

Chelsea Renée Fougère

Department of Earth Sciences, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada
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Profile

Professional environmental science research technician with laboratory management experience; trained and practiced in GIS, database management, data processing, and GC-IRMS instrumentation.

Key Competencies

Data handling – database management, GIS, writing scripts in R, data processing and visualization

Leadership – laboratory management, mentoring peers, organizing groups and meetings

Communication – technical and academic writing, public speaking, emotional literacy

Versatility – adaptable, comfortable in laboratory and field, work well independently or with a team

Professional Experience

Laboratory Manager in the Dalhousie University Earth Sciences Department, 2019-present

I currently manage the new Stable Isotope Biogeochemistry Laboratory adjacent to the Ocean Frontier Institute. I am responsible for the maintenance and operation of our GC-IRMS equipment, data quality and processing, overseeing sample preparation, and liaising with partners and clients.

Research Assistant, GIS Technician and Database Administrator in the Flux Lab, 2015-2018

I built and managed a multi-million record PostgreSQL database of mobile atmospheric survey data. I wrote and ran scripts in R, and improved computational aspects of the mobile survey workflow. I prepared technical reports and contributed to academic papers. I made maps for a variety of purposes and audiences. I supported colleagues in the field, liaised with partners, and presented research at conferences.

Education

BSc with Honours in Environmental Science (Biology) from St. Francis Xavier University, 2009-2013

Advanced Diploma with Honours in GIS from the Centre of Geographic Sciences (NSCC), 2014-2015

Isomass Scientific Inc. IRMS and GC Continuous-Flow IRMS training, 2019

First Aid with CPR/AED (2017), Class 5 Nova Scotia driver's license

Awards

Hans Klinkenberg Memorial Scholarship from the Canadian Institute of Geomatics, 2015

KC Irving Environmental Science Award from Science Atlantic, 2013

Anderson Environmental Award from St. Francis Xavier University, 2013

The Pengrowth Energy Scholarship from the Nova Scotia Department of Energy, 2009

References

Dr. David Risk (Flux Lab – former employer): drisk@stfx.ca, 902-872-2861

Emma Kinley (Bluenose Coastal Action Foundation): emma@coastalaction.org, 902-634-9977

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Co-Authored Publications

Atherton E, Risk D, Fougère C, Lavoie M, Marshall A, Werring J, Williams JP, Minions C. (2017). Mobile Measurement of methane emissions from natural gas developments in northeastern British Columbia, Canada. *Atmospheric Chemistry and Physics*. 17, 12405-12420.

Tarakki N, Risk D, Spafford L, Fougère C. (2018). A meta-analysis of the surface soil gas measurement monitoring and verification (MMV) program at the Aquistore project. *International Journal of Greenhouse Gas Control*. 75, 189-197.

O'Connell E, Risk D, Atherton E, Bourlon E, Fougère C, Baillie J, Lowry D, Johnson J. (2019). Methane emissions from contrasting production regions within Alberta, Canada: Implications under incoming federal methane regulations. *Elementa Science of the Anthropocene*. 7, 3.

MacKay K, Risk D, Atherton E, Fougère C, Bourlon E, O'Connell E, Baillie J. (2019). Fugitive and vented methane emissions surveying on the Weyburn CO₂-EOR field in southeastern Saskatchewan, Canada. *International Journal of Greenhouse Gas Control*. 88, 118-123.

Conference Posters

Fougère C, Risk D, Lavoie M, Baillie J, Atherton E, Marshall A, Williams JP, MacKay K, O'Connell E, MacIntyre C, Spafford L. Raw Baseline Concentrations and Environmental Controls on Background CO₂ and CH₄ for Sites Across Canada. Poster presented at: AGU Fall Meeting; 2016 Dec 12-16; San Francisco, California, USA.

Fougère C, Atherton E, Bourlon E, Sherwood OA, Risk D, Vaughn B, Pétron G. Characterizing and Comparing Anthropogenic CH₄ Sources in the DJ Basin using Mobile Surveys. Poster presented at: NOAA ESRL Global Monitoring Annual Conference; 2018 May 22-23; Boulder, Colorado, USA.