

The Northern Tornadoes Project (NTP) and Northern Hail Project (NHP) are once again hiring summer interns, allowing for some exciting opportunities for undergraduate students and senior high school students. Undergraduate students from any program will be considered. For 2024, available internships include, but are not limited to:

### **Northern Tornadoes Project - Field Internship**

- Post-Event Tornado Damage Surveys (multiple internships available).

### **Northern Hail Project - Field Internship**

- Real-Time Hailstorm Chasing – The Northern Hail Project Field Internship will be based out of Olds, AB and travel stipends will be provided. For those interested in the collection work, storm chasing experience and a good driving record will be considered assets (multiple internships available). Note that high school students are ineligible for this internship unless they are local to the Olds, AB area.

### **Northern Tornadoes Project / Northern Hail Project - Research Internship**

Potential research topics (multiple internships available):

- Implementation of augmented-reality & virtual-reality workflows on the NTP Open Data Site
- Automated classification of damage severity through LiDAR data.
- Northern Tornadoes Project Atlas – cartography-focused atlas of the last 5 years of NTP collected data
- Database integration of real-time severe weather data collected by the public
- Assessing failure modes in trees under extreme wind loads
- Development of a near real-time verification system for NTP/NHP outlooks
- Development of NTP/NHP case study capacity using MetPy and PyART
- Creation of entries for a historical tornado website from archival data
- Using machine learning to identify hail (and hail size) from audio recordings
- Identifying current and historical wind-driven hail events in Canada
- Identifying (and documenting) hail swaths from radar and high-resolution satellite imagery
- Assessing hail damage to trees
- Lab analysis of hail meltwater samples.

## Eligibility

All applicants will be considered, provided you satisfy all eligibility requirements:

- Must be a Canadian citizen, international student, or permanent resident
- Registered student at a university, college, or high school
- Be available from May 13 – August 30, 2023 (university, college), or from July 8 – August 30, 2023 (high school).
- Able to attend one of the two mandatory information sessions. Dates and times for these sessions are:

January 11<sup>th</sup>, 2024 – 12:30-1:30PM – Zoom

Registration: <https://westernuniversity.zoom.us/meeting/register/tJwld-ipqDsjG9QCH501jyU319QMBrgkcYB7>

Passcode: NTPNHP2024

January 17<sup>th</sup>, 2024 – 7:00PM-8:00PM – Zoom

Registration: <https://westernuniversity.zoom.us/meeting/register/tJUvc-2gqjMpGdOYm-6HJ3-MRb41Du8H8-0>

Passcode: NTPNHP2024

**Value of award:** \$10,000 CAD

## Application:

For more information, or to apply, please visit

<https://www.eng.uwo.ca/graduate/funding/nserc-usra.html> and look for the “NTP / NHP Summer Internships”. Note that applications open on **December 4, 2023**; and the deadline for applications is **January 26, 2024**.

If you have any questions, you can also reach out to Dr. Connell Miller at

[connell.miller@uwo.ca](mailto:connell.miller@uwo.ca).

**Good luck to all applicants!**