

PhD/MSc opportunities available at Polytechnique Montreal

on **Mesh-free particle methods for high-performance modelling of multiphase flows**

Applications are invited for graduate student positions (1 doctoral and 1 master) at the Department of Civil, Geological and Mining Engineering at Polytechnique Montreal (Montreal, Canada). The project is on the development of high-performance mesh-free particle methods such as MPS (Moving Particle Semi-Implicit) and SPH (Smoothed Particle Hydrodynamics) for multiphase systems, particularly multiphase granular and sediment flow.

Requirements: Applicants are expected to hold a degree in civil engineering, mechanical engineering or related areas, have a strong background of hydraulics and fluid mechanics, good programming skills, and good command of English or French. Applicants must also satisfy the admission requirements for Doctoral/Master programs at École Polytechnique de Montréal.

Knowledge and relevant expertise in numerical fluid mechanics especially particle-based methods (such as MPS and SPH), good programming skills in C/C++, MPI and CUDA, and good publication record are desired (esp. for doctoral position), but NOT mandatory.

Polytechnique Montréal (affiliated with the Université de Montréal) is one of the largest engineering schools in Canada and ranks first in Canada for the scope of its engineering research. With cutting-edge infrastructures, today it is one of North America's most vibrant centres for scientific and technological knowledge with professors, researchers and students from around the world. Although Polytechnique is a French language institute, the graduate students are allowed to do their research and write/defend their thesis in English and attend their classes at English-language universities in Montreal.

The positions are available from January 2017. To apply please send your motivation letter (including your research background), curriculum vitae, sample publications, and transcripts (unofficial) to Prof. Ahmad Shakibaeinia (ahmad.shakibaeinia@polymtl.ca). **Review of applications will start on October 15, 2016 and continues until the successful candidates are selected.** For more information, please visit this [link](#).