Research Centre: Advanced Processing Technology Research Centre

Post title: Postdoctoral Researcher – High accuracy laser processing

Level on Framework: Level 1

Post duration: 2 years

Background & Role

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.

Background & Role

Arising from a recent Enterprise Ireland award, the following Postdoctoral Research position is now available in Dublin City University. This position will focus on the development of materials selection, laser processing of selected materials for die application, and measurement of the die dimensions during controlled humidity and temperature profiles. The successful applicant will join an exciting research in cooperation with local industry partner and within the Advanced Processing Technology Research Centre (APT) in the School of Mechanical & Manufacturing Engineering.

Principle Duties and Responsibilities

Reporting to the Principal Investigator, Dr Dermot Brabazon, the Postdoctoral Researcher will:

- Conduct a specified programme of research on die board development including:
  - selection of materials for high dimensional accuracy die application
  - determination of laser processing parameters for selected materials
  - measurement of humidity and temperature within the cardboard processing industry
  - implementing systems for high dimensional measurement and feature recognition

- Preparation of quarterly project review reports on generated results is an integral component of this role under the supervision of the Principal Investigator
• Assist in identifying and developing future research and funding initiatives
• Supervise and assist 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

Experience & Qualifications
Successful applicants must have a PhD in materials science, mechanical engineering, laser processing or closely related subjects. In addition, the ideal candidate should have experience working in teams; in system assembly, integration and control, and laser processing of samples. It is also desirable that the candidate have knowledge of process parameter mapping with design of experiments and data acquisition and use of LabVIEW control software.

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

Closing date: 18th May 2013

Application Procedure

Informal enquiries to:
Dr Dermot Brabazon, School of Mechanical & Manufacturing Engineering, DCU
E-mail: Dermot.Brabazon@dcu.ie Phone: +353 (0)1 700 8213

Applications forms are available at: http://www4.dcu.ie/hr/vacancies/current.shtml and from the
Human Resources Department, Dublin City University, Dublin 9. Tel: (01) 700 5149; Fax: (01)
700 5500 Email: hr.applications@dcu.ie

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