Edward Fleming

Doctoral Researcher

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About

Title of PhD: The dynamics of a "Snowball Earth" glaciation through the magnetic and microstructural analysis of diamictites (NERC tied Studentship - tied to GAINS grant)

Supervisors: **Dr Carl Stevenson (/staff/profiles/gees/stevenson-carl.aspx)**, **Professor Ian Fairchild (/staff/profiles/gees/fairchild-ian.aspx)**, Professor Mike Hambrey (Aberystwyth University), Professor Doug Benn (The University Centre in Svalbard)

Edward is undertaking doctoral research at the University of Birmingham and UNIS as part of the **GAINS (Glacial Activity in Neoproterozoic Svalbard) project (/research/activity/geosystems/projects/gains2010/index.aspx)**. For his Phd, he is using a combination of traditional and new techniques, in particular AMS (Anisotropy of Magnetic Susceptility), to examine a "Snowball Earth" glaciation in Svalbard, where it is suggested that ice spread to low latitudes in arguably one of the most extreme events in the earth's history. As part of the project, the AMS and structural techniques are also being applied to other areas of glacial geology, such as investigating the processes involved in the formation and subsequent deformation of glacigenic sediments and constraining deformation within the basal ice of surging glaciers.

Qualifications

BSc Geology (University of Southampton)

Biography

2009 - BSc, Geology, University of Southampton (SOES scholarship, 2008)

- Awarded: The Hodson-Najoan Prize,The D.E. Wisden Prize and The Brian Sedgwick Oversby Award by the University of Southampton

2010 – Awarded the **Dave Johnston Memorial Undergraduate Field Mapping Prize (http://www.tectonicstudiesgroup.org.uk/awards/dave-johnston-mapping-prize)** by TSG (Tectonic Studies Group)

2010 to present - PhD, The University of Birmingham

Research

Research interests

- Neoproterozoic palaeoenvironments and palaeoclimates
- AMS and its use in the understanding of the formation and deformation of glacigenic sediments
- The magnetic properties of glacier and basal ice
- Macro and microstructural analysis of glacigenic sediments
- Glaciotectonics

Research group

Geosystems

Other activities

Coordinator of the Geosystems research seminars

Postgraduate demonstrator (Continental Deformation; Structural Geology; Field skills; Field skills II)

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