

# Stephen Schroeder

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## EDUCATION

### **BSC HONOURS IN GEOLOGY** | UNIVERSITY OF CALGARY

Graduated April 2019 | Calgary, AB

**Thesis Title:** Carbon Storage Dynamics of Saline lakes in the Cariboo Plateau, British Columbia

- Analysed aqueous and mineral data using Python, Excel, and Geochemists' Workbench
- Modelled lake geochemistry and potential to sequester atmospheric CO<sub>2</sub>
- Prepared rock and aqueous samples for Optical Emission Spectrometry, Ion Chromatography, and X-Ray Diffraction analysis

## EXPERIENCE

### **UNDERGRADUATE RESEARCHER** | UNIVERSITY OF CALGARY

January 2019 - Present | Calgary, AB

**Thesis Title:** Laboratory Constraints on the Kinetics of Pyrite Oxidation in Alkaline Waters

- Grant-funded position to perform undergraduate research
- Responsible for experimental design, literature review, and geochemical modelling of pyrite oxidation.

### **PODCAST HOST** | ENDEAVOUR PODCAST

July 2018-Present | Calgary, AB

Hosted a weekly podcast, interviewed professionals of diverse backgrounds and communicated their stories and science to the general public. Developed and maintained podcast hosting and social media.

### **RESEARCH ASSISTANT** | PALEOENVIRONMENTAL DYNAMICS GROUP

Summer 2017, Summer 2018 | Heidelberg, Germany

Supported research on Oligocene palaeoceanography and cryosphere modelling. Prepared, weighted, and diluted samples for ICP-OES analysis.

- Interpreted data and its relevance to the paleoclimate model using Excel
- Identification of foraminiferal morphospecies under a microscope
- Analysis of microscope and stable isotope data using Excel

### **STUDENT ASSISTANT** | UNIVERSITY OF CALGARY

September 2016 – May 2017 | Calgary, AB

Volunteered in a lab setting, supporting research on Swift Current Creek vertebrate fossil material.

## SKILLS

### **PROGRAMMING**

**Python:** NumPy and Pandas data processing. Contributed to open-source packages on GitHub: PyJanitor, Econ-ARK, and Trio

**Wolfram Language:** Created a script which accesses the RunKeeper database in order to visualise my running history

**Excel:** Projects involving INDEX, MATCH and IF functions

### **PROFESSIONAL**

Science Communication • Resource Estimation • Geologic Mapping • Petrographic Microscopy •  $\LaTeX$

## AWARDS & HONORS

### **UNDERGRADUATE STUDENT RESEARCH AWARD**

January 2019 | Natural Sciences and Engineering Research Council of Canada

Awarded one of 3 competitive research grants available to the Geoscience department at the University of Calgary. The grant supported my research on pyrite oxidation.

### **RISE-GLOBALINK RESEARCH INTERNSHIP**

May 2018 - August 2018 | MITACS & German Academic Exchange Service

One of the 60 Canadian highest ranked candidates to receive the RISE-Globalink scholarship, which allowed me to participate in a research project supervised by a doctoral student at the Heidelberg University.