

ALAN J. YU

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Expertise

- Geospatial data mapping with *Esri ArcGIS* and *Oasis Montaj*.
- Geophysical data analysis with *Leapfrog* and *Python*.
- Numerical modelling with *ASPECT* and *UNIX-based supercomputers*
- Project and data management with *Git* and *SQL*.
- Field knowledge and experience.

Education

Specialist in Environmental Physics

Expected 2023

Honours Bachelor of Science, University of Toronto

Notable Courses: planetary geophysics, planetary astrophysics, mineralogy, petrology, sedimentology and stratigraphy, structural geology, and glacial geology.

Experience

Researcher, Geodynamics Modelling

Toronto, ON

University of Toronto, supervised by Dr. Philip Heron

Summer 2022–

- Investigated the intracratonic (continental) rifting of the Labrador Sea between east Canada and west Greenland via numerical modelling using the finite-element geodynamics code *ASPECT*.
- Computations were performed using Compute Canada's Niagara High Performance Computing clusters, and data was visualized using *ParaView*.
- In press: *Stranding continental crustal fragments during continental break-up: mantle suture reactivation in the Nain province of Eastern Canada*

Geophysicist, Exploration Geophysics

Toronto, ON

Abitibi Geophysics

Spring 2022

- Digitally mapped preliminary geophysical surveying data (e.g., magnetic, induced polarization, and gravity) in *Geosoft Montaj*.
- Developed templates and control scripts to establish streamlined, standardized map output in *Montaj*.

Researcher, Seismic Stratigraphy

Toronto, ON

University of Toronto, supervised by Dr. Nicholas Eyles

Fall 2021

- Investigated intraplate earthquakes in western Quebec based on seismo-acoustic reflection profiles of deformed sedimentary structures below the floor of Lake Simard, Quebec.
- Constructed 3D visualization with *Blender* and analyzed cross-section stratigraphic sequences to determine the extent and chronology of said deformation structures.

- In prep: *Seismo-stratigraphy of Lake Simard basin, Quebec Canada: sedimentation in glacial Lake Barlow Ojibway*

Research Assistant, Glacial Geology

University of Toronto, supervised by Dr. [Nicholas Eyles](#)

Toronto, ON
Summer 2021

- Trained for high-resolution Li-DAR digital data processing and imaging of glacial geological features (e.g., drumlins, glacial lineations, moraines, etc.) in *ArcGIS*.
- Assisted with establishing the glacial history and dynamics based on the glacial geological remnants.

Awards

NSERC Undergraduate Student Research Award – \$7500

2021

Natural Sciences and Engineering Research Council, Government of Canada

CRESS Summer Research Award – \$7500

2022 & 2021

Centre for Research in Earth System Science, University of Toronto

Don Salt Memorial Scholarship – \$800

2022

University of Toronto & Canadian Exploration Geophysics Society

Miscellaneous

Class 5 Driver's License

2017–

Saskatchewan Driver's Licensing and Vehicle Registration

Pleasure Craft Operator Card

2021–

Transport Canada

Basic Operator of Remotely Piloted Aircraft Systems

2021–

Transport Canada