

**PhD Student
River Dynamics Laboratory
School of Environmental Science
Simon Fraser University**

The River Dynamics Laboratory at Simon Fraser University, in collaboration with WaterSHED lab at the University of Calgary (<https://ucalgary.ca/labs/waterSHED>), seeks a **PhD student** to work on sediment supply in mountain drainage basins in the Rocky Mountains. The candidate would develop and validate a **morphodynamic model** of changes in river channels caused by coarse sediment delivery by landslides. The candidate will join a large group of students and postdocs at Simon Fraser University and the University of Calgary with expertise in river geomorphology and natural hazards.

The PhD candidate will:

- 1) Build a one-dimensional numerical model to predict channel evolution that is based on the Parker family of morphodynamic models
- 2) Collect topographic and sediment texture information to parametrize model in the field
- 3) Validate the model using channel profiles and newly acquired lidar
- 4) Experiment with the model to explore sediment removal and augmentation strategies

Minimum qualifications include:

- 1) A Masters degree in Geology, Engineering, Environmental Science, or Physical Geography
- 2) Excellent organizational, communication, and problem-solving skills, and attention to detail
- 3) Experience with hydraulic and/or morphodynamic modelling.

The position is funded for 4 years.

Simon Fraser University sits atop Burnaby Mountain in British Columbia's lower mainland, minutes from downtown Vancouver and a variety of spectacular mountainous environs. Simon Fraser University has a long history of study in geomorphology and water sciences, and remains a stimulating environment in which to learn and do research. SFU is an equity employer and encourages applications from all qualified individuals including women, persons with disabilities, visible minorities, Indigenous Peoples, people of all sexual orientations and gender identities, and others who may contribute to the further diversification of the university.

To apply for a position please send a cover letter describing your interests and experience, CV and a list of three references to Jeremy Venditti (jeremy_venditti@sfu.ca) and Dan Shugar (Daniel.Shugar@ucalgary.ca).

Review of applications will begin immediately and continue until the position is filled. Start date could be as early as May 2026.