University of Manitoba | Price Faculty of Engineering

Ph.D. Openings: Climate Hazards, Water, and Agriculture

The **Hydroclimate–Society Lab**, led by Dr. Donghoon Lee in the Department of Civil Engineering at the University of Manitoba, Canada, invites applications for **three Ph.D. research assistant** positions starting in **Fall 2026 (September 2026)**. Students will join an interdisciplinary team that integrates advanced data and methods to examine how climate extremes and long-term change influence both natural systems and human societies.

Research Areas

Ph.D. students will engage in collaborative, interdisciplinary projects. Potential research directions include (but are not limited to):

- Using climate forecasts and SWOT satellite data to enhance water management (in collaboration with Manitoba Hydro)
- Projecting future socio-environmental impacts of extreme heat and wildfires in North America
- Developing climate data-driven hazard footprints
- Designing disaster resilience metrics to inform policy triggers under future climate scenarios
- Monitoring crop yield using Earth Observation (e.g., SIF, NISAR) for early warning systems
- Advancing seamless sub-seasonal to decadal (S2D2) predictions of crop productivity

Qualifications

- Bachelor's degree (Master's preferred) in Civil or Environmental Engineering, Climate Science, Geography, Agriculture, Data Science, or related disciplines
- Research experience with large-scale Earth science or socioeconomic datasets
- Experience in ML/AI/deep learning, especially for scientific applications
- Strong programming skills (Python required). A GitHub portfolio is highly recommended
- Excellent written and oral communication skills

What We Offer

- Competitive **stipend** and **full tuition coverage for four years**
- Access to advanced computing resources and research environment
- Opportunities for interdisciplinary collaboration across engineering and data science
- Comprehensive professional development, including conference travel, workshops, leadership training, and career mentoring

How to Apply

Interested candidates should complete the **Research Interest Form** by **November 30, 2025**, for full consideration. The form includes detailed guidelines and review procedures. Applications will be reviewed on a rolling basis until the positions are filled.