***­­Emilie E. E. Hooft***  *Professor of Earth Sciences*

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***Employment***

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| --- | --- |
| 2014- | ***University of Oregon, Eugene OR***. Associate Professor of Earth Sciences. |
| 2006-2014 | ***University of Oregon, Eugene OR***. Assistant Professor of Earth Sciences. |
| 2000-2014 | ***Carnegie Institution of Washington, DC.*** Visiting Investigator in Department of Terrestrial Magnetism |
| 1999-2006 | ***University of Oregon, Eugene OR***. Courtesy Research Associate in Geological Sciences. |
| 1997-2000 | ***Carnegie Institution of Washington, DC.*** Carnegie Postdoctoral Fellow in Department of Terrestrial Magnetism. |
| 1997 | ***Woods Hole Oceanographic Institution, MA***. Postdoctoral Investigator. |
| 1991-1996 | ***Joint Program in Oceanography Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, MA***. Graduate Research Assistant. |
| 1989 | ***Pacific Geoscience Center, Sidney, BC, Canada.*** Summer Research Assistant. |

***Education***

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| 1991-1996 | ***Joint Program in Oceanography Massachusetts Institute of Technology/Woods Hole Oceanographic Institution, MA***. Ph.D. Marine Geophysics  *Ph.D. Advisor: Robert S. Detrick*  Thesis: "The Influence of Magma Supply and Eruptive Processes on Axial Morphology, Crustal Construction and Magma Chambers at Mid-Ocean Ridges." |
| 1990-1991 | ***College Year in Athens, Greece****.*  Courses in art, archaeology, history & modern Greek. |
| 1986-1990 | ***Trinity College, University of Toronto, Canada.*** B.Sc. magma cum laude.  Specialized in Physics, Major in Astronomy, Minor in Mathematics. |

***Awards*** Fund for Faculty Excellence Award, University of Oregon, $20k, 2021.

# ***Research Interests***

I study how magma is transported from Earth’s mantle to the surface at volcanoes and the interaction of mantle plumes with ocean ridges. I also investigate the structures that control rupture segmentation at the Cascadia subduction zone. I lead research expeditions to the Cascadia margin, oceanic spreading centers, and volcanic hotspots. I collect and analyze dense geophysical data and use inverse modeling on high performance computers.

***Publications***

*Metrics*. Total publications 52; total citations 2178; h-index 26; i-index 41(Google Scholar September 21, 2023)

\* indicates student first author

*In Review (2)*

Paraskevas M.\*, D. Paradissis, P. Nomikou, **E. Hooft**, Spatiotemporal gravity changes at the Santorini Volcanic Complex and their interpretation of interests, *submitted to Quaternary Science Advances*, 2023.

Mayer J.\*, V. Sahakian; **E. Hooft**; R. Durairajan, Enhancing the Resilience of Internet Infrastructures to Earthquakes using ShakeNet, *in review in Natural Hazards*, 2022.

*Refereed journal papers (52)*

Karstens J., J. Preine, G. J. Crutchley, S. Kutterolf, W. van de Bilt, **E. Hooft**, T.H. Druitt, Florian Schmid, Jan Magne Cederstrøm, Christian Hübscher, Paraskevi Nomikou, Steven Carey , Michel Kühn, Judith Elger, Christian Berndt, Revised and error-corrected Minoan eruption volume as benchmark for large volcanic eruptions, *Nature Communications*, *doi: 10.1038/s41467-023-38176-3*, 2023.

Gilchrist J.\*, A.M. Jellinek, **E.E.E. Hooft**, S. Wanket, Submarine terraced deposits linked to periodic column collapse during explosive caldera-forming eruptions, *Nature* *Geoscience*, *doi: 10.1038/s41561-023-01160-z*, 2023.

Dufek J., K. Cashman, **E. Hooft**, P. Bedrosian, The nature of active magma reservoirs and storage underneath Cascade volcanoes*, Elements*, *doi:10.2138/gselements.18.4.239*, 2022.

M. Paulatto, **E.E. E. Hooft**, K. Chrapkiewicz, B. Heath, D.R. Toomey, J.V. Morgan, Advances in seismic imaging of magma and crystal mush, *Frontiers in Earth Sciences,* 10:970131, *doi: 10.3389/feart.2022.970131*, 2022.

\*Chatzis N., C. Papazachos, N. Theodulidis, P. Hatzidimitriou, G. Vougioukalakis, M. Paulatto, B. Heath, **E. Hooft**, D. Toomey, M. Anthymidis, Ch. Ventouzi, Metamorphic bedrock geometry of Santorini using HVSR information and geophysical modeling of ambient noise and active-source surface-wave data, *Journal of Volcanology and Geothermal Research*, doi:10.1016/j.jvolgeores.2022.107692, 2022.

\*Chrapkiewicz K., M. Paulatto, B.A. Heath, **E. Hooft**, P. Nomikou, C.B. Papazachos, F. Schmid, D.R. Toomey, M.R. Warner, J.V. Morgan, Magma chamber detected beneath an arc volcano with high-resolution velocity images, *Geochemistry, Geophysics, Geosystems*, doi:10.1029/2022GC010475, 2022.

Schmid, F., G. Petersen, **E. Hooft**, M. Paulatto, K. Chrapkiewicz, M. Hensch, T. Dahm, Heralds of a future eruption? Swarms of microseismicity beneath the submarine Kolumbo volcano indicate opening of near-vertical fractures exploited by ascending melts, *Geochemistry, Geophysics, Geosystems,* 23, e2022GC010420, *doi.org:10.1029/2022GC010420*, 2022.

\*Heath, B.A., **E. Hooft**, D.R. Toomey, M. Paulatto, C.B. Papazachos, P. Nomikou, J. Morgan, Relationship between active faulting/fracturing and magmatism around Santorini: Seismic anisotropy from an active source tomography experiment, *Journal of Geophysical Research, doi: 10.1029/2021JB021898,* 2021.

\*Huff A.E., P. Nomikou, L.A. Thompson, **E. Hooft**, I. Walker, Applying planetary mapping methods to submarine environments: onshore-offshore geomorphology of the Christiana-Santorini-Kolumbo volcanic group, Greece, *Journal of Maps*, *doi:10.1080/17445647.2021.1880980*, 2021.

\*Mayer, J., V. Sahakian, **E. Hooft**, F. Toomey, R. Durairajan, On the resilience of internet infrastructures in Pacific Northwest to earthquakes, paper #44*, Passive and Active Measurement Conference*, 247-265, *doi: 10.1007/978-3-030-72582-2\_15,* 2021.

\*Paraskevas, M., D. Paradissis, R. Konstantinos, P. Nomikou, **E. Hooft**, K. Bejelou, Gravity observations on Santorini island (Greece): Historical and recent campaigns, *Contributions to Geophysics and Geodesy*, *doi:10.31577/congeo.2021.51.1.1*, 2021.

Bodmer, M., D. Toomey, B. VanderBeek, **E. Hooft**, J.S. Byrnes, Body wave tomography of the Cascadia subduction zone and Juan de Fuca plate system: Identifying challenges and solutions for shore-crossing data, *Geochem. Geophys. Geosyst*, *doi: 10.1029/2020GC009316*, 2020.

\*McVey, B.G., **E.E.E. Hooft,** B.A. Heath,D.R. Toomey, M. Paulatto, J.V. Morgan, P. Nomikou, C.B. Papazachos, Magma accumulation beneath Santorini volcano from P-wave tomography, *Geology,* doi:10.1130/G47127.1, 2020.

Paulatto, M., M. Moorkamp, S. Hautmann, **E. Hooft**, J. V. Morgan, R.S.J. Sparks, Vertically extensive magma reservoir revealed from joint inversion and quantitative interpretation of seismic and gravity data, *Journal of Geophysical Research, doi: 10.1029/2019JB018476*, 2019.

\*Heath, B.A., **E. E. E.** **Hooft,** D.R. Toomey, C.B. Papazachos, P. Nomikou, M. Paulatto, J.V. Morgan, M.R. Warner, Tectonism and its relation to magmatism around Santorini volcano from upper crustal P-wave velocity, *Journal of Geophysical Research, JGRB53679, doi: 10.1029/2019JB017699,* 2019.

**Hooft, E. E. E.**, B.A. Heath, D.R. Toomey, M. Paulatto, C.B. Papazachos, P. Nomikou, J.V. Morgan, M.R. Warner, Seismic imaging of Santorini: Subsurface constraints on caldera collapse and present-day magma recharge. *Earth and Planetary Science Letters*, *514*, 48–61, *doi:10.1016/j.epsl.2019.02.033*, 2019*.*

\*Arnoux, G.M., D.R. Toomey, **E.E.E. Hooft**, W.S.D. Wilcock, Seismic imaging and physical properties of the Endeavour segment: Evidence that skew between mantle and crustal magmatic systems governs spreading center processes, *Geochem. Geophys. Geosyst.*, *doi: 10.1029/2018GC007978*, 2019.

\*Kim, E., D.R. Toomey, **E.E.E. Hooft**, W.S.D. Wilcock, R.T. Weekly, S-M. Lee, YH. Kim, Upper crustal *Vp*/*Vs* ratios at the Endeavour segment, Juan de Fuca Ridge, from joint inversion of *P* and *S* travel times: Implications for hydrothermal circulation, *Geochem. Geophys. Geosyst.*, *doi: 10.1029/*2018GC007921, 2019.

\*Bodmer, M., D.R. Toomey, **E.E.E. Hooft**, B. Schmandt, Buoyant Asthenosphere Beneath Cascadia Influences Megathrust Segmentation, *Geophys. Res. Lett., doi: 10.1029/2018GL078700*, 2018.

\*Heath, B. A., **E. E. E. Hooft**, and D. R. Toomey, Autocorrelation of the seismic wavefield at Newberry Volcano: Reflections from the magmatic and geothermal systems, *Geophys. Res. Lett., doi: 10.1002/2017GL076706,* 2018*.*

\*Brynes, J.S., D.R. Toomey, **E.E.E. Hooft**, J. Nabalek, J.M. Braunmiller, Mantle dynamics beneath the discrete and diffuse plate boundaries of the Juan de Fuca plate: Results from Cascadia Initiative body wave tomography, *Geochem. Geophys. Geosyst.*, *doi: 10.1002/2017GC006980*, 2017.

**Hooft, E.E.E.**, P. Nomikou, D.R. Toomey, D. Lampridou, C. Getz, M.-E. Christopoulou, D. O’Hara, G.M. Arnoux, M. Bodmer, M. Gray, B.A. Heath, B.P. VanderBeek, Backarc tectonism, volcanism, and mass wasting shape seafloor morphology in the Santorini-Christiana-Amorgos region of the Hellenic Volcanic Arc, *Tectonophysics, doi: 10.1016/j.tecto.2017.06.005*, 2017.

\*Arnoux, G.M., D.R. Toomey, **E.E.E. Hooft**, W.S.D. Wilcock, J. Morgan, M. Warner, and B. P. VanderBeek, Seismic evidence that black smoker heat flux is influenced by localized magma replenishment and associated increases in crustal permeability, *Geophys. Res. Lett*., *44, doi:10.1002/2016GL071990*, 2017.

\*VanderBeek, B., D.R. Toomey, **E.E.E. Hooft**, W.S.D. Wilcock, Segmentation of mid-ocean ridges attributed to oblique mantle divergence, *Nature GeoSciences*, *9*, doi:10.1038/NGEO2745, 2016.

\*Soule, D., W.S.D. Wilcock, D.R. Toomey, **E.E.E. Hooft**, and R.T. Weekly, Near-axis crustal structure and thickness of the Endeavour Segment, Juan de Fuca Ridge, *Geophys. Res. Lett.,* *43*, doi:10.1002/2016GL068182, 2016.

Morgan, J., M. Warner, G. Arnoux, **E. Hooft**, D. Toomey, B. VanderBeek, W. Wilcock, Next-generation seismic experiments – II: wide-angle, multi-azimuth, 3-D, full-waveform inversion of sparse field data, *Geophys. Jour. Internl*, 204, 1342-1363, *doi: 10.1093/gji/ggv513*, 2016.

\*Heath, B. A., **E. E. E. Hooft**, D. R. Toomey, and M. J. Bezada, Imaging the magmatic system of Newberry Volcano using joint active source and teleseismic tomography, *Geochem. Geophys. Geosyst.*, 16, *doi:10.1002/2015GC006129/full*, 2015.

\*Bodmer, M., D. R. Toomey, **E. E. Hooft**, J. Nábalek, and J. Braunmiller, Seismic anisotropy beneath the Juan de Fuca plate system: Evidence for heterogeneous mantle flow, *Geology*, G37181.1, *doi:10.1130/G37181.1,* 2015.

\*Byrnes, J.S., **E.E.E. Hooft**, D.R. Toomey, D.R. Villagómez, D.M. Geist, S.C. Solomon, An upper mantle seismic discontinuity beneath the Galápagos Archipelago and its implications for studies of the lithosphere-asthenosphere boundary, *Geochemistry, Geophysics, Geosystems*, *doi: 10.1003/2014Gc005694*, 2015*.*

Brandsdóttir, B., **Hooft, E.E.E.**, R. Mjelde, and Y. Murai, Origin and Evolution of the Kolbeinsey Ridge and Iceland Plateau, N-Atlantic, *Geochemistry, Geophysics, Geosystems, doi: 10.1002/2014GC005540*, *2015.*

Toomey, D.R., R.M. Allen, A.H. Barclay, S.W. Bell, P.D. Bromirski, R.L. Carlson, J.A. Collins, R.P. Dziak, B. Evers, D.W. Forsyth, P. Gerstoft, **E.E.E. Hooft**, D. Livelybrooks, J.A. Lodewyk, D.S. Luther, J.J. McGuire, S.Y. Schwartz, M. Tolstoy, A.M. Tréhu, M. Weirathmueller, W.S.D. Wilcock, The Cascadia Initiative: A Sea Change In Seismological Studies of Subduction Zones, *Oceanography* 27(2):138–150, *doi: 10.5670/oceanog.2014.49*, 2014.

\*Villagómez D.R., D.R. Toomey, D.J. Geist, **E.E.E. Hooft**, S.C. Solomon, Seismic imaging reveals mantle flow and multistage melting beneath the Galápagos, *Nature Geoscience*, *doi: 10.1038/NGEO2062*, 2014.

\*Weekly, R.T., W.S.D. Wilcock, D.R. Toomey, **E.E.E. Hooft**, E. Kim, Upper crustal seismic structure of the Endeavour Segment, Juan de Fuca Ridge from travel time tomography: Implications for oceanic crustal accretion, *Geochem. Geophys. Geosyst*, *doi:10.1002/2013GC005159,* 2014*.*

\*Weekly R.T., W.S.D. Wilcock, **E.E.E. Hooft**, D. Toomey, P. McGill, D. Stakes, Termination of a decadal-scale ridge-spreading event observed using a seafloor seismic network on the Endeavour Segment, Juan de Fuca Ridge, *Geochemistry, Geophysics, Geosystems*, *doi: 10.1002/ggge.20105*, 2013.

\*Beachly M., **E.E.E. Hooft**, D. Toomey, G. Waite, Upper crustal structure of Newberry Volcano from P-wave tomography and finite difference waveform modeling, *Journal of Geophysical Research, 117, B10311, doi:10.1029/2012JB009458*, 2012.

Kelley, D.S. S M. Carbotte, D. Clague, D.W. Caress, J. Delaney, J.B. Gill, H. Hadaway, J.F. Holden, **E.E.E. Hooft**, J.P. Kellogg, M.D. Lilley, M. Stoermer, D. Toomey, R. Weekly, and W.S.D. Wilcock, Endeavour segment of the Juan de Fuca Ridge, one of the most remarkable places on Earth, *Oceanography* 25(1):44–61, doi:10.5670/oceanog.2012.03, 2012.

\*Villagómez D.R., D.R. Toomey**, E.E.E. Hooft**, S.C. Solomon,Crustal structure beneath the Galápagos Archipelago from ambient noise tomography and its implications for plume-lithosphere interactions, *Journal of Geophysical Research*, 116, B04310, doi:10.1029/2010JB007764, 2011.

**Hooft, E. E. E.**, H. Patel, W. S. D. Wilcock, K. Becker, D. A. Butterfield, E. E. Davis, R. Dziak, K. Inderbitzen, M. D. Lilley, P. McGill, D. R. Toomey, D. Stakes, A seismic swarm and regional hydrothermal and hydrologic perturbations: the northern Endeavour segment, February 2005, *Geochemistry, Geophysics, Geosystems*, Q12015, doi:10.1029/2010GC003264, 2010.

Wilcock, W. S. D., **E. E. E. Hooft**, D. R. Toomey, P. R. McGill, A. H. Barclay, D. S. Stakes, and T. M. Ramirez, The role of magma injection in localizing black smoker activity, *Nature Geoscience*, 2, 509-513, doi:10.1038/ngeo550, 2009.

Toomey, D.R. and **E.E.E. Hooft**, Mantle upwelling, magmatic differentiation, and the meaning of axial depth at fast-spreading ridges, *Geology*, 36, 679-682, doi:10.1130/G24834A.1, 2008.

\*Villagómez, D.R., D.R. Toomey, **E.E.E. Hooft**, S.C. Solomon, Upper Mantle Structure Beneath the Galápagos Archipelago from Surface Wave Tomography, *Journal of Geophysical Research*,112, B07303, doi:10.1029/2006JB004672, 2007.

**Hooft, E.E.E.**, B. Brandsdóttir, R. Mjelde, H. Shimamura, and Y. Murai, Asymmetric Plume-Ridge Interaction Around Iceland: The Kolbeinsey Ridge Seismic Experiment, *Geochemistry, Geophysics, Geosystems*, 7, Q05015, doi:10.1029/2005GC001123, 2006.

\*Fontaine, F., **E.E.E. Hooft**, P. Burkett, D.R. Toomey, S.C. Solomon, and P.G. Silver, Shear-wave Splitting Beneath the Galápagos Archipelago, *Geophysical Research Lett*ers, *32*, doi:10.1029/2005GL024014, 2005.

**Hooft E.E.E.**, D.R. Toomey, and S.C. Solomon, Anomalously Thin Transition Zone Beneath the Galápagos Hotspot, *Earth and Planetary Science Letters, 216*, 55-64, 2003.

**Hooft, E.E.E.**, R.S. Detrick, D.R. Toomey, J.A. Collins, and J. Lin, Crustal Thickness and Structure along the Axial Valley of Three Contrasting Spreading Segments of the Mid-Atlantic Ridge, 33.5°-35°N, *Journal of Geophysical Research*, *105*, 8205-8226, 2000.

**Hooft, E.E.E**., R.S. Detrick, and G.M. Kent, Seismic Structure and Indicators of Magma Budget along the Southern East Pacific Rise, *Journal of Geophysical Research, 102*, 27,319-27,340, 1997.

Canales, J.P., J.J. Dañobeitia, R.S. Detrick, **E.E.E. Hooft**, R. Bartolomé, and D. Naar, Variations in Axial Morphology along the Galápagos Spreading Center and the Influence of the Galápagos Hotspot, *Journal of Geophysical Research*, *102,* 27,341-27,354, 1997.

**Hooft, E.E.E.**, H. Schouten, and R.S. Detrick, Constraining Crustal Emplacement Processes from the Variation of Seismic Layer 2A Thickness at the East Pacific Rise, *Earth and Planetary Science Letters*, *142*, 289-309, 1996.

**Hooft, E.E.E.**, and R.S. Detrick, The Relationship between Axial Morphology, Crustal Thickness, and Mantle Temperatures along the Juan de Fuca and Gorda Ridges, *Journal of Geophysical Research*, *100*, 22,499-22,508, 1995.

**Hooft, E.E.**, M. Kleinrock, and C. Ruppel, Rifting of the Oceanic Crust at Endeavor Deep on the Juan Fernandez Microplate, *Marine Geophysical Research*, *17*, 251-273, 1995.

**Hooft, E.E**., and R.S. Detrick, The Role of Density in the Accumulation of Basaltic Melts at Mid-Ocean Ridges, *Geophysical Research Letters, 20,* 423-426, 1993.

Larson, R.L., R. C. Searle, M. C. Kleinrock, H. Schouten, R. T. Bird, D. F. Naar, R. I. Rusby, E. **E. Hooft**, H. Lasthiotakis, Roller-Bearing Tectonic Evolution of the Juan Fernandez Microplate, *Nature, 356,* 571-576, 1992.

*Non-refereed publications (12)*

Gonnermann, H., K. Anderson, with primary contributions from speakers (including **Hooft**), Modeling volcano-magmatic Systems, Workshop report for the modeling collaboratory for subduction research coordination network, <https://doi.org/10.31223/X55G96>, 11/2021.

**Hooft, E.**, We probed Santorini's volcano with sound to learn what's going on beneath the surface, *TheConversation.com* <https://theconversation.com/we-probed-santorinis-volcano-with-sound-to-learn-whats-going-on-beneath-the-surface-114696>, June 24, 2019.

As of 1/22/2020: 14,288 reads, 711 Facebook shares, 15 tweets, 2 newspaper engagements, and 29 re-publishers.

**Hooft, E.**, Women in Oceanography: A Decade Later, Autobiographical Sketches, *Oceanography*, *27*, No. 4, 140, 2014.

**Hooft, E.E.E.**, Cascadia Initiative Expedition Team, Student Seagoing Experiences: The 2013 Cascadia Initiative Expedition Team’s Apply to Sail Program, *GeoPRISMS Newsletter, Fall 2013, 31,* 23-26, 2013.

Humphries, S., **E. Hooft**, A.-L. Reysenbach, Ridge2000 Mid-Atlantic Ridge 35°-37.5°N Workshop Report, Portland, OR March 27-28, 2008, http://www.interridge.org/files/interridge/R2K\_MAR\_March2008.pdf

Christie, D. M., B. Ildefonse, N. Abe, S. Arai, W. Bach, D. K. Blackman, R. Duncan, **E. Hooft**, S. E. Humphris, and D. J. Miller, Mission Moho: Formation and Evolution of Oceanic Lithosphere, *Eos Trans. AGU*, *87*(48), doi:10.1029/2006EO480005, 2006.

Christie, D. M., B. Ildefonse, N. Abe, S. Arai, W. Bach, D. K. Blackman, R. Duncan, **E. Hooft**, S. Humphris, and D. J. Miller, Mission Moho - Formation and Evolution of Oceanic Lithosphere. Full workshop report, *IODP JOI Interridge*, 244 p. [www.iodp.org/ocean-lithosphere](http://www.iodp.org/ocean-lithosphere), 2006.

Ildefonse, B., D. M. Christie, N. Abe, S. Arai, W. Bach, D. K. Blackman, R. Duncan, **E. Hooft**, S. Humphris, and D. J. Miller, Mission Moho Workshop: Drilling Through the Oceanic Crust to the Mantle, *Scientific Drilling, 4,* 11-18,doi:10.2204/iodp.sd.4.02.2007, 2006.

Ildefonse, B., D. M. Christie, N. Abe, S. Arai, W. Bach, D. K. Blackman, R. Duncan, **E. Hooft**, S. Humphris, and D. J. Miller, Meeting report: mission Moho - Formation and evolution of oceanic lithosphere, *Interridge News*, *15*, 54-56, 2006.

**Hooft, E.**, Autobiographical Sketches of Women in Oceanography, *Oceanography*, *18*, No. 1, 136, 2005.

Barriga, F., A. Colaço, J. Escartín, **E. Hooft**, S. Humphris, N. Le Bris, C. Lee, N. Lourenço, and F. Wenzhofer, Long-termo monitoring of the Mid-Atlantic Ridge – Proceedings of the III MOMAR Workshop, Lisbon, Portugal, 7-9 April 2005, 82 pp.

**Hooft E.** et al., KRISE-2000: Constraining the Dynamics of Plume-Ridge Interaction to the North of Iceland. *InterRidge News*, *9*, 37-40, 2000.

***Selected Recent Conference Proceedings***

Abbreviations: American Geophysical Union (AGU), European Geophysical Union (EGU), Society of Exploration Geophysics (SEG)

*Only post-tenure and unpublished work*

\*Autumn, K., E. Hooft, D. Toomey, Imaging the Deep Crustal Magma System Below Santorini Using P-wave Moho Reflections, V32F-0121, *Fall Meeting, AGU, 2022.*

\*Hufstetler, R., E. Hooft, N. Chatzis, D. Toomey, B. VanderBeek, C. Papazachos, F. Schmid, A Joint Vp/Vs Model for the Mid to Upper Crust at Santorini Arc Volcano, V32F-0120, *Fall Meeting, AGU, 2022.*

\*Ashraf, A., E. Hooft, A. Trehu, S. Nolan, E. Wirth, K. Ward, I. Stone, A 3-D seismic velocity model across the south-central Cascadia subduction margin, T32E-0190, *Fall Meeting, AGU, 2022.*

\*Nolan, S., A. Trehu, E. Hooft, A. Ashraf, E. Wirth, K. Ward, I. Stone, Cascadia 2021: Developing a 3-D Seismic Velocity Model Across the Central Cascadia Subduction Margin, T32E-0189, *Fall Meeting, AGU, 2022.*

\*Sassard, V., Y. van Dinther, M. Bodmer, E. Hooft, D. Toomey, What Controls Lateral Segmentation in Cascadia? Sub-Slab Density Anomalies or Slab Age Variations, DI55A-04, *Fall Meeting, AGU, 2022.*

\*Ashraf, A., **E. Hooft**, A. Trehu, S. Nolan, E. Wirth, K. Ward, I. Stone, Cascadia 2021: Developing a 2-D seismic velocity model across the southern Cascadia subduction margin, *SEG-AGU workshop on Geophysics of Convergent Margins*, 2022.

\*Nolan, S., A. Trehu, **E. Hooft**, Ashraf, A., E. Wirth, K. Ward, I. Stone, Cascadia 2021: Developing a 3D seismic velocity model across the central Cascadia subduction margin, *SEG-AGU workshop on Geophysics of Convergent Margins*, 2022.

the Cascadia2021 Field crew, Field report for the Cascadia2021 Seismic Node Experiment, *SEG-AGU workshop on Geophysics of Convergent Margins*, 2022.

\*Preine, J., C. Hübscher, J. Karstens, **E. Hooft**, P. Nomikou, This Rift is on Fire: Volcano-Tectonic Evolution of the Christiana-Santorini-Kolumbo volcanic field, Aegean Sea, EGU22-298, *EGU General Assembly 2022.*

Trehu A., **E. Hooft**, K. Ward, E. Wirth, S. Nolan, A. Ashraf, S. Larsen, I. Stone, Cascadia2021 Onshore Field Team, Imaging the structure of the Cascadia Margin by recording offshore marine sound sources on a dense network of onshore seismic nodes, T11E-03, *Fall Meeting, AGU, 2021.*

***Research Expeditions***

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| 3-4/2023 | Chief Scientist on the *R.V. Langseth*: deploy 53 broad band ocean bottom seismometers to seismically image the Galápagos mantle plume as it interacts with the Western Galápagos Spreading center. |
| 6-7/2021 | Co-Lead on Cascadia2021: 755 short-period seismometers in the Oregon Coast Ranges to record deep-penetrating off-shore airguns and image the structure of the Cascadia Subduction Zone. |
| 11-12/2015 | Chief Scientist on the *R.V. Langseth*: 93 OBS, 69 land station, 14,320 airgun sources and multibeam bathymetry, gravity and magnetics study of the magma plumbing system of Santorini volcano, Greece. |
| 8/2013 | Chief Scientist on the *R.V. Oceanus*: Year 2 Leg 5 deployment of 15 Cascadia Initiative ocean bottom seismometers, Juan de Fuca Plate, Northwest Pacific. |
| 8/2012 | Chief Scientist on the *R.V. Oceanus*: Year 2 Leg 4 deployment of 25 Cascadia Initiative ocean bottom seismometers, Juan de Fuca Plate, Northwest Pacific. |
| 11/2011 | Chief Scientist on the *R.V. Wecoma*: Year 1 Leg 3 deployment of 25 Cascadia Initiative ocean bottom seismometers, Juan de Fuca Plate, Northwest Pacific. |
| 8-9/2009 | Chief Scientist on the *R.V. Marcus G Langseth*: Multi-scale active source seismic tomography of the Endeavour segment, Juan de Fuca ridge, to image the magmatic structure in mantle & crust and structure of the hydrothermal system. |
| 9/2008 | Lead PI: Study shallow magma plumbing at Newberry volcano, OR. Deployment and recovery of 81 PASSCAL short-period three component seismometers. |
| 9/2005 | Lead of seismic group: Interdisciplinary studies of Endeavour hydrothermal venting on the Juan de Fuca Ridge using autonomous underwater vehicle *Jason* on *R.V. T.G. Thompson*. Sub-seafloor short-period & broadband seismometers. |
| 7/2000 | Lead PI: Seismic study of the Kolbeinsey ridge north of Iceland to investigate the asymmetry in interaction of the Iceland hotspot with the spreading centers. Collaboration with Icelandic, Japanese, and Norwegian scientists. |
| 8-9/1999  12/1999  9/2000 | Seismic reconnaissance of the Galápagos archipelago to determine the size and structure of Galápagos mantle plume. Installation and servicing of broadband portable land stations. Collaboration between the Carnegie Institution, the University of Oregon, and the Instituto Geofisico, Quito, Ecuador. |
| 10-11/1996 | Seismic refraction on the Mid-Atlantic Ridge, *Research Vessel (R.V.) Maurice Ewing,* to image crustal structure and thickness of 3 ridge segments. |
| 3/1996 | Geophysical survey of the Galápagos spreading center aboard the Spanish research vessel, *B.I.O. Hesperides*. Bathymetry, gravity and magnetics. |
| 6-7/1991 | GLORIA (sidescan sonar), Hydrosweep (swath bathymetry), gravity and magnetics cruise to the Juan Fernandez microplate, *R.V. Maurice Ewing*. |
| 7/1989 | NOBEL (ocean bottom explosives) and single channel seismic cruise to the Juan de Fuca ridge, on board the Canadian *R.V.* *J.P. Tully.* |

***Grant Activity***

**Current**

2023-2028 Track II - Center Operations: Cascadia Region Earthquake Science Center (CRESCENT), NSF- Centers for Innovation and Community Engagement in Solid Earth Geohazards, $14,977,362.

Hooft Senior Personnel - 2.5 months support, 1 year postdoc & 1 term grad student funding.

2024-2029 Hydrothermal Controls on Caldera Explosivity, NERC – Pushing the Frontiers of Environmental Research, £785,379. Hooft – Project Partner. No support.

2020-2024 Collaborative Research: An Open Access experiment to seismically image Galápagos plume-ridge interaction, NSF-OCE, $539,509.

Hooft PI with D. Toomey, co-PI – 8.0 months support & 10 terms of grad student funding.

2020-2022 Collaborative research: Cascadia2020: Investigating subduction zone segmentation with a 3D high-resolution VP model, NSF-EAR, $310,020.

Hooft PI with OSU lead Inst – 4 months support & 2.5 yrs of grad student funding.

2020-2022 Structure of a recharging crustal magma plumbing system at the Santorini arc volcano, NSF-OCE, $292,974.

Hooft PI with D. Toomey & H. Smith, cp-PIs – 2.0 months support & full grad student funding.

7/2020 AMORGOS: Traces of the 1956 Mw 7.7 AMORGOS earthquake and tsunami source, International collaborator on Campagne de Recherche Scientifique – France, No support.

1st seagoing expedition April 2022; 2nd seagoing expedition April 2023.

5/2020 Volcanism and tectonics in an island-arc rift environment (VolTecArc): Christiana-Santorini-Kolumbo marine volcanic field, Greece, co-PI International Ocean Drilling Program (IODP proposal 932), No support.

*IODP expedition 398:* December 2022 – February 2023.

2/2020 Mantle dynamics, paleo-oceanography, and climate evolution in the North Atlantic Ocean, co-PI International Ocean Drilling Program (IODP proposal 892), No support.

*IODP expedition 395C:* June – August 2021; and *IODP expedition 395:* June – August, 2023.

**Completed**

2019-2020 Computational approaches to mitigate volcanic eruption hazards: Enhancing detection of subsurface magma bodies, UO Renee James Seed Grant Initiative to Accelerate Scientific Research, $40,000.

Hooft co-PI with J. Dufek – 0.5 yrs grad student funding.

2016-2019 Next-generation 3D imaging of the on- and off-axis mantle and crustal magmatic systems at the Endeavour segment, NSF-OCE 1634786, $177,041.

Hooft co-PI with D. Toomey – 1.5 months support & 1.6 yrs grad student funding.

2015-2019 Crustal magma plumbing of the Santorini volcanic system, NSF-OCE 1459794, $509,552 (plus REU supplement $3,948).

Hooft PI with D. Toomey– 5 months support & 3 years grad student funding.

2015-2016 Support for the Cascadia Initiative Expedition Team, Year 5, Supplement to NSF-OCE 1139701, $110,266 (includes sub-awards to 2 other US institutions).

Hooft co-PI with D. Toomey & D. Livelybrooks – 0 months support.

2014-2015 Support for the Cascadia Initiative Expedition Team, Year 4, NSF-OCE 1139701, $423,964 (includes sub-awards to 6 other US institutions).

Hooft co-PI with D. Toomey & D. Livelybrooks – 0.75 months support.

2013-2014 Support for the Cascadia Initiative Expedition Team, Year 3, NSF-OCE 1139701, $361,135 (includes sub-awards to 6 other US institutions).

Hooft co-PI with D. Toomey & D. Livelybrooks – 1.5 months support.

2012-2013 Support for the Cascadia Initiative Expedition Team, Year 2, NSF-OCE 1139701, $500,000 (includes sub-awards to 6 other US institutions).

Hooft co-PI with D. Toomey & D. Livelybrooks – 1.8 months support.

2011-2012 Support for the Cascadia Initiative Expedition Team, NSF-OCE 1139701, $467,237 (includes sub-awards to 7 other US institutions).

Hooft co-PI with D. Toomey & D. Livelybrooks – 2 months support.

2009-2013 Collaborative Research: Linking stress changes and hydrothermal activity during a non-eruptive spreading event, NSF-OCE 0937285, $177,576.

Hooft PI with W. Wilcock, UW, D. Toomey, UO – 2 months support.

2008-2011 Imaging the Upper Crust at Newberry Volcano Using Large Offset Reflections, NSF-EAR 0813978, $151,738 ($102,469 & a supplement of $49,269).

Hooft PI with D. Toomey, Univ. Oregon – 1 month support & funding MSc student.

2007-2011 Skew of Mantle Upwelling Beneath the EPR: A Reconsideration of Data and Models, NSF-OCE 0732751, $265,252.

Hooft co-PI with D. Toomey – 3 months support.

2006-2011 Collaborative Research: Testing Models of Magmatic and Hydrothermal Segmentation: A 3-D Seismic Tomography Experiment at the Endeavour Ridge, NSF-OCE 0454747, $399,495 ($342,181 & a supplement of $57,314).

Hooft co-PI with D. Toomey, Univ. Oregon, and W. Wilcock and A. Barclay, Univ. Washington –9 months support & funding for Hooft’s MSc student Anne Wells.

2007 Temporal Variations in the Interaction of Iceland with the Kolbeinsey Ridge: Analysis of Seismic Refraction Data KRISE Line 4, Univ. of Iceland, $13,320.

Hooft PI – 1.5 months support.

2007-2010 Acquisition of a Computational Facility, Geological Sciences, University of Oregon, NSF-EAR 0651123, $75,000.

Hooft co-PI with D. Toomey, E. Humphreys, J. Roering and D. Schmidt – 0 months support, funds for hardware and software only.

2006 Continued Analysis and Interpretation of KRISE Seismic Refraction Data, Univ. of Iceland, $4,047.

Hooft PI – 0.6 months support.

2005 Interactive Seafloor Studies of Episodic Deformation, Fluid Venting and Microbial Productivity at Plate Margins: Prototype Experiment for NEPTUNE, Phase 2, Keck Foundation, $66,860.

Hooft co-PI on a Univ. Washington sub-award with D. Toomey – 7.5 months support & funding for Hooft’s MsC student Hemalinee Patel.

2005 IRIS Summer Internship Sub-award, $5,325. Hooft PI – student support only.

2005 Continued Analysis and Interpretation of KRISE Seismic Refraction Data, Univ. of Iceland, Univ. of Iceland, $13,987. Hooft PI – 2.1 months support.

2004 Analysis and Interpretation of KRISE Seismic Data, Univ. of Iceland, $5,140.

Hooft PI – 0.8 month support.

2002-2005 Collaborative Research: Seismic Studies of the Galápagos Hotspot, NSF OCE-0221549, $206,470. Univ. Oregon, and S. Solomon, Carnegie Inst.

Hooft co-PI with D. Toomey – 9 months support.

2001-2002 Symposium on the Icelandic Plume and Crust, NSF OCE-0114206, $79,757.

Hooft PI – 1 month support.

2000 Activity at the Galápagos Volcanoes: Monitoring Local Seismicity, National Geographic Society Research & Exploration Grant, $25,000.

Hooft PI – 0 months support, funds for instrumentation and installation.

* 1. Plume-Ridge Interaction to the North of the Iceland Plume: Kolbeinsey Ridge Iceland Seismic Experiment, NSF OCE-9911243, $177,922.

Hooft PI – 12 months support.

# ***Students Advised***

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| *Graduate students (Primary advisor 2 PhD - one co-advised, 7 MSc - 1 co-advised)* | |
| 2021 | Gabriel Ferragut, M.Sc., Committee Member, *Legacy active-source seismic data for modern 3D tomography: integrating data from the Mendocino triple junction for multiscale imaging.* Currently seismic software developer at USGS. |
| 2021 | Joshua Crozier, Ph.D., Committee Member, *Using Spectral Analysis and Fluid Dynamics to understand supraglacial stream networks on the Greenland Ice Sheet and Seismicity at Kilauea Volcano*. USGS Mendenhall Postdoc. |
| 2019 | Benjamin Heath, Ph.D., Primary Advisor, *Interactions Between Tectonism and Magmatism at Santorini: Insights from an Active Source Seismic Experiment.* Currently Duty Scientist/Watchstander at National Tsunami Warning Center. Formerly a postdoc with Cliff Thurber, University of Wisonsin Madison. |
| 2019 | Brittany Gordon, Ph.D., Institutional Representative, *Experimental and Computational Vibrational Sum Frequency Spectroscopy Studies of Atmospheric Organics and their Surface Active Hydration and Oligomer Products at the Air-Water Interface.* Currently postdoc at Univ Calif. Irvine. |
| 2019 | Elizabeth Cochran, Ph.D., Institutional Representative, *Solution-Processed Metal-Oxide Thin Films: Toward Enhanced Understanding of Film Formation Chemistry.* Currently Research Scientist at Intel. |
| 2019 | Miles Bodmer, Ph.D., Committee Member, *Seismic Imaging of the Cascadia Subduction Zone and Juan de Fuca Plate System Mantle Structure: A Bottom-up Approach to Subduction Dynamics.* Currently Technical Staff Scientist at Sandia National Laboratory. |
| 2019 | Regina Ciszewski, Ph.D., Institutional Representative, *Vibrational Sum Frequency Spectroscopy Investigations of Mixed Surfactant Systems at the Oil-Water Interface.* |
| 2019 | Brennah McVey, M.Sc., Advisor, *Magma Accumulation Beneath Santorini Volcano from P-wave Tomography.* (DoES Research Recognition Award). Currently Geospatial Analyst at WSP Corporation. |
| 2018 | Gillean Arnoux, PhD., Committee member, *Novel Insights into Mass and Energy Transfer at Mid-Ocean Ridges from Seismic Imaging of the East Pacific Rise and Juan de Fuca Ridge.* Currently ShakeAlert Seismic Siting Specialist at Oregon Hazards Lab, University of Oregon. |
| 2018 | Brandon VanderBeek, PhD., Committee member, *New Perspectives on Mid-Ocean Ridge Magmatic Systems and Deformation in the Uppermost Oceanic Mantle from Active- and Passive-Source Seismic Imaging in Cascadia.* Currently EU Postdoc at the University of Padua, Italy. |
| 2018 | Emily Sexton, M.Sc., Thesis committee member, *Characterization of Aftershock Sequences from Large Strike-Slip Earthquakes along Geometrically Complex Faults.* Currently Reservoir Modeler at ExxonMobil. |
| 2017 | Samuel Li, Ph.D., Institutional Representative, *Wavelet Compression for High Performance Computing.* Currently Project Scientists at National Center for Atmospheric Research. |
| 2017 | Joseph Brynes, Ph.D., co-Advisor, *Mantle Flow and Melting Beneath Young Oceanic Lithosphere: Seismic Studies of the Galápagos Archipelago and the Juan de Fuca Plate.* Currently Postdoc at Norther Arizona University. |
| 2014 | Benjamin Heath, M.Sc., Advisor, *New Constraints on the Magmatic System beneath Newberry Volcano from the Analysis of Active and Passive Source Seismic Data and Ambient Noise*. Currently duty scientist/watchstander National Tsunami Warning Center. Formerly a postdoc with Cliff Thurber, University of Wisonsin Madison. |
| 2012 | Anne Wells (now Anne Teachout), M.Sc., Advisor, *Analysis of Off-Axis, Low-Velocity Zones on the Flanks of the Endeavour Segment of the Juan de Fuca Ridge*. Currently Adjunct Professor at San Diego Mesa College and at Grossmount College, CA. Previously Geophysicist at Chesapeake Energy (2012-2017). |
| 2012 | Kohtaro Araragi, M.Sc., co-Advisor, *Spatial Distribution of Shallow Crustal Anisotropy from Shear Wave Splitting Measurements at the Endeavour Segment of the Juan de Fuca Ridge.* Currently PhD candidate at Earthquake Research Institute, University of Tokyo, Japan. |
| 2011 | Brandon Schmandt, Ph.D. Thesis committee member, *Seismic Structure of the Western U.S. mantle: Implications for Cenozoic Subduction and Present-Day Convection*. Currently Associate Professor at University of New Mexico, NM*.* |
| 2011 | Matthew Beachly, M.Sc., Advisor, *Three-dimensional Upper Crustal Velocity Structure of Newberry Volcano.* Currently Software Development Intern at Pacific Source Health Insurance; previously Senior Technical Support Engineer at Symantec (2015-2018). |
| 2010 | Darwin Villagómez, Ph.D., Thesis committee member, *Crustal and Upper Mantle Structure of the Galápagos Archipelago.* Currently Senior Manager, ML Science, Identity Risk Analytics at Amazon, San Diego, CA; previously Senior Director of Analytics at ID Analytics (2007-2016). |
| 2010 | Ali Furmall, M.Sc., Advisor, *Temporal Variations in Crustal Thickness and Structure on the Southern Kolbeinsey Ridge, Iceland*.Currently Small and Rural Communities Brownfields Specialist at Washington Department of Ecology, Spokane, WA; previously Program Manager Remediation at New Mexio Environmental Department (2013-2016); Geologist at Los Alamos National Lab (2010-2013). |
| 2009 | David Adams, Ph.D., Thesis committee member, *Effects of Noise on Teleseismic t\* Estimation and Attenuation Tomography of the Yellowstone Region.* |
| 2007 | Hemalinee Patel, M.Sc., Advisor, *Spatial and Temporal Seismicity Patterns of the February/March 2005 Swarm on the Endeavour Segment, Juan de Fuca Ridge.* Currently Lead Geophysicist & Team Lead, British Petroleum, Houston, TX. |

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| *Undergraduate students (6)* | |
| 2021 | Kaisa Autumn |
| 2019-21 | Spencer Palanuk |
| Not completed | Sam Freeman, Honors College Thesis Project, Advisor, *Shear Waves and the Santorini Magmatic System*. |
| 2017 | Kathleen Walls, Undergraduate Senior Research Project, Advisor, *Seismic Amplitude Variations in the Region of Santorini Volcano*. |
| 2015 | Amber Tucker, Undergraduate Senior Thesis Project, Advisor, *Earthquake Relocation and Reflection Migration at Newberry Volcano.* |
| 2007 | Kelly Wood, Undergraduate Research Project, Advisor, *Shear-Wave Study of the Kolbeinsey Ridge.* |

***Courses Taught***

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| --- | --- |
| W20, F17 | Intro to Seismology (ERTH468/568) |
| W19, S16, F12 | Signal Processing (GEOL 410/510) |
| F18, S18, F16, W15 | Graduate seminars: Ethics; New Grad Student Survival Skills (GEOL607) |
| W18 | Staples Field Trip Seminar (ERTH407/507) |
| W17, F14, W14 | Earth Physics; 4-credits (GEOL/ERTH 315) |
| W16 | Graduate seminar: Imaging Volcanic Systems (GEOL 607) |
| F13, F10, F11, F09 | Earth’s Interior Heat and Dynamics (GEOL 201) |
| W13, W12, W07-10 | Earth Physics; 2-credits (GEOL 315) |
| F08, F07 | MATLAB for Earth Sciences (GEOL 410/510) |
| F06 | Dynamics of Ocean Basins and Margins (GEOL 410/510) |
| F04 | Co-instructor, Research Apprenticeship Class, “Seismic Deformation and its Relation to Volcanic, Hydrothermal & Biologic Activity along the Juan de Fuca Ridge”, 15 credits, Friday Harbor Lab, Univ. Washington, WA. |

***Professional Service***

2023 – 28 College of Earth, Ocean & Atmospheric Sciences, OSU, Courtesy Faculty

4/2022 – Ocean Networks Canada (ONC) International Science Advisory Board, Member

2022 – 23 College of Earth, Ocean & Atmospheric Sciences, OSU, Affiliate Faculty

2/22 –23 Incorporated Research Institutions for Seismology, UO Member Representative

12/2021 Judge, Graduate student papers, American Geophysical Union Fall Meeting

3/2021 Knight Campus for Accelerating Scientific Impact, University of Oregon, Affiliate

10/2020 National Science Foundation Ocean Sciences proposal review panel, Member

9/2019 – UNOLS Ocean Bottom Seismic Instrument Center Operations Subcommittee, Member

3/2019 – Oregon Hazards Lab, Research & Development Officer

4/2019 Future of Marine Seismics Workshop & Report, NSF-OCE, Contributor (<https://www.unols.org/sites/default/files/Report_to_NSF_May2019.pdf>)

11/2017 National Science Foundation Marine Seismic Panel, NSF-OCE, Member

8/2017 Convenor of Special Session (107 submissions) “Architecture of magmatic plumbing systems” at the Scientific Assembly of the International Association of Volcanology and Chemistry of the Earth’s Interior, Portland, OR, August 2017.

Judge for graduate student papers

11/2016 National Science Foundation Ocean Sciences proposal review panel, Member

10/14-2/16 Science and Technology Advisory Team for Newberry Geothermal Area FORGE project, DOE, Member

Reviewer of tenure file for: University of New Mexico.

Reviewer of proposals for: National Science Foundation - Ocean Sciences, Earth Sciences, GeoPRISMS; the German Research Foundation; the European Research Council.

Reviewer of papers for: *Science,* *Nature*, *Nature Geosciences*, *Nature Communications*, *Geology, Journal of Geophysical Research, G3**(Geochemistry, Geophysics, Geosystems), Geophysical Research Letters, Earth and Planetary Science Letters, Geophysical Journal International, Physics of the Earth and Planetary Interiors, AGU Book: The Galápagos: A Natural Laboratory for the Earth Sciences.*

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| 12/2013 | | Convenor of special session "Understanding the Cascadia Subduction Zone: Contributions from the Cascadia Initiative and Multidisciplinary Studies”, American Geophysical Union Fall Meeting |
| 3/2011-2016 | | Cascadia Initiative Expedition Team member. The team implemented the oceanographic portion of an onshore/offshore experiment in the Pacific Northwest to study Cascadia megathrust earthquakes, volcanic arc structure and the formation, deformation and hydration of the Juan de Fuca and Gorda plates |
| 9/2008- | | Ridge 2000 Monitoring the Mid-Atlantic Ridge Oversight Committee & InterRidge Monitoring the Mid-Atlantic Ridge Working Group |
| 3/2008 | Convenor, Ridge 2000 Inter-disciplinary Meeting, Mantle to Microbe: Integrated Studies at Oceanic Spreading Centers & Mid-Atlantic Ridge ~35-37.5°N Implementation PlanWorkshop, Portland, OR. | |
| 10/2006  9/2006 | | NSF Ocean Sciences proposal review panel, Member  Steering Committee, International Ocean Drilling Program/Joint Oceanographic Institutions /Ridge 2000/InterRidge Workshop: “Mission MOHO: Understanding the Formation and Evolution of the Oceanic Lithosphere”, Portland, OR |
| 4/2005 | | Convenor, Monitoring the Mid-Atlantic Ridge, International Implementation Workshop, Lisbon, Portugal |
| 9/2001 | Convenor, Symposium on the Icelandic Plume and Crust, Iceland. | |
| 1998, Spring & Fall 1999 | | Judge, Tectonophysics Section Outstanding Student Paper Award, American Geophysical Union |
| 1997 | | Co-convenor of 2 special sessions "The super-fast spreading segment of the East Pacific Rise", American Geophysical Union, and "Tectonic evolution and thermal structure of mid-ocean ridges", European Geological Society |
| 12/1996 | | Outstanding Student Paper Award, Tectonophysics Section of American Geophysical Union |
| 1986 | | Canadian team member, 18th International Chemistry Olympiad, Leiden, Netherlands |

Reviewer of proposals for: National Science Foundation - Ocean Sciences, Earth Sciences, and Polar Programs; Joint Oceanographic Institutions - Ocean Drilling Program; and the Icelandic Center for Research.

Reviewer of papers for: *Nature*, *Geology, Journal of Geophysical Research, G3**(Geochemistry, Geophysics, Geosystems), Geophysical Research Letters, Earth and Planetary Science Letters, Geophysical Journal International, Journal of Geodynamics*, *Chemical Geology, Annals of Glaciology,**Marine Geophysical Research, Proceedings of the Ocean Drilling Program.*

***Invited Lectures***

2/2021 “Seismic imaging of magmatic systems”, Keynote for MCS RCN ’s Volcanic Systems Modeling Workshop

1/2021 “Seismic imaging of the caldera and upper crustal magma system at Santorini volcano, Greece”, USGS Volcano Science Center

9/2018 “Seismic Imaging of Mantle Plumes”, Guest lecture, Colgate College.

11/2017 “Volcanic, tectonic and hydrothermal processes in an island-arc caldera environment (Santorini-Kolumbo marine volcanic system)”, MagellanPlus Workshop, European Consortium for Ocean Research Drilling, Athens, Greece.

9/2017 “PROTEUS – Santorini Seismic Experiment”, Ocean Bottom Seismology Instrument Pool Symposium, Portland, Maine

4/2017 “Advances in seismic imaging of volcanic systems: Examples from arc volcanoes and the mid-ocean ridge”, Oregon State University

11/2015 “Imaging the magma plumbing of volcanoes: Newberry and Santorini volcanoes”, University of Athens, Greece

4/2014 “Imaging a shallow crustal magma body at Newberry volcano using P-wave tomography and waveform modeling”, Oregon State University, Corvalis

3/2014 “Imaging a shallow crustal magma body at Newberry volcano using P-wave tomography and waveform modeling”, Cascades Volcano Observatory, Vancouver, WA

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| 12/2013 | “Magma plumbing at Newberry volcano from P-wave tomography and waveform modeling”, Forest Service, Bend, OR |
| 10/2013 | “Seismo-tectonics of the Juan de Fuca Ridge”, 2013 Ocean Bottom Seismology Workshop, Redondo Beach, CA |
| 4/2013 | “Magma plumbing at Newberry volcano and at the northern Juan de Fuca ridge: Implications for the delivery and storage of melt”, Hatfield Marine Science Center, Newport, OR |
| 3/2008 | Ridge 2000 Inter-disciplinary Meeting, Mantle to Microbe: Integrated Studies at Oceanic Spreading Centers & Mid-Atlantic Ridge ~35-37.5°N Implementation PlanWorkshop, Portland, OR. |
| 4/2006 | “The interaction of the Iceland plume and the Mid-Atlantic Ridge”, University of Idaho, Moscow, ID. |
| 3/2004 | Ridge Workshop on Mid-Atlantic Ridge Integrated Studies Site, Providence, RI. |
| 9/2003 | InterRidge Workshop on Hotspot-Ridge Interactions, Brest, France. |
| 9/2001 | Symposium on the Icelandic Plume and Crust, Iceland. |
| 5/2000 | Ridge Integrated Studies Planning Workshop, Newport, OR. |

# ***University of Oregon Service***

2021/22 UO Leadership Academy

2019/20 UO Research Advisory Board member.

2019- Senior Faculty on CAS Mentoring Group for Women in the Sciences; group of 5.

8/2019 Faculty panel for pre-proposals the [Johnson & Johnson Women in STEM](https://www.jnj.com/wistem2d-university-scholars) award.

5/2019 Invited speaker for Oregon Hazards Lab on “Tribal Connectivity Opportunities”, Native American Advisory Council & UO President Schill, UO Many Nations Longhouse.

Institutional Representative on PhD committees:

Ongoing:

Caitlin Plowman (since 2019, Young lab - OIMB)

Allison van Cleve (since 2019, Cook lab – Chemistry).

Completed:

Brittany Gordon (2014-2019, PhD 2019, Richmond lab - Chemistry)

Elizabeth Cochran (2016-2019, PhD 2019, Boettcher and D.W. Johnson Laboratories - Chemistry)

Regina Cizewski (2013-2019, PhD 2019, Richmond lab - Chemistry)

Hillary Henthorn (2014, MS in 2017, Pluth lab - Chemistry)

***Departmental Service***

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| 2022/23 | Associate Department Head; Executive Committee  Teaching schedule & GE assignments; Alumni relations/Dept. report  Comprehensive Exam Committee Member for Roey Shimony  Dissertation Committee coordinator for David Small  Mentor for Valerie Sahakian - UO Under-represented Minority Recruitment Plan |
| 2021/22 | Associate Department Head; Executive Committee  Curriculum Committee Chair  GE assignments; Alumni relations/newsletter  Comprehensive Exam Committee Member for Yu-Sheng Sun; Roey Shimony  Mentor for Valerie Sahakian - UO Under-represented Minority Recruitment Plan |
| 2020/2021 | Associate Department Head; Executive Committee  Curriculum Committee chair  GE assignments; Alumni relations/newsletter |
| 2019/20 | Geophysics Undergrad Track Advisor  Comprehensive Exam Committee Member for Gabriel Ferragut  Mentor for Valerie Sahakian - UO Under-represented Minority Recruitment Plan |
| 2018/19 | Met with Rep. Nancy Nathanson Oregon State funding for ShakeAlert & AlertWildfire. |
| 2018/19 | Comprehensive Exam Committee Member for Joshua Wiejaczka; Alexis Klimasewski  Mentor for Valerie Sahakian - UO Under-represented Minority Recruitment Plan  Member of DoES IgDEAS group |
| 2014-2019 | Departmental Library Coordinator;  2015 & 2016 - budget cuts  2014-15 - paper journal reduction and new science library design |
| 2017/18 | Comprehensive Exam Committee Member for Michelle Muth; Mike Hudak; Josh Crozier  Undergraduate Senior Thesis Committee Member for Geena Littel |
|  | Organizer for Staples Departmental Field trip to Santorini and Crete, March 2018 (<https://blogs.uoregon.edu/staples2018>) |
|  | Member of Volcanology Cluster of Excellence Faculty Search Committee  Mentor for Leif Karlstrom, Associate Professor |
| 4/2017 | UO Alumni/Donor event in Washington DC |
| 4/2017 | UO Alumni/Donor event in New York City |
| 4/2017 | Met with OR Representative Bonamici and UO Board Chair & Volcanology Cluster Donor Chuck Lillis to advocate for Volcanology funding legislation Washington DC |
| 2016/17 | Member of Volcanology Cluster of Excellence Faculty Search Committee |
| 2015/16 | Comprehensive Exam Committee Member for Benjamin Heath; Dan O’Hara |
| 3-6/2015 | Departmental host for Meierjurgen Scholar, Prof. Costas Papazachos (Aristotle Univ. Thessaloniki, Greece) |
| 2014/15 | Member of Volcanology Faculty Search Committee |
| 4/2014 | Participated in development of Volcanology Cluster Hire proposal |
| 4/2014 | Contributed to UO lobbying for a west coast Earthquake Early Warning System with UO President Gottfredson, Congressman DeFazio, & Senator Merkeley, Representative Nathan Nathanson |
| 2012/13 | Chair of Committee for Department of Geological Sciences, College of Arts and Sciences Departmental 5-Year Academic Plan. |
| 2012/13 | Department Web Page Committee. |
| 2011/12 | Member of Faculty Search Committee. |
| 2009-2013 | Departmental Library Coordinator; 2009 - refocused the journal collection and coordinated budget cuts of 1/3rd |
| 2010 | Coordinator for fall departmental seminar series; developed the themes and invited and hosted speakers (shared with David Schmidt). |
| 2006 & 2007 | Ph.D. Comprehensive Exam Coordinator. |

***Media Coverage***

6/2023 Features for Research Excellence on UO banners of a Community of Educational Excellence: <https://provost.uoregon.edu/educational-excellence/research>

1/2023 Nature Research Highlight: *Underwater volcano near Greece is a sleeping menace*: <https://www.nature.com/articles/d41586-023-00090-5>

AGU press release on our discovery of a magma chamber beneath Kolumbo seafloor volcano at Santorini and subsequent news articles: [https://news.agu.org/press-release/surprise-magma-chamber-growing-under-mediterranean-volcano/](https://urldefense.com/v3/__https:/news.agu.org/press-release/surprise-magma-chamber-growing-under-mediterranean-volcano/__;!!C5qS4YX3!B1bjXjnoa71bMnFeZxi97pIpZs8Uv1MudUIOjdGsJo1igZyf3W0cYHk0tNyxuaQhnIN49TFL01SOjLc4cIMQqQcvnfvZutbEGA$)

[https://www.haaretz.com/israel-news/science/2023-01-18/ty-article/rising-magma-beneath-undersea-volcano-in-aegean-poses-regional-risk-but-how-much/00000185-c489-da66-a1bf-fd9bb2310000](https://urldefense.com/v3/__https:/www.haaretz.com/israel-news/science/2023-01-18/ty-article/rising-magma-beneath-undersea-volcano-in-aegean-poses-regional-risk-but-how-much/00000185-c489-da66-a1bf-fd9bb2310000__;!!C5qS4YX3!D0w1jsAbrMxO3w7SjzmmkMVROzKXZgOGz-kmnxrj6W23DWedxPQffPNXO_Y5Qpx3c4ObWfFKZrwnfhQ0KNZDabU6Zw$)

[https://www.livescience.com/mediterranean-volcano-growing-magma-chamber](https://urldefense.com/v3/__https:/www.livescience.com/mediterranean-volcano-growing-magma-chamber__;!!C5qS4YX3!D0w1jsAbrMxO3w7SjzmmkMVROzKXZgOGz-kmnxrj6W23DWedxPQffPNXO_Y5Qpx3c4ObWfFKZrwnfhQ0KNbkGp5u6w$)

[https://www.iflscience.com/a-surprising-magma-chamber-is-growing-under-the-mediterranean-sea-67111](https://urldefense.com/v3/__https:/www.iflscience.com/a-surprising-magma-chamber-is-growing-under-the-mediterranean-sea-67111__;!!C5qS4YX3!D0w1jsAbrMxO3w7SjzmmkMVROzKXZgOGz-kmnxrj6W23DWedxPQffPNXO_Y5Qpx3c4ObWfFKZrwnfhQ0KNaI302yEw$)

[https://www.foxnews.com/science/surprise-magma-chamber-found-mediterranean-sea-volcano-kolumbo-santorini-tourist-destination](https://urldefense.com/v3/__https:/www.foxnews.com/science/surprise-magma-chamber-found-mediterranean-sea-volcano-kolumbo-santorini-tourist-destination__;!!C5qS4YX3!D0w1jsAbrMxO3w7SjzmmkMVROzKXZgOGz-kmnxrj6W23DWedxPQffPNXO_Y5Qpx3c4ObWfFKZrwnfhQ0KNaU6LKeXw$)

[https://www.sciencetimes.com/articles/41876/20230116/previously-hidden-magma-chamber-found-under-mediterranean-submarine-volcano-kolumbo.htm](https://urldefense.com/v3/__https:/www.sciencetimes.com/articles/41876/20230116/previously-hidden-magma-chamber-found-under-mediterranean-submarine-volcano-kolumbo.htm__;!!C5qS4YX3!D0w1jsAbrMxO3w7SjzmmkMVROzKXZgOGz-kmnxrj6W23DWedxPQffPNXO_Y5Qpx3c4ObWfFKZrwnfhQ0KNaoWqWiBw$)

<https://www.theguardian.com/science/2023/jan/25/terrawatch-santorini-braces-as-explosive-volcano-stirs>

2/2022 EOS article on 2018 Anak Krakatau eruption and tsunami by Saima Sidik: <https://eos.org/articles/which-came-first-the-eruption-or-the-landslide>

11/2021 NYTimes article by Robin Andrews, *When Kilauea Erupted, a New Volcanic Playbook Was Written*, <https://www.nytimes.com/2021/11/09/science/kilauea-volcano-eruption.html>

7/2021 Science news article by Paul Voosen: *Ship gauges potential for catastrophic earthquake, Science, 373,* 13-14.

7/2021 Columbia Climate School article by Nathan Milles, Pablo Canales, Anne Trehu, *Searching for Faults from Afar – Illuminating the Cascadia Subduction Zone*, <https://news.climate.columbia.edu/2021/07/12/searching-for-faults-from-afar/>

8/2020 YouTube video on Newberry national volcanic monument by Matt Cook: [*https://www.youtube.com/watch?v=8ysL\_8SlF6o*](https://urldefense.com/v3/__https:/www.youtube.com/watch?v=8ysL_8SlF6o__;!!C5qS4YX3!RkldMexqcwQBdaOUw13BSDj37oNasA5EQVY5Uru_21Dpt6eS9EJO2ac-1EsI7R-J$)

10/2019 Video interview with Chris Larsen, UO for Volcanology Cluster and Newberry promotions: <https://around.uoregon.edu/volcanology>

8/2019 Article in Greek national newspaper about Santorini caldera formation: Kathimerini: [https://www.kathimerini.gr/1038809/gallery/epikairothta/ellada/h-a3onikh-toografia-toy-hfaisteioy-ths-santorinhs](https://urldefense.com/v3/__https:/www.kathimerini.gr/1038809/gallery/epikairothta/ellada/h-a3onikh-toografia-toy-hfaisteioy-ths-santorinhs__;!5W9E9PnL_ac!V_huSt2ryfFfBG1lvi4cjlKgrtJLmuDPXygdwVMuXXJ7rf20u3YusyrhVIr9nn2U$) by Lina Giannarou.

7/2019 Video interview with NVS productions ([www.nvs.productions](http://www.nvs.productions)) for video on Cascade volcanoes.

3/2019 Article in two Greek national newspapers about Santorini caldera formation: Efimerida: <https://www.iefimerida.gr/news/487151/ifaisteio-santorinis-epistimones-proeidopoioyn-gia-endehomeni-nea-ekrixi> Athens News Agency: <https://www.amna.gr/mobile/articleen/345911/Epistimones-fotografisan-to-magmatiko-thalamo-tou-ifaisteiou-sti-Santorini>

9/2017 Provided images for Oregon Quarterly article on Volcanology Cluster.

9/2017 Provided video of Santorini research expedition to Mallinson Sadler Productions for a National Geographic documentary series, 'Drain', on seafloor geology and archeology.

5/2017 Article in Greek national newspaper about the new Santorini seafloor maps: Kathimerini: <http://www.ekathimerini.com/220804/article/ekathimerini/community/scientists-harvest-fresh-findings-from-roots-of-santorini-volcano> by Giorgos Lialios.

2016 Cascade Magazine article about participation of undergraduate student Claire Getz in the Santorini shipboard seismic experiment by Jim Murez: <http://cascade.uoregon.edu/fall2016/features/sea-star/>

2016 UO Research Innovation & Graduate Education article by Jim Barlow: <https://around.uoregon.edu/content/uo-led-expedition-probes-undersea-magma-system>

Copied into Science Daily: <http://www.sciencedaily.com/releases/2016/01/160111161055.htm>

2015 Oregon Quarterly article by Rosemary Camozzi: <http://oregonquarterly.com/deep-research>

2014 Cascade Magazine article by Matt Cooper: <http://cascade.uoregon.edu/winter2014/features/the-sleeping-giant/>

2013 UO Research Innovation & Graduate Education article by Jim Barlow: <http://around.uoregon.edu/story/research-innovation-graduate-education/academics/what-lies-beneath-3d-view-shows-magma-under-n>

2013 Video offers peek at magma beneath Newberry by Susie Bodman: <http://community.statesmanjournal.com/blogs/science/2013/01/23/video-offers-a-peek-at-magma-beneath-newberry>

2010 UO Cascade Magazine article by Marc Dadigan: <http://cascade.uoregon.edu/fall2010/natural-sciences/is-newberry-likely-to-erupt/>

***Education and Outreach Activities***

10/2020 Invited speaker “Under the Volcano: Mapping the magmatic pathways of volcanoes: Oregon and Greece”, Central Oregon Geoscience Society, Bend OR: <https://www.cogeosoc.org/>

6/2019 YouTube video of Santorini caldera magma plumbing system:3D visualization of tomographic seismic velocity model from the PROTEUS experiment, <https://youtu.be/vJqmypD17mU>, made by Brennah McVey, MSc UO

5/2019 Invited speaker “Under the Volcano: Mapping the magmatic pathways of volcanoes from Oregon to Greece”, UO Quack Chats pub talk, Eugene: <https://around.uoregon.edu/content/quack-chats-explores-insides-worlds-great-volcanoes>

10/2016 PROTEUS – Santorini seagoing expedition, 3-minute public outreach documentary on YouTube, <https://youtu.be/sygEQzn0BP4>, made with Laura Stewart University of Oregon undergraduate student in Journalism

5/2016 Santorini Seismic Experiment Website: <https://santorini.uoregon.edu/>. Describes the purpose of the seagoing expedition and hosted a Blog during the cruise.

1/2016 Invited speaker joint with Doug Toomey “The Cascadia Subduction Zone: Volcanoes, Earthquakes, and Early Warning”, UO Alumni Association, Portland Science Night.

8/2015 YouTube video: EarthScope Chronicles: *Meet a Geophysicist - Emilie Hooft* <https://youtu.be/pTSTdBYZewE>

4/2015 Invited speaker “The magma chamber below Newberry caldera”, UO-High Desert Museum Natural History Pub talk.

3/2015 Instructor, Environmental Science, ENVS 199, UO Academic Extension Courses for High School Students Program.

3to9/2014 Coordinator of Cascadia Initiative Expedition Team Apply-to-Sail Program

5/2014 Newberry’s Magma Chamber, 10-minute public outreach documentary on rotation in the theater at the Newberry Volcanic Monument Visitors Center, Bend, OR.

1/2014 Instructor, Earth Science, ENVS 199, UO Academic Extension Courses for High School Students Program.

11/2013 Newberry’s Magma Chamber, 10-minute public outreach documentary on You Tube, <http://youtu.be/VbErlYAfWKI>, made with Garon Hale (Interim Director of College of Arts and Sciences Information Technology) and Adam Paikowsky & Hayden Steinbock (Undergraduate students in the UO Digital Arts Program). ~1000 views as of Feb 2015.

3to9/2013 Coordinator of Cascadia Initiative Expedition Team Apply-to-Sail Program

3/14/13 Geology STEM talk at Science Open House Event for 140 high school science students.

2012/13 Member of UO STEM CORE Consortium (<http://stemcore.uoregon.edu>)

2010-2012 Several in-class presentations on research at sea at Edison Elementary School, Eugene.

3-9/2012 Coordinator of Cascadia Initiative Expedition Team Apply-to-Sail Program

***Professional Affiliations***

American Geophysical Union, American Association for the Advancement of Science, International Association of Volcanology and Chemistry of the Earth’s Interior, Seismological Society of America

***Languages***  Dutch, English, French, German, modern Greek, and Spanish