

Research Centre	Adaptive Sensors Group, INSIGHT Centre for Data Analytics and National Centre for Sensor Research
Post Title	Postdoctoral Researcher (FP7 – Aquawarn Project)
Post Duration	6 Months

Background

The Adaptive Sensors Group (www.adaptivesensors.com/) 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 initiative (<https://www.insight-centre.org/>), supplemented by significant project based income provided by Enterprise Ireland, the Marine Institute, EPA and Industry partners. Arising from success in recent FP7 proposals, the following research position is available in the Adaptive Sensors Group at DCU.

Role

Funded through the FP7 project ‘Aquawarn’, this Postdoctoral position is focused on the development of autonomous instruments that incorporate reliable reagent-based colorimetric methods for the sensitive detection of key analysis like pH, sulphate, COD, certain metal ions and TOC. The role will focus on system design and integration, covering mechanical components, microfluidics and fluidic components (pump, valves, interconnects), electronic circuit fabrication and testing, and control software development and validation. Reporting to Professor Dermot Diamond, the successful candidate will work closely on a day-to-day basis with other researchers to deliver a truly multidisciplinary group effort.

Duties and Responsibilities:

Reporting to his/her Principal Investigator the Postdoctoral Researcher will:

- Conduct a specified programme of research on the mechanical and electronic engineering tasks required to implement reagent-based analytical methods in an autonomous instrument
- Deliver research outputs and provide input into reports as required according to project management schedules.
- Participate in field deployments of prototype devices.
- Attend and present results at project technical progress meetings.
- Liaise with both internal and external stakeholders including industry and academic partners/collaborators.
- Maintain an up-to-date profile on the group website.
- Engage in the dissemination of the results of the research at international conferences and publish research outputs in high impact international journals.
- Assist in identifying and developing future research and funding initiatives.

- 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 and in agreement with the Head of School, under the direction of the Principal Investigator.
- Carry out administrative work associated with the programme of research as & when necessary.

Experience and Qualifications

Candidates must have a primary degree and PhD in which electronic, mechanical or mechatronic engineering was a significant component. Experience in circuit design and fabrication, microprocessor programming, systems design and integration, and systems troubleshooting/validation will be important. Experience in microfluidic system design and fabrication would be an advantage, as would experience in environmental analysis, particularly in-situ monitoring.

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 projects including the supervision of undergraduate students.

Salary: €37,750 - 41,181

Subject to experience and qualifications

Closing Date: Thursday 2nd April 2015

Informal enquiries to:

Professor Dermot Diamond, School of Computing, DCU, Dublin 9, Ireland

E-mail: dermot.diamond@dcu.ie Phone: +353 (0)1 7005404

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, Dublin 9. Tel: +353 (0) 1 7005149.

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

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