

## **Postdoctoral Researcher Position - High-Resolution Vegetation Fuel Modelling for Wildfire Management**

**Researcher(s) Name(s):** Drs. Laura Chasmer and Christopher Hopkinson

**Department:** Geography and Environment

**Start Date of Appointment:** February 2026

**Duration:** 24-month, with a possibility of extension of up to 12 additional months, contingent upon satisfactory performance and funding opportunities.

**Hours per week:** 40

**Remuneration:** \$75,000/annum \*Information about PDA benefits at Western University is available at:

[https://www.uwo.ca/hr/benefits/your\\_benefits/pda](https://www.uwo.ca/hr/benefits/your_benefits/pda)

**Deadline:** Rolling submission. Applications will be accepted until the position is filled.

### **Job Description**

We are seeking a postdoctoral researcher to join our research team at Western University as a full-time research associate, senior research associate, or postdoctoral fellow. This position offers an opportunity to contribute to research in wildfire management through advanced remote sensing and deep learning techniques.

The successful candidate will work on a project developing a comprehensive forest fuel modeling framework. The research utilizes deep learning-based 3D segmentation to extract structural fuel characteristics from high-density point cloud data, improving the accuracy and resolution of fuel maps used in fire behavior prediction and management. The position involves designing, training, and testing deep learning models for semantic and instance segmentation of LiDAR data. The candidate will develop physics-informed algorithms to translate segmentation outputs into quantifiable fuel attributes and integrate these models into a scalable operational workflow. Additional responsibilities include collaborating with Hatfield Consultants ([www.hatfieldgroup.com](http://www.hatfieldgroup.com)) and project partners to facilitate knowledge exchange and methodological development, contributing to and leading peer-reviewed publications, and supervising undergraduate students.

This role provides an opportunity to work at the intersection of academic research and applied wildfire science, contributing to advances that address critical environmental challenges. This appointment is contingent upon budgetary approval.

### **Responsibilities:**

- Work in a collaborative team environment, under the general direction of Drs. Laura Chasmer and Christopher Hopkinson to achieve the goals of associated research grant funding requirements;
- Conduct high-level academic literature reviews and associated writing tasks;
- Analyze and pre-process high-density LiDAR data for use in deep learning models;
- Design, train, and test deep learning neural network architectures for 3D point cloud segmentation;
- Develop and validate physics-informed algorithms to translate segmented data into fuel attributes;
- Draft technical reports;
- Lead academic publications related to project research;

- Collaborate with Hatfield Consultants and other partners for knowledge exchange and methodological development;
- Other duties, as assigned.

**Required Qualifications:**

- Ph.D. in computer science, engineering, mathematics, forestry, remote sensing, or related fields;
- Formal training in machine learning, especially deep learning for 3D data processing;
- Experience in developing deep learning applications for remote sensing data;
- Experience working with LiDAR data and large geospatial datasets;
- Knowledge and experience with Python, and deep learning frameworks such as TensorFlow or PyTorch;
- Excellent oral and written communication skills;
- Strong organizational skills with the ability to manage time effectively and efficiently to meet deadlines;
- Strong interpersonal skills with the ability to work as part of a team.

**Desirable Qualifications:**

- Experience with Docker and Linux environments;
- Experience in developing physics-informed models;
- Familiarity with wildfire science and management.

**Application Instructions**

Interested applicants should submit the following documents to Dr. Chasmer at [Ichasmer@uwo.ca](mailto:Ichasmer@uwo.ca) with the subject line "Application: Postdoctoral Researcher Forest Fuel Modelling."

- Cover Letter detailing your qualifications and interest in this position.
- Curriculum Vitae (CV).
- One sample first-author publication related to deep learning or remote sensing.
- Names and e-mail addresses of two referees familiar with your academic work.

Western University is committed to equity, diversity, and inclusion and recognizes that a diverse staff/faculty benefits and enriches the work, learning, and research environments, and is essential to academic and institutional excellence. We welcome applications from all qualified individuals and encourage women, members of racialized communities, Indigenous persons, persons with disabilities, and persons of any sexual orientation or gender identity to confidentially self-identify at the time of application. All qualified candidates are encouraged to apply; however, Canadian citizens and permanent residents will be given priority.

Additional information on Western University is available at <http://www.uwo.ca/>