

Student opportunities with Dr. Jenine McCutcheon (starting May 1, 2020)

Geomicrobiology Group

Dr. McCutcheon is recruiting enthusiastic, creative, and motivated applicants to join her Geomicrobiology research group. To learn more about Dr. McCutcheon and her research, see her profile on the Department website. Qualified applicants are invited to apply for the student and postdoctoral opportunities listed below.

Undergraduate Students

Undergraduate thesis positions are available for the 2020/2021 academic year. Projects will be suited to students interested in interdisciplinary science encompassing mineralogy, geochemistry, and microbiology.

How to apply: Interested undergraduate students can contact me to discuss their research interests and potential projects.

Graduate Students

I am recruiting M.Sc. and Ph.D. students to begin September, 2020 and January, 2021. Applicants should have an Honours B.Sc. (M.Sc. applicants) or M.Sc. (Ph.D. applicants) in Earth/environmental sciences, microbiology, materials science, or a closely related field. Laboratory and/or field research experience in geomicrobiology, geology, geochemistry, or microbiology is advantageous.

Available thesis topics include:

- Characterizing microbial mat structure, chemistry, and metabolism in three dimensions.
- Microanalysis of stromatolite structure and chemistry as linked to microfossil and organic matter preservation.
- Microbial carbonate mineral precipitation reactions in natural and industrial systems.
- Microbial mat-metal interactions, examining how microbial mats retain and respond to high concentrations of dissolved metals.
- Endolithic microbial activity and nutrient acquisition in polar environments.

Successful applicants will have opportunities to develop skills in the following areas:

- Designing and conducting experiments in the laboratory, field, and/or synchrotron research facilities;
- Electron/X-ray microscopy and spectroscopy techniques;
- Microbial culturing, experimentation, and characterization;
- Fluid and solid material geochemical analyses;
- Data processing, interpretation, and visualization; and

- Science communication

How to apply: Applicants must meet the [University of Waterloo degree entry requirements and application deadlines](#). Please send (1) a 1 page cover letter highlighting your research experience and interests, (2) an academic CV, (3) transcripts (unofficial copies are sufficient), and (4) names and contact information for 3 academic references. These can be sent to Jenine McCutcheon (j.mccutcheon@leeds.ac.uk).