



Western
Centre for Multi-hazard
Risk & Resilience

SPARK:

Seminar Platform for Adaptive Resilience Knowledge

Transformative Role of Machine Learning in Addressing Climate and Weather-Related Challenges

Date: Friday, September 11, 2026, 10:00 AM EST

Location: ACEB 4405 & Online via Teams

Climate change is increasing weather variability and extreme events, creating growing challenges for cities, agriculture, renewable energy, and other climate-sensitive sectors. Machine learning (ML) offers a powerful pathway to transform coarse-resolution global forecasts into hyper-resolution, decision-ready information. By downscaling and correcting global forecasts, ML can provide more localized and actionable information for sector-specific decisions.

Three Applications:

☁️ **Extreme Rainfall & Floods** — Mumbai: Hyperlocal forecasting to support rapid response in a highly vulnerable megacity.

⚡ **Renewable Energy** — Western India: Improved forecasting to support efficient planning and grid integration.

🌾 **Irrigation Advisory** — Central–Western India: Farm-scale guidance to enable water-smart agricultural practices.

Together, these approaches can help bridge the gap between global climate information and local decision-making, accelerating the transition toward a weather-ready and climate-smart India.



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Further event details can be found in:

https://uwo.ca/multihazard_risk_resilience/SPARK_Seminar/index.html