

Université catholique de Louvain, Louvain-la-Neuve, Belgium  
www.uclouvain.be  
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## 4 PhD Students

*are to be hired for contributing to the development and use of a*

### **A multi-scale, unstructured-mesh, ice-ocean model**

We are building a numerical ice-ocean model using the finite element method to solve the governing equations on an adaptive unstructured grid. To know more about this, visit the project's web site, [www.climate.be/SLIM](http://www.climate.be/SLIM), where the acronym SLIM stands for Second-generation Louvain-la-Neuve Ice-ocean Model.

Four PhD fellowships are available for conducting research related to:

1. the development of novel time-integration procedures, and their implementation on massively parallel computers;
2. the coupling of SLIM's solid and liquid water components, and their application to ice-ocean interactions in a complex-geometry region;
3. the improvement of SLIM's sediment dynamics module, and its application to a tropical land-sea continuum;
4. the improvement of SLIM's wetting-drying algorithm and other shallow region functionalities, and their application to coral reef ecosystems, in particular the study of land-to-sea fluxes and physical aspects of connectivity.

Our group has access to excellent computing facilities ([www.uclouvain.be/cism](http://www.uclouvain.be/cism)). The successful applicants will enjoy the excellent environment and postgraduate culture of the SLIM team.

Applicants should have a background in applied mathematics, (geophysical or environmental) fluid mechanics, hydrology, (fluvial) hydraulics, oceanography, climatology or equivalent. The open positions are expected to be filled by October 1, 2010.

The promoters of the project are E. Deleersnijder (co-ordinator), T. Fichefet, E. Hanert, V. Legat, J.-F. Remacle and S. Soares Frazão.

Informal enquiries should be directed to the relevant project promoter, for whom contact information is available on SLIM's website. Applications, including CV and the name and address of an academic referee, should be made as soon as possible to the project co-ordinator.