iCRAG IRISH CENTRE FOR RESEARCH IN APPLIED GEOSCIENCES

DIAS Institiúid Ard-Léinn Bhaile Átha Cliath Dublin Institute for Advanced Studies

Post-Doctoral Position in applied electromagnetics and shallow geophysical imaging

The Dublin Institute for Advanced Studies (DIAS) invites applications for one Post-Doctoral Researcher position. The aim of this position is to add a ground-based Electro-Magnetic (EM) data generation, and interpretation capability to iCRAG. The research performed by the applicant will be relevant to several key research areas covered within iCRAG, such as mineral exploration (e.g., Pb-Zn deposits), groundwater resources (e.g., karst) and potentially geo-hazards (e.g. karst-related flooding or landslides). This research will not only be supportive to existing iCRAG research lines, but the challenging character of the targets will give the candidate the possibility to undertake research on a wide range of experimental and theoretical topics.

The applied methods will be centred on the large instrumental pool available in DIAS for passive and active magnetotellurics over a wide frequency and thus depth range. However, depending on the target, the experimental basis may be widened by joint experiments with other electromagnetic methods, such as the Tellus Airborne EM component (www.tellus.ie), Transient Electromagnetics, Electrical Resistivity Imaging including Induced polarisation, and Self Potential. The required instrumentation is available within iCRAG, or through existing research collaborations. As the island-wide Tellus project represents an invaluable source of near surface information, special emphasis will be put on methods relating to this huge data set. The successful candidate will work with other disciplines within iCRAG (e.g. seismology, hydro-geology on specific targets). Time lapse monitoring will also form part of the work programme.

The position is within the framework of the Science Foundation Ireland funded iCRAG research centre. The successful candidate will represent the working group on Electrical Geophysics in DIAS, but her/his research will be in close collaboration with other relevant groups in DIAS (Seismology) and within the iCRAG centre. Specific information on the position is given below.

Mandatory Requirements

- Hold a PhD in EM geophysics
- Excellent knowledge of the theoretical and practical aspects of a wide range of EM methods, instrumentation, and the relevant processing and interpretation software
- Excellent knowledge in particular of the methods relevant to the processing, inversion and interpretation of Airborne EM
- Demonstrated ability to plan and organize field measurements and all aspects of their interpretation
- Demonstrated ability to work in close collaborations with industry collaborators
- Ability to present methods and results in oral and written form in English

Additional Desired Requirements

- Some post doctoral experience in a relevant field
- Demonstrated ability to attract own funding for new research projects
- Relevant EM experience in Irish mining applications

General information

The start date for the position is January, 2018, or as soon as possible thereafter. The position is funded for 3 years. The starting salary will be €33,975 per year reaching

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€36,003 in the third year, plus benefits. Applications will be accepted until 11.59pm, 7 January 2018. Potential candidates should send a cover letter outlining their research interests, motivation and suitability, a full CV and contact details of two referees via email to Dr Volker Rath (vrath@cp.dias.ie) using the subject line “Postdoc Applied Electromagnetics”. For additional information on the project or working at DIAS please contact Volker Rath. DIAS is an Equal Opportunities Employer.

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