

Postdoctoral position – Antarctic ice sheet modelling

Free University of Brussels (VUB)

The Ice&Climate Group in the Earth System Sciences/ Department of Geography at the Vrije Universiteit Brussel (VUB) is currently seeking to fill a postdoctoral research position in Antarctic ice sheet modelling in the framework of the EU FP7 ice2sea project (<http://www.ice2sea.eu/>).

Ice2sea is a consortium of European institutes and international partners with the aim to improve understanding of the future glacial contribution to sea-level rise. This includes improving understanding of the processes that control, past, current and future sea-level rise, as well as the generation of improved estimates of the contribution of glacial components to sea-level rise over the next 200 years. The programme includes studies of key processes in mountain glacier systems and ice caps, and in ice sheets in both polar regions (Greenland and Antarctica). The project includes fieldwork and remote sensing studies, and the development of a suite of new, cross-validated glacier and ice-sheet models.

The specific aim of the 3-year postdoctoral research position at the VUB is to further improve an existing 3D thermomechanical coupled ice-sheet/ ice-shelf model by incorporating a novel sub-grid-scale grounding-line treatment with higher-order stresses in a nested approach, as well as improved treatments for basal processes (basal sliding below ice sheet, basal melting below ice shelves). These developments aim at improving the treatment of ice streaming and grounding-line migration in the current generation of large-scale ice sheet models. Essential model codes largely exist, but need to be further adapted for whole-Antarctic ice-sheet modelling. The main deliverable will be improved predictions of the contribution of the Antarctic ice sheet to global sea-level change over the next 200 years and beyond. The experiments will also contribute to intercomparison exercises with groups at BAS, LGGE, and the University of Bristol. Forcing fields will be supplied by different coupled global and regional atmospheric and climate models.

The desired qualifications are a PhD in glaciology, geophysics, meteorology, or an equivalent geoscience, good programming skills in a Fortran/Unix-like environment, and good communication skills, both orally and in writing. A background in the numerical modelling of physical systems and/or previous experience with the operation of large-scale ice-sheet models would be beneficial. Candidates at the postdoctoral level are preferred, but experienced researchers at PhD level with the right qualifications will also be considered.

The post is for 3 years and will start as soon as possible. Net salaries (after tax and social security) range between 2000 and 2400 € per month depending on experience and family status.

Applicants should email a letter of interest and a Curriculum Vitae to Professor Philippe Huybrechts at the E-mail address given below. Review of the applications will begin 1 September 2009 and will continue until the position is filled.

For more information, please contact:

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