



Meghan Sharp

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Education

Master of Science in Geoscience – Expected 2021: University of Calgary, Calgary, AB

- *Thesis:* Multidisciplinary approach to the dynamics of Tweedsmuir Glacier
- *Advisors:* Dr. Dan Shugar, Dr. Gwenn Flowers
- *GPA:* 4.0 (4.0 scale)

Bachelor of Science in Geophysics (Honours) –2019: University of British Columbia, Vancouver, BC

- *Thesis:* Glacier-Volcano Interaction in the Katla Caldera: A Box Model of Available Meltwater
- *Advisors:* Dr. Mark Jellinek
- *GPA:* A (85.5%), Dean's Honour list in final three years

GoGlobal Exchange Program – 2016: University of Iceland (Háskóli Íslands)– Reykjavík, Iceland

Research Interests

Keywords: Geophysics, Glaciology, Volcanology

Techniques: Numerical modelling, Structure from Motion photogrammetry, Remote sensing

Academic Research Experience

Arctic Field Assistant (July 2019- September 2019)

Department of Geography, UBC Vancouver

- Initiated and executed botany and phenology field data collection in a remote environment (Alexandra Fiord, Ellesmere Island)
- Assisted a glacier mapping field team using Garmin GPS instruments
- Interpreted geospatial data at field site using ArcGIS mapping software to estimate average glacier retreat velocities for the past seven decades

Undergraduate Research Assistant (January 2016- May 2019)

with Dr. Mark Jellinek, Department of Earth, Ocean, and Atmospheric Sciences, UBC Vancouver

- Attended and delivered presentations at weekly meetings with graduate and undergraduate team members
- Created numerical models in collaboration with senior students to investigate magma-water interactions
- Assisted with laboratory research projects related to fluid mechanics and volcanology

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Non-Academic Research Experience

Remote Sensing Research Assistant (May 2017- September 2017)

National Research Council of Canada's Flight Research Laboratory, Ottawa, Ontario

- Conducted geographical remote sensing surveys using airborne hyperspectral imagers
- Processed hyperspectral data using both Matlab and geospatial software, ENVI, and translated this data into presentable maps
- Communicated results of environmental remote sensing survey at National Research Council's Student Research Symposium

Teaching Experience

Teaching Assistant (January 2020- Present)

Department of Geoscience, University of Calgary

Course: Computational Methods for Geophysicists

- Instructed laboratory assignments on differential equation solvers in MATLAB
- Provided technical feedback on structure of codes and models

Substitute Lecturer (October 2019)

Department of Geoscience, University of Calgary

Course: Introduction to Geophysics

- Delivered lecture material in an interactive fashion

Teaching Assistant (September 2019- December 2019)

Department of Geoscience, University of Calgary

Course: Introduction to Geophysics

- Instructed laboratory assignments
- Provided technical feedback and hosted weekly office hours to assist student learning

Relevant Work Experience

Intern Instructor & Course Logistics Assistant (July 2018- September 2018)

Outward Bound Canada, Rocky Mountain Sector

- Supervised and guided students in a backcountry environment
- Organized expedition courses pre- and post-trip
- Worked collaboratively with instructor team to solve problems in the field

Co-author of Earth Matters (2016 & 2018)

Department of Earth, Ocean, and Atmospheric Sciences, UBC, Vancouver, British Columbia

- Conducted interviews of accomplished researchers
- Produced engaging articles for the annual Earth Science Review

Mechanical Engineering Intern (May 2015- September 2016)

L3 Wescam, Burlington, Ontario

- Designed and updated mechanical drawings and computer-aided design models in SolidWorks and AutoCAD

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Volunteer Experience & Extracurricular Activities

Ski Patroller (September 2019- Present)

Lake Louise Ski Resort, Canadian Ski Patrol

- Ensured the safety of alpine recreationists by responding to and leading first aid situations, as well as taking proactive measures, such as identifying and solving hazards on ski runs

Women in STEM Representative (September 2018- May 2019)

UBC Young Women for Science

- Deliver presentations and science demonstrations at local high schools in British Columbia
- Act as a role model for the next generation of female scientists

Gear Fairy (August 2018)

Girls on Ice Canada

- Transported outdoor equipment to basecamp for a science and mountaineering expedition for young women
- Served as a role model to the next generation of female scientists and outdoor leaders

Geophysics Undergraduate Representative (September 2015- May 2018)

University of British Columbia G.M. Dawson Club (Geoscience Club)

- Maintained a professional relationship and communication between students and geophysical industry by organizing student-industry networking events

Relevant Coursework

- **Mathematics:** Partial Differential Equations, Multivariable Calculus, Linear Algebra
- **Physics:** Advanced Physics of Earth and Other Planets, Continuum Mechanics, Thermal Physics
- **Data Analysis:** Big Data Analysis & Machine Learning, Time Series Analysis
- **Remote Sensing:** Advanced Photogrammetric Techniques, Geographical Information Systems
- **Programming:** Matlab, Python
- **Cryosphere:** Advanced Glaciology (quantitative), Snow & Ice Processes (qualitative)

Publications

Thesis/Dissertation

- Glacier-Volcano Interaction in the Katla Caldera: A Box Model of Available Meltwater, Undergraduate Honours Thesis (2019), Supervised by M. Jellinek

Magazine Entries

- **Meghan Sharp**, Catherine Armstrong. (2018). Earth Science Goes Viral. Earth Matters. Vol(4). University of British Columbia, Department of Earth and Ocean Sciences. Editors: Alan Shapiro.
- Rhy McMillan, **Meghan Sharp**. (2016). Red Planet. Earth Matters. Vol(3). University of British Columbia, Department of Earth and Ocean Sciences. Editors: Chuck Kosman.

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Awards & Scholarships

CSEG Foundation Student Scholarship– 2020 & 2017 (\$2000 x2 years)

- Awarded based on academics, professional potential in geophysical industry

Alberta Graduate Excellence Scholarship– 2019 (\$11,000)

- Awarded based on research potential, academic excellence, and extracurricular involvement of students pursuing graduate studies in Alberta

Thomas and Marguerite MacKay Memorial Scholarship– 2018 (\$3,000)

- Nominated by the Faculty of Science at the University of British Columbia

KEGS & BC Geophysical Society Scholarship–2018 & 2017 (\$1,500 x2 years)

- Awarded based on academics, promising career in geophysics and extra-curricular activities

Certifications

- Advanced Occupational First Aid (Canadian Ski Patrol) (December 2019)
- Possession and Acquisition Firearms License (2019)
- Wilderness First Aid (2018)
- Avalanche Safety Training 1 (2017)

Interests

- **Alpine skiing:** Ski raced for 11 years, competed in provincial-level competitions in Ontario
- **Sea kayaking:** Paddled 115 kilometres in a two-day river and ocean expedition in New Zealand
- **Watercolour Painting:** Collection of personal interpretations of landscapes, specifically of glaciers