Research Scientist position in Geophysics: Anisotropic Viscosity in Computational Geodynamics

Job description
A permanent position as Research Scientist, funded by the Centre of Excellence grant to the Centre for Earth Evolution and Dynamics (CEED) at the University of Oslo (UiO) in Norway.
The starting date is August 2020.

Project description
Viscosity anisotropy involves rheological properties that vary depending on the orientation of applied stresses relative to the crystallographic fabric of a mineral assemblage. Because olivine exhibits anisotropic fabrics in the upper mantle, viscosity anisotropy is thought to be important for understanding how tectonic stresses are related to deformation patterns. This position involves developing a tool for modelling both olivine texture development and the related anisotropic viscosity to evaluate the importance of anisotropic viscosity for a range of geodynamic processes.

Target processes include global flow models that relate mantle convection and plate tectonics, as well as regional studies of subduction zones, mid-ocean ridges, and their connecting transform faults. The work will include implementing viscosity anisotropy into the finite element code ASPECT, applying this code to geodynamic settings, and comparing to geophysical observations, for example from seismology. The overall goal is to evaluate and quantify the importance of viscosity anisotropy for understanding geodynamic processes occurring in the upper mantle.

Qualification requirements
The Faculty of Mathematics and Natural Sciences has a strategic ambition is to be among Europe's leading communities for research, education and innovation. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

- The candidate must have a PhD or other corresponding education equivalent to a Norwegian doctoral degree in Solid Earth Geophysics.
- This position requires research experience developing models of anisotropic viscosity, some experience with regional geodynamic problems such as subduction, and development experience with the ASPECT finite element code.
- A good command of English is required.

We offer
- salary NOK 523 200 - 640 200 per annum depending on qualifications in position as Researcher (position code 1109)
- a professionally stimulating working environment
- vibrant international academic environment
- attractive welfare benefits and a generous pension agreement, in addition to Oslo’s family-friendly environment with its rich opportunities for culture and outdoor activities

How to apply
The application must include

- Application letter
- CV (summarizing education, positions, pedagogical experience, administrative experience and other qualifying activity)
- Copies of educational certificates, transcript of records and letters of recommendation
- A complete list of publications and up to 5 academic works that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

The application with attachments must be delivered in our electronic recruiting system. Foreign applicants are advised to attach an explanation of their University's grading system. Please note that all documents should be in English (or a Scandinavian language).

Formal regulations
According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.
The University of Oslo has an agreement for all employees, aiming to secure rights to research results etc.

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

Contact information

Professor Clint Conrad - email: c.p.conrad@geo.uio.no

For technical questions regarding the recruitment system, please contact HR Adviser Torunn Standal Guttormsen, email: t.s.guttormsen@mn.uio.no, phone: +47 22854272

About the University of Oslo

The University of Oslo is Norway’s oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

Centre for the Earth Evolution and Dynamics (CEED) is a Norwegian Centre of Excellence that provides a stimulating and well-funded research environment. The main goal of the centre is to develop a model that explains how mantle processes drive plate tectonics and trigger massive volcanism and associated environmental and climate changes throughout Earth’s history.

The centre explores the distribution and history of tectonic plates in time and space, and examines the driving mechanisms that steer all stages of the ‘Wilson Cycle’, and aims to establish the links between Earth’s interior, crust and oceans, atmosphere and biosphere. CEED endeavors to also unravel similarities and differences of our planet with earth-like planetary bodies.

The centre was established in 2013 and consists of ca. 70 full time and part time professors and researchers, PhD Research Fellows and Postdoctoral Research Fellows.

Jobbnorge-ID: 184651, Søknadsfrist: 31. mars 2020