PhD in Aquatic Monitoring and Modelling
PREDICTING IN-LAKE RESPONSES TO CHANGE USING NEAR REAL TIME MODELS (PROGNOS)

Applications are invited for a full-time three year PhD research position in Dundalk Institute of Technology (DkIT), Ireland, in conjunction with the Irish Marine Institute, and the PROGNOS project. The position will commence in May 2016.

Background

Lakes across Europe are under pressures from cultural eutrophication, and changes in climate, including increases in the occurrence of extreme events. These can reduce water quality through, for example, promoting nuisance algal blooms, or higher levels of dissolved organic matter (DOM), and increase costs of water treatment. Increasingly, automated high frequency monitoring (HFM) systems are being adopted for water management across Europe. The PROGNOS project is led by Uppsala University (Sweden), and involves partners in Ireland, Denmark, Norway and Israel. It aims to develop an integrated approach that couples HFM data to dynamic models to forecast short-term changes in lake state, and inform management decisions to safeguard future lake ecosystem services. In Ireland, data from the Burrishoole catchment in Mayo will be used, where the Marine Institute maintains two HFM systems on Loughs Feeagh and Furnace, three river HFM systems, and has a unique >10 year data archive on key parameters.

Requirements

Applicants should have an excellent primary degree (First or Upper Second Class Honours) or M.Sc. in an appropriate discipline (e.g. Environmental Science, Environmental Engineering). The successful candidate should possess a knowledge of lake and catchment processes, have some lab-based experience in water analysis, a demonstrable ability in maths and statistics, and be highly self-motivated. Some experience of dynamic modelling would also be an advantage. They must meet DkIT requirements for entry to a doctoral programme. It is also a requirement that any applicant whose first language is other than English must have a certified English language proficiency of at least IELTS 6.5 or equivalent.
NOTE: *A full EU driving licence is also essential.*

Award

Funding provides a 3-year stipend of €16,000 per annum plus fees (appropriate for EU students at DkIT), although it should be noted that a PhD programme can take longer than the 3 year period for which funding is available. The student will be based in the Centre for Freshwater and Environmental Studies, Dundalk Institute of Technology, but will also use Marine Institute facilities in Burrishoole. The successful candidate will be registered as a full time research student in DkIT, under the supervision of Dr Eleanor Jennings (DkIT). The PhD degree will be awarded by Dublin City University.

For informal enquires in relation to the position please contact:

Dr Eleanor Jennings (eleanor.jennings@dkit.ie)

Application Procedure

Submit an electronic copy of Curriculum Vitae and a letter of interest simultaneously to the DkIT Research Office at **Aideen.Gaynor@dkit.ie** by the 20th April 2016 at 5pm.