

TYLER NEWTON

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EXPERIENCE:

Computational Geophysicist Intern	- Leidos, Inc.	06.2020-present
Graduate Research Assistant	- University of Oregon	09.2016-present
Visiting Graduate Research Assistant	- University of Washington	01-03.2017, 01-03.2018
Associate Geologist	- Environmental Resources Management, Inc.	08.2013-08.2016
Undergraduate Research Assistant	- University of Maryland	01.2012-05.2013
Astrophysics Summer Intern	- NASA Goddard Space Flight Center	06-08.2011
Machinist	- Kelco Industrial Fabricators, Inc.	08.2008-01.2011

EDUCATION:

Ph.D. Earth Sciences, <i>in progress</i>	- University of Oregon	09.2016-present
B.S. Geology with Honors	- University of Maryland	08.2013

PEER-REVIEWED ARTICLES:

- Inbal A., Thomas, A. M., **Newton, T. J.**, and Bürgmann R. (in review). Complex Migration of Tremor near Cholame, CA Resolved by Seismic Array Analysis. *Journal of Geophysical Research: Solid Earth*.
- Thomas, A. M., **Newton, T. J.**, Chamberlain C. J., Malone S., and Toomey D. R. (in review). Short Lifetimes of Repeating Earthquakes on a Fast-moving Translational Landslide. *Earth and Planetary Science Letters*.
- **Newton, T. J.**, Weldon, R. Miller, I. M., Schmidt, D., Mauger, G., Morgan, H., Grossman, E. (2021). An Assessment of Vertical Land Movement to Support Coastal Hazards Planning in Washington State. *Water*. <https://doi.org/10.3390/w13030281>
- **Newton, T. J.**, Thomas, A. M. (2020). Stress Orientations in the Nankai Trough Constrained Using Seismic and Aseismic Slip. *Journal of Geophysical Research: Solid Earth*. <https://doi.org/10.1029/2020JB019841>

NON-REFEREED REPORTS:

- Miller, I. M., Morgan, H., Mauger, G., **Newton, T.**, Weldon, R., Schmidt, D., Welch, M., Grossman, E. (2018). Projected Sea Level Rise for Washington State – A 2018 Assessment. *Prepared for the Washington Coastal Resilience Project*.
- **Newton, T.** (2013). Geochemistry of the Timberville Zn-Pb District, Rockingham County, VA. *University of Maryland Honors Bachelor of Science Thesis*. Advisors: McDonough, W.F., Candela, P.A., Piccoli, P.M.

BOOK CHAPTERS:

- **Newton, T.**, 2021, *Human Neural Networks in Geocomputing* in 52 Things You Should Know About Geocomputing, pp. ##-##, Agile Libre, (in press)

HARDWARE & CITABLE SOFTWARE:

- Uieda, L., Dongdong, T., Leong, W. J., Toney, L., **Newton, T.**, Wessel, P. (2020). PyGMT: A Python interface for the Generic Mapping Tools. *Zenodo*. <https://doi.org/10.5281/zenodo.425345>
- **Newton, T. J.** (2018) *Research tool*. Positioning device for 3-component nodal seismometers. ID: DIS-21-026

DISTINCTIONS:

2021: UO Emeritus Faculty Tribute Award

2020: Smith Scholarship, UO Research Recognition Award

2019: IRIS/UNAVCO Earth in 4D Travel Scholarship, ASPRS Photogrammetry Scholarship, Wikipedia Scientist Fellowship

2018: Stovall Fellowship, UO Special Opps Travel Award

DISTINCTIONS (continued):

2017: Weiser Scholarship, Marthe E. Smith Memorial Science Scholarship
2013: University of Maryland Excel Research Scholarship
2012: Mineralogical Society of America Undergraduate Award
2011: NASA Certificate of Appreciation (InFOCμS)

FIRST AUTHOR CONFERENCE PRESENTATIONS:

Relating Microseismicity to Fault Geometry at the Rattlesnake Ridge Landslide

Newton, T. J., Thomas, A. M., DeLong, S. B., Pickering, A. J.

2019 poster at the American Geophysical Union meeting, San Francisco, CA

Vertical Land Motion in Western Washington: Separating Cascadia Locking from Other Sources

Newton, T. J., Weldon R. J., Schmidt D. A., Miller I. M.

2019 poster at the Seismological Society of America meeting, Seattle, WA

Stress Regime of the Nankai Trough Megathrust: A Stress Analysis Incorporating Geodetic and Seismic Fault Slip

Newton, T. J., Lin J-T., Thomas A.

2019 poster at the Seismological Society of America meeting, Seattle, WA

Stress regime of the Nankai trough

Newton, T. J., Thomas A. M.

2018 poster at the International Joint Workshop on Slow Earthquakes, Fukuoka, Japan

Stress orientations in the Nankai trough region of Japan

Newton, T. J., Thomas A. M., Bletery Q.

2017 poster at the American Geophysical Union meeting, New Orleans, LA

A multi-methods approach for assessing vertical land motion in coastal Washington

Newton T. J., Weldon R., Welch M., Schmidt D., Miller I., Mauger G., Grossman E.

2017 talk at Northwest Climate Conference, Tacoma, WA

TEACHING EXPERIENCE:

Teaching Assistant - University of Oregon 2016-present

- *Courses: Advanced Computational Earth Science, Fault Mechanics, Tectonics, Introductory Earth Science*

FIELD EXPERIENCE:

Pacific Northwest Seismic Network Internship (July 2020)

Installed remote solar-powered broadband ShakeAlert station (station ID: JAZZ).

Rattlesnake Ridge Landslide (2018-2019)

Deployed 40 Fairfield Nodal 5 Hz 3C seismometers for a continuous four-month period. Assisted with terrestrial LiDAR scans.

Cholame Dense Array Experiment (July-October 2018)

Deployed 80 Fairfield Nodal 5 Hz 3C seismometers for a continuous three-month period.

Environmental Resources Management (2013-2016)

Extensive experience organizing and implementing field campaigns focused on the remediation of contaminated sites. Served as field safety officer and subsurface clearance specialist.

SERVICE:

- Reviewer (n=15), Copy Editor (n=8), Ask-A-Scientist (n=1), *Journal of Emerging Investigators*, (2019-2021)
- Graduate Student Representative, *University of Oregon, Department of Earth Science*, (2019-2020)
- Graduate Student Liaison, *University of Oregon Earth Sciences Honor Society*, (2017-2019)
- Mentoring: Conrad Nielsen (UO Undergraduate, IgDEAS program, 2020-present), Cadie Cagle (UO Undergraduate, JUMP program, 2019-2020), Alice Yeager (UO Undergraduate, JUMP program, 2019), Ty Amorosano (McGill University, IRIS Summer Intern, 2018)

TECHNOLOGIES:

Languages: Python, C, MATLAB

Python Frameworks: NumPy, pandas, matplotlib, scikit-learn, PyTorch, TensorFlow, ObsPy, Pyrocko, PyGMT

Other: bash, Git, Conda, Jupyter, L^AT_EX, GMT, MacOS, Linux, Adobe Illustrator and Photoshop, Autodesk Inventor