



## Postdoctoral position at Polytechnique Montreal, Montreal, Canada

(Position #: [CHL20221201](#))

Applications are invited for a postdoctoral position at *the Computational Hydrosystems Research Lab* (CHLab) of Polytechnique Montreal, Montreal, Canada ([link to the CHLab webpage](#)).

### Topic:

The project is on the development of a high-performance (GPU-accelerated) mesh-free particle numerical model, based on SPH (Smoothed Particle Hydrodynamics) or MPS (Moving Particle Semi-Implicit), for continuum-based modelling of multiphase ice dynamics problems.

### Requirements:

- Doctoral degree in civil engineering, mechanical engineering, applied mathematics, or other relevant fields;
- Background in fluid mechanics and knowledge and relevant experience in numerical techniques, esp. particle-based methods such as MPS and SPH;
- Good programming skills in C/C++, and parallel programming, esp. GPU programming (preferably on CUDA)
- Good command of English and skill in scientific writing in English;
- Excellent publication record.

### Work environment:

The successful candidate will join Computational Hydrosystems Research Lab (CHLab) at Polytechnique Montreal and will be a member of “*Canada Research Chair Computational Hydrosystems*” led by Prof. Ahmad Shakibaeinia. Polytechnique Montreal (Engineering school of 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 centers for scientific and technological knowledge with professors, researchers, and students from around the world.

### Timeframe:

- The position is available from **May 2023 or soon after**.
- Review of applications will start on **January 15, 2023** and continues until the successful candidate is selected.

### How to apply:

Applications must be submitted on-line at: [click here](#)

Informal inquiries can be made to: Dr. Ahmad Shakibaeinia ([ahmad.shakibaeinia@polymtl.ca](mailto:ahmad.shakibaeinia@polymtl.ca))