people to engage with clinicians and better self-manage their own care.
Within DCU, INSIGHT will continue the work done as part of the CLARITY CSET and will initially involve researchers across Materials Science and Chemistry, Computing, Engineering, and Health and Human Performance.

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.

Principle Duties and Responsibilities
Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Conduct a specified programme of research under the supervision and direction of the Principal Investigator focused on extending the current state of the art materials chemistry, and stimuli responsive materials in particular. Fundamental knowledge gained will be applied to the optimisation of materials characteristics for use in chemical sensing and microfluidics, through, for example, control of binding, transduction and actuation behaviour at the molecular level. Concepts related to nano/microscale platforms based on modified surfaces, beads, droplets etc. that exhibit biomimetic behaviour through combining sensing and response behaviour will be of particular interest.
- Assist in identifying and developing future research and funding initiatives
- Engage in the dissemination of the results of the research in which he/she is engaged with the support of and under the supervision of the Principal Investigator
- Supervise and assist undergraduate students working in this area with their research
- Engage in appropriate training and development opportunities as required by the Principal Investigator, the School or Research Centre, or the University.
- Engage in teaching and teaching support as assigned by the Head of School under the direction of the Principal Investigator
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators
- Carry out administrative work associated with the programme of research as necessary
Minimum Criteria
Candidates should hold a PhD in which materials chemistry and microfluidics was a significant component. Experience in the synthesis and characterisation of molecular photoswitches, stimuli-responsive polymers and functionalised surfaces using techniques like NMR, SEM, and various spectroscopies would be a significant advantage. The ideal candidate will also have experience of incorporating stimuli-responsive materials into microfluidic platforms to demonstrate advanced functional behaviour of the novel materials e.g. switchable uptake and release of molecular guests, transduction of binding events, control of fluid/particle movement, remote control of polymer actuators.

Salary: €37,750 - €46,255 subject to experience & qualifications

Closing date: 12th June 2013

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.

Application Procedure:

Informal enquiries to:
Prof. Dermot Diamond, INSIGHT , Dublin City University, Dublin 9
E-mail: Dermot.diamond@dcu.ie
Application Procedure:
Applicants should quote Ref. No. **PD_IN01** when applying for this position. Application forms are available at [http://www.dcu.ie/vacancies/APPLICATION_FORM_8pg.doc](http://www.dcu.ie/vacancies/APPLICATION_FORM_8pg.doc) and 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

*Dublin City University is an equal opportunities employer*