April 2, 2024

PhD position studying wildfire emissions using novel technologies. Interested in atmospheric chemistry, wildfires, and challenging yourself in outdoor, remote field work? We have an ideal position for you studying the complexity of wildfire emissions with novel sampling technologies.

Assistant Professor Dr. David McLagan, PI of the Fire, Earth, Water, Air Contaminant Biogeochemistry Lab in the School of Environmental Studies (SES) and Dept. of Geological Sciences & Geological Engineering (GSGE) at Queen's University, is offering a doctoral research opportunity to study the atmospheric science/chemistry of wildfire emission using mobile sampling platforms and low-cost, light-weight air-quality sensors. Wildfire smoke is dynamic; plumes evolve chemically over time. Hence, exposures to smoke near-to and remote-from fire sources are not the same. Near-source wildfire smoke monitoring is a massive logistical challenge, which means we lack the data needed to undertake holistic and accurate assessments of the impacts of wildfire emissions on atmospheric chemistry, climate change, and human health. Within this project we aim to push the boundaries of our capabilities of near-source wildfire smoke monitoring in order to better understand smoke from not only human and environmental health perspectives, but also to support improved wildfire management, in particular, greater leadership and participation of Indigenous Peoples and Indigenous Fire Stewardship in shared wildfire management.

Requirements: Candidates should be in good academic standing and have a strong interest in the development and application of novel methods/technologies in multi-disciplinary atmospheric/ environmental sciences. A BSc or MSc degree in atmospheric sciences/chemistry is very desirable.

EDI matters: Academic research and scientific advancement benefits from a breadth of perspectives. The FEWA Lab values Equity, Diversity, and inclusions and aspires to build a research group that provides opportunity to people of all backgrounds, experiences and identities, and supports group members through an adaptive mentoring approach to ensure their success. This project will partner with Indigenous Fire Organizations, researchers, and communities and the project is structured to harmonize the objectives of these groups with those of the wider project. Interested researchers must be open and willing to work innovatively with different Knowledge systems and respect Indigenous ownership of their Knowledge and practices.

Submission details: Applications should include a cover letter (<2 pages; include summary of past research experience), a transcript (unofficial is ok, official transcript assessed during program admission) and CV. Please tailor your application to this position; generic applications will not be considered. Applications should be emailed to david.mclagan@queensu.ca. Applications will be reviewed as they are submitted with an intended start date of September 2024 (or potentially January 2025). Successful candidates must still be formally accepted into GSGE or SES (unit to fit candidate's experience). **Salary:** TBC - minimum of $32K/yr before tuition (fully funded for 4-years).

Sincerely,

Dr. David McLagan
Assistant Professor in Environmental Geochemistry
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