

The Northern Tornadoes Project & Northern Hail Project are hiring several summer interns, allowing for some exciting opportunities for undergraduate students and senior high school students. Undergraduate students from any program will be considered. For 2023, 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 Red Deer, 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. High school students are ineligible for this internship unless they are local to the Red Deer, AB area (multiple internships available).

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

- Automated large-scale tornado treefall detection and directional analysis using machine learning.
- Sentiment analysis on a social media scrapper for severe weather events.
- Implementation of 360° panoramic imagery workflows on the NTP Open Data Site.
- 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.
- Investigation of tornado intensity trends in Southern Ontario.
- Updating the National and Ontario Tornado Databases.

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

- Using machine vision to automate the analysis of hailpads.
- 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.

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

- Must be a Canadian citizen or landed immigrant to Canada
- Registered student at a Canadian university, college, or high school

- Be available from May 15 – September 1, 2023 (university, college), or from July 10 – September 1, 2023 (high school).
- Attended one of the two mandatory information sessions. Dates and times for these sessions are:
  - December 9<sup>th</sup> – 4:00-5:00PM – ACEB 3445
  - January 19<sup>th</sup> – 12:30-1:30PM – Zoom
    - Meeting ID: 974 3102 2628
    - Passcode: NTPNHP

For more information, visit the NTP website: [www.uwo.ca/ntp](http://www.uwo.ca/ntp).