

Thompson Rivers University
ENVIRONMENTAL SCIENCES SEMINAR SERIES
Fall 2025

Guest speaker information

Name of guest speaker:	Weiwei Wang
Current affiliation:	Department of Natural Resource Science, Faculty of Science, Thompson Rivers University
Seminar date:	October 16
Title of seminar:	From landscape to the continent: quantifying the changes and impacts of wildland fires in Canada

Abstract: 5-8 lines in length, non-technical, written to be accessible and "catchy" to a general audience

Recent severe fire seasons in Canada, marked by increased extreme fire events and record-breaking burned areas, highlight the urgent need to fully understand and accurately predict wildfire dynamics and impacts. My research focuses on modelling the full spectrum of wildland fires at different temporal and spatial scales, including annual and daily fire activity, landscape- and national-scale burn severity, fire-fuel feedback effects, and community-level fire risk. By examining how wildland fires interact with key environmental factors (weather, vegetation, and topography), my research identifies key drivers of wildland fires and builds prediction models of daily and annual fire activity across Canada. My research also quantifies the effects of fire-fuel feedback, i.e., the reduction of future burnable fuels as consumed by prior fires, on mitigating climate-driven increases in future fire extent and frequency in Canada. Using advanced fire simulation model and expert knowledge, my research estimates fire hazard, assesses fire risk, and develops fire risk reduction plans for the local communities. Together, my research outcomes support proactive management strategies to enhance resilience to the escalating wildfires in Canada.