

Electromagnetic induction in the Earth and/or other planetary bodies

Supervisor: Dr Fiona Simpson

Department: Grantham Institute

Project Overview: Electromagnetic induction techniques are used to characterise the interiors of planetary bodies including the Earth. On Earth, this is often achieved using the magnetotelluric (MT) technique, a complementary geophysical technique to seismology that uses electromagnetic induction to quantify Earth's 3D electrical conductivity structure and infer physicochemical properties, whereas in planetary science, magnetic transfer functions derived from orbiting magnetometers are used. Current foci of Dr Simpson's research group are mantle plumes and icy moons. However, applications are invited from candidates interested in pursuing a PhD in any aspect of electromagnetic induction in the Earth and/or other planetary bodies involving numerical modelling, geophysical fieldwork and/or instrumentation. The student will receive training in electromagnetic induction techniques, have opportunities to participate in geophysical fieldwork and be expected to present their research at national and international conferences.

To apply:

Please email f.simpson@imperial.ac.uk and include in your application:

- Statement of Purpose
- Your CV

At least two references to be sent directly to Dr Simpson from the referees