

Research Centre: Adaptive Sensors Group, INSIGHT Centre for Data Analytics
National Centre for Sensor Research

Post Title: Postdoctoral Researcher, Wearable Chemical Sensing Platforms for
Real-Time Sweat Analysis

Post Duration: Fixed Term Contract up to 2 Years

Overview

The Adaptive Sensors Group (ASG, see www.dcu.ie/chemistry/asg/) is a large, multidisciplinary research unit hosted by the National Centre for Sensor Research (NCSR), in state-of-the-art facilities situated on the campus of Dublin City University. Core funding for the ASG is provided by Science Foundation Ireland through the Insight Centre (<https://www.insight-centre.org>), supplemented by significant project based income provided by Enterprise Ireland, the Marine Institute, The EPA, EU-FP7, and Industry partners.

The successful candidate will play a leading role in developing and validating wearable platforms for sweat analysis that integrate sweat sampling, fluidic handling, multi-component analysis via an electrochemical sensor array, electronics and wireless communications, and customised software (mobile phone APP). This position is funded under the Enterprise Ireland Innovation Partnership programme (**Next Generation Wearable Sensors for Monitoring Sweat Composition in Real-Time, Contract No: IP 2016 504**), in partnership with, Realtime-Shimmer Ltd. based at DCU-Alpha Innovation Campus. The role is primarily focused on electrochemical sensor development (solid-state ion-selective electrodes, reference electrodes and amperometric enzyme electrodes), and the successful integration of these sensors into the sweat monitoring platform. While this project mainly deals with development of wearable chemical sensing of sweat composition, he/she will contribute to the group's overall research effort in autonomous sensing devices. He/she will join a multidisciplinary team that functions on the basis of mutual support across a range of projects, drawing on combined team expertise in mechanical/electronic engineering, computer science, wireless communications, web database management, environmental science, materials science, and analytical chemistry.

Duties and Responsibilities:

Reporting to the PI, the successful candidate will;

- Deliver the technical and administrative deliverables associated with the project
- Maintain close interaction with the industry partner throughout the project
- Assist with management and administration research of related projects, through co-supervision of

postgraduate students, generation of technical and administrative reports, and organisation of/attendance at project meetings.

- Deliver teaching modules for degree courses as agreed with the project PI and relevant head of School.
- Participate in the DCU Researcher Career Development process
- Identify funding opportunities and assist with the preparation of H2020 and other funding proposals
- Assist with the managements of relationships with external industry and academic partners
- Attend and contribute to ASG meetings and maintain an active profile on the ASG/NCSR website
- Contribute positively to the overall research reputation of the ASG, and through it, INSIGHT and the NCSR.

Experience and Qualifications

Candidates should have a primary degree in which materials science or analytical chemistry was a significant component, and a doctorate in which materials characterisation played a significant part. Candidates should have at least two years postdoctoral experience in electroanalytical chemistry, microfluidics, materials chemistry, and/or analytical method development and validation. Previous experience with on-body chemical sensing would be an advantage.

Salary * €35,488 - €44,930

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

Closing date: 3 March 2017

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.

- **Management & Leadership skills** - Demonstrates the potential to manage research projects including the supervision of undergraduate students and visiting researchers.

Informal enquiries:

Prof. Dermot Diamond (Dermot.diamond@dcu.ie)

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, DCU Glasnevin Campus, Dublin 9, Ireland, Tel: +353 (0) 1 700 5149. 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. Human Resources Department, Dublin City University, Dublin 9. Tel: +353 1 700 5149; Fax: +353 1 700 5500 Email: hr.applications@dcu.ie

Please clearly state the role that you are applying for in your application and email subject line: Job Ref#491 Postdoctoral Researcher, Wearable Chemical Sensing Platforms for Real-Time Sweat Analysis

Dublin City University is an equal opportunities employer.