iCRAG PhD HC 4.2 PD4a

The kinematics of fault systems in offshore Ireland – implications for fault related trapping and leakage

The Irish offshore basins provide a wide variety of structural styles, settings and extensional strain magnitudes. The primary aim of this project is to analyse this spectrum of basin structure to better understand the controls on the geometry and kinematics of basinal fault systems. Key topics of research will be the controls exerted by basement structure on the geometrical evolution of rift-related fault systems and the reactivation and inversion of faults in different basinal and tectonic settings. Particular focus will be on those aspects of the evolution of fault systems relevant to hydrocarbon distribution in the Irish offshore namely, fault-controlled hydrocarbon migration and trapping, and top seal integrity and up-fault flow into post-rift stratigraphic traps.

The successful candidate will become an integral part of an initiative to better understand basin evolution offshore Ireland. By collating existing data, performing seismic mapping and structural analysis, oversight of PhD students and collaboration with researchers in related disciplines, the successful candidate will develop a comprehensive overview of the structural development of the Irish offshore and of basin development in general.

Applicants must have a PhD in a relevant research subject area and experience in interpretation of seismic reflection data. A keen interest in structural geology and fault system evolution as well as an ability to communicate with and advise other members of the research team are essential.

The position is fully funded for four years with a starting salary of €34K/year together with provision for conference and travel expenses. To register your interest send a full CV, contact details for 2 academic referees and a letter of motivation to Conrad Childs (conrad.childs@ucd.ie), The application deadline will be 30th April 2015 for a mid-2015 start-up.

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