

Yijie Zhu

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EDUCATION

UNIVERSITY OF VICTORIA , Victoria, Canada	May 2021 - Present
PhD in Earth and Ocean Sciences (GPA: 9/9)	
Major Courses: Rock Deformation in Geodynamics (A+), Earthquake Engineering (A+).	
PhD Project: Understanding earthquake cycle deformation along subduction margins and strike-slip faults.	
UNIVERSITY OF VICTORIA , Victoria, Canada	Sep 2017 - Aug 2020
Master of Science in Earth and Ocean Sciences	
Maser Thesis: Localizing interseismic deformation around locked strike-slip faults.	
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA , Hefei, China	Sep 2013 - July 2017
Bachelor of Science in Geophysics	
Bachelor Thesis: Theory of wedge mechanics and its application to northeast Japan subduction zone	

RESEARCH INTERESTS

- **Earthquake Cycle Deformation; Tsunami Source Modelling; Mantle Rheology; Geodetic Observations; Interseismic Strain Accumulation.**

PUBLICATIONS

- Zhu, Y., Wang, K., Shen, L., & Nissen, E. (2026). Replacing the elastic model with a simple viscoelastic model for more reliable estimation of geodetic locking depths. (submitted)
- Zhu, Y., Wang, K., Sun, T., Carvajal, M., & He, J. (2025). On dislocation modeling of megathrust tsunami sources. *Journal of Geophysical Research: Solid Earth*, 130(3), e2024JB030903.
- Wang, K., Carvajal, M., Zhu, Y., Sun, T., He, J., & Sypus, M. (2025). Chapter 8: Informing Megathrust Tsunami Source Models with Knowledge of Tectonics and Fault Mechanics. In *Probabilistic Tsunami Hazard and Risk Analysis*, edited by Goda, K., De Risi, R., Gusman, A., and Nistor, I., Elsevier (2025).
- Zhu, Y., Wang, K., Xie, S., Jiang, Y., & Zhou, X. (2024). Dominance of transient rheology in far-field postseismic deformation following the 2012 Mw 7.8 Haida Gwaii and 2013 Mw 7.5 Craig earthquakes. *Earth and Planetary Science Letters*, 636, 118698.
- Carvajal, M., Sun, T., Wang, K., Luo, H., & Zhu, Y. (2022). Evaluating the Tsunamigenic Potential of Buried Versus Trench - Breaching Megathrust Slip. *Journal of Geophysical Research: Solid Earth*, 127(8), e2021JB023722.
- Wang, K., Zhu, Y., Nissen, E., & Shen, Z. K. (2021). On the Relevance of Geodetic Deformation Rates to Earthquake Potential. *Geophysical Research Letters*, 48(11), e2021GL093231.
- Zhu, Y., Wang, K., & He, J. (2020). Effects of earthquake recurrence on localization of interseismic deformation around locked strike - slip faults. *Journal of Geophysical Research: Solid Earth*, 125(8), e2020JB019817.

CONFERENCE PRESENTATIONS

- Zhu, Y., Wang, K., Shen, L., & Nissen, E. (2025, December). Viscoelastic Models Yield Physically More Reasonable Geodetic Locking Depth: the Altyn Tagh Fault Example (Oral). *American Geophysical Union Annual Meeting*. New Orleans, US.

- Zhu, Y., & Wang, K. (2025, October). Fault Locking and Strain Energy Accumulation in a Viscoelastic Earth: Implications for Hazard Assessment (Oral). *VII Colloquium on Geophysical Signatures of Earthquakes and Volcanoes*, Valparaíso, Chile.
- Zhu, Y., Wang, K., Sun, T., Carvajal, M., & Luo, H. (2024, December). A systematic study of dislocation modelling of megathrust tsunami sources (Poster). *American Geophysical Union Annual Meeting*. Washington DC, US.
- Wang, K., Zhu, Y., Jiang, Y., Zhou, X., & Xie, S. (2023, December). Dominance of Transient Rheology in Controlling Far-Field Postseismic Deformation of the 2012 Haida Gwaii and 2013 Craig Earthquakes (E-Lightening Poster). *American Geophysical Union Annual Meeting*. San Francisco, US.
- Zhu, Y., Wang, K., Jiang, Y., & Zhou, X. (2022, December). Short-duration Far-field Postseismic Deformation of the 2012 Mw 7.8 Haida Gwaii Earthquake and Its Implications to Regional Rheological Structure (Oral). *American Geophysical Union Annual Meeting* (Vol. 2022, pp. T56A-07). Chicago, US.
- Zhu, Y., Wang, K., Nissen, E., & Shen, Z. (2021, August). Strain energy build up around locked faults towards future earthquakes: Strain rate vs. strain itself (Oral). *Geodetic/Seismological Facility for the Advancement of Geoscience 2021 Community Science Workshop*. Online.
- Zhu, Y. & Wang, K. (2019, December). Localization of Interseismic Deformation in Viscoelastic Earthquake-Cycle Models for Strike-slip Faults (Poster). *American Geophysical Union Annual Meeting*. San Francisco, US.
- Zhu, Y. & Wang, K. (2019, April). Localizing Interseismic Deformation with Far-Field Loading Around Locked Strike-Slip Faults (Oral). *Seismological Society of America Annual Meeting*. Seattle, US.

WORK EXPERIENCE

SCHOOL OF EARTH AND OCEAN SCIENCE, University of Victoria, Victoria, Canada	Sep - Dec 2019, 2021, 2022
Teaching Assistant for EOS 170 Natural Hazards	
SCHOOL OF EARTH AND OCEAN SCIENCES, University of Victoria, Victoria, Canada	Sep - Dec 2018
LAB Instructor for EOS 120 The Dynamic Earth	

FIELD EXPERIENCE

NEAR-TRENCH COMMUNITY GEODETIC EXPERIMENT, Earth Scope, US	July 2024
Science Team Member	
<ul style="list-style-type: none"> Participated in deploying seafloor geodetic instruments along the Cascadia trench offshore Oregon. Assisted in the operation of Remotely Operated Vehicles (ROVs) for underwater exploration. Identified and documented noteworthy observations or technical issues during ROV operation. 	
PACIFIC GEOSCIENCE CENTRE, Geological Survey of Canada, BC, Canada. Aug 2018, 2019; Sep 2023, 2024	
Volunteer	
<ul style="list-style-type: none"> Participated in the strategic planning and decision-making process for the placement of crustal deformation monitoring stations around Vancouver Island and central BC. Assisted the installation of GNSS stations, including site preparation, equipment setup, and calibration, ensuring all stations were operational and correctly configured. Maintained detailed records of site selection criteria, installation procedures, and station performance. 	

HONORS AND AWARDS

- 2025: Commander Peter Chance MASC Memorial Graduate Fellowship (\$10000)
- 2025: Dr. Arne H. Lane Graduate Fellowships in Marine Sciences (\$10105)
- 2024: David McGillivray Scholarship (\$2730)