

**Post Doctoral Fellowship
High Performance Computing for Geophysical Applications
Memorial University**

The project “High Performance Computing for Geophysical Applications”, an interdisciplinary project between the Departments of Earth Science, Physics and Physical Oceanography, and Mathematics and Statistics at Memorial University of Newfoundland, is seeking candidates for two Post- Doctoral Fellowship positions. The purpose of this project is to develop algorithms and software for the numerical modelling and inversion of geophysical data using high-performance, multi-core, shared-memory computer architectures. Development will be carried out on a dedicated large-scale multiprocessor computer that is to be purchased as part of the project.

Particular goals of the project include: the implementation of an interactive 3D pre-stack seismic migration algorithm for multi-core, shared-memory computational environments; the implementation of adaptive beam-forming methodology on a parallel computational architecture; and the development of 3D seismic and joint seismic–gravity–EM inversion algorithms. The two Post-Doctoral Fellows will be expected to contribute towards the attainment of these goals.

The successful candidates will have a PhD in Geophysics, Physics, Computational Science, or similar discipline with a background in scientific computation and experience programming in at least one of the two major languages FORTRAN90 and C/C++. Candidates who are in the final year of a PhD programme and who will have completed all the requirements for their programme by the start date of the position will also be considered.

The positions are for two years, with the possibility of extension to a third year subject to budgetary constraints. The start-date for both positions is negotiable, but before April 1st 2011 is preferred. Salary is commensurate with qualifications and experience.

For more information, or to apply for one of the positions, please contact:

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