

Brent Delbridge

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Earth and Planetary Sciences
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Google Scholar: [Delbridge, B.](#)

- Education**
- University of California, Berkeley, Berkeley, CA.**
Ph.D., Earth and Planetary Sciences, 2017.
Fields: Geodesy, Seismology, Tectonics
 - University of Washington, Seattle, WA.**
B.S., Applied Computation Mathematical Sciences, 2011.
B.S., Physics, 2011.
- Professional Experience**
- Postdoctoral Fellow, Cambridge, MA**
Harvard University (Advisor: Prof. Miaki Ishii), 2017-Current
 - GROW Visiting Research Fellow, Sendai, Japan**
Tohoku Univ. RCPEVE, Fall Semester 2013
- Awards and Fellowships**
- NSF Graduate Research Fellow, Berkeley, CA**
UC Berkeley Dept. of EPS, 2013-2016
 - Travel Award for UNAVCO InSAR Short Course, Berkeley, CA**
UC Berkeley Dept. of EPS, 2012
 - Tocher Research Fellow, Berkeley, CA**
Berkeley Seismological Laboratory, 2011-2012
 - Washington State Research Fellowship Fellow, Seattle, WA**
Univ. of Washington Dept. of ESS, 2010-2011
 - Washington Space Grant Scholar, Seattle, WA**
Univ. of Washington Dept. of Physics, 2009-2010
 - Best Overall Undergraduate Poster Presentation, Seattle, WA**
Univ. of Washington Dept. of ESS, 2010

Mary Gates Research Scholar, Seattle, WA
Univ. of Washington Dept. of ESS, 2009-2010

VIGRE Research Grant, Seattle, WA
Univ. of Washington Dept. of ACMS, 2009-2010

Travel Award for UNAVCO Strainmeter Short Course, Seattle, WA
Univ. of Washington Dept. of ESS, 2010

AmeriCorps Education Award, Seattle, WA
Washington Dept. of Natural Resources, 2009-2010

AmeriCorps Education Award, Seattle, WA
Washington Dept. of Natural Resources, 2008-2009

Publications

(* indicates advisor to an undergraduate)

11. Mittal, T., **Delbridge, B.** (2017). Global detection of submarine eruptions using the Argo data set and its implications for ocean dynamics. (Submitted).
10. Saltiel, S., Bonner, B., Mittal, T., **Delbridge, B.**, Ajo-Franklin, J. (2017). Stress-strain hysteresis loops and harmonics show rate-dependent nonlinearity of mated dolomite fracture. *J. Geophys. Res. Solid Earth*, 122, doi:10.1002/2017JB014219.
9. **Delbridge, B.**, Johnson, C.W., Kita, S., Matsuzawa, T., Uchida, N., Bürgmann, R., (2017). Temporal variation of intermediate-depth earthquakes around the time of the M 9.0 Tohoku-oki earthquake. *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL072876.
8. **Delbridge, B.**, Bürgmann, R., Fielding, E., Hensley, S. and Schulz, W.H., (2016). Three-dimensional surface deformation derived from airborne interferometric UAVSAR: Application to the Slumgullion Landslide. *J. Geophys. Res. Solid Earth*, 121, 3951–3977, doi:10.1002/2015JB012559.
7. **Delbridge, B.**, Bürgmann, R., Fielding, E. and Hensley, S., (2015), July. Kinematics of the Slumgullion Landslide from UAVSAR derived interferograms. *IGARSS* (pp. 3842-3845). *IEEE*.
6. *Birch, S.P.D., Manga, M., **Delbridge, B.** and Chamberlain, M., (2014). Penetration of spherical projectiles into wet granular media. *Physical Review E*, 90(3), p.032208.

5. Milillo, P., Fielding, E.J., Shulz, W.H., **Delbridge, B.** and Burgmann, R., (2014). COSMO- SkyMed spotlight interferometry over rural areas: The Slungullion landslide in Colorado, USA. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 7(7), pp.2919-2926.
4. Knecht, A., Hong, R., Zumwalt, D.W., **Delbridge, B.**, Garcia, A., Müller, P., Swanson, H.E., Towner, I.S., Utsuno, S., Williams, W. and Wrede, C., (2012). Precision measurement of the 6 He half-life and the weak axial current in nuclei. *Physical Review C*, 86(3), p.035506.
3. Houston, H., **Delbridge, B.**, Wech, A.G. and Creager, K.C., (2011). Rapid tremor reversals in Cascadia generated by a weakened plate interface. *Nature Geoscience*, 4(6), pp.404-409.
2. Knecht, A., Zumwalt, D.W., **Delbridge, B.**, García, A., Harper, G.C., Hong, R., Müller, P., Palmer, A.S.C., Robertson, R.G.H., Swanson, H.E. and Utsuno, S., (2011). A high-intensity source of 6 He atoms for fundamental research. *Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, 660(1), pp.43-47.
1. Freeman, B.M., Wrede, C., **Delbridge, B.**, García, A., Knecht, A., Parikh, A. and Sallaska, A.L., (2011). Branches of $S\ 33$ (p, γ) at oxygen-neon nova temperatures. *Physical Review C*, 83(4), p.048801.

Finished Projects in Queue for Publication

6. **Delbridge, B.**, Nadeau, R., Bürgmann, R., (2017). Geodetic Signature of Slow-Slip and Tremor in Parkfield, CA, JGR. (In Prep.)
5. Mittal, T., **Delbridge, B.**, (2017). Geophysical Applications of Coupled Poro-thermo-visco- Elasticity and non-Normal Mode Analysis: Part 1, JGR. (In Prep.)
4. **Delbridge, B.**, Mittal, T., (2017). Geophysical Applications of Coupled Poro-thermo-visco- Elasticity and non-Normal Mode Analysis: Part 2, JGR. (In Prep.)
3. **Delbridge, B.**, Kita, S., Houston, H., Bürgmann, R., (2017). Variations in intraplate stress Beneath NE Japan following the 2011 Tohoku-oki Earthquake from Earthquake Focal Mechanisms, (In Prep.)
2. *Nelson, O., **Delbridge, B.**, Mittal, T., Randolph-Flagg N., Manga, M. 2017. Internal Flow Dynamics of Dikes in Analog Experiments and Their Controls on Magma Ascent Processes, GRL. (In Prep.)

1. **Delbridge, B.**, Kalstrom, L. Buffett., B. Wavelength of Subduction Zone Curvature, G-Cubed(In Prep.)

Invited Talks

3. **Delbridge, B.**, Nadeau, R., Bürgmann, R, 2017. Geodetic Signature of Slow-Slip and Tremor in Parkfield, CA. Harvard Solid Earth Seminar: May 22, 2017. Boston, MA.
2. **Delbridge, B.**, Bürgmann, R., Fielding, E., Hensley, S. and Schulz, W.H., 2016. Airborne and Spaceborne Geodetic Imaging of the Slumgullion Landslide. USGS Earthquake Science Center Seminars: Sept. 7, 2016. Menlo Park, CA.
1. **Delbridge, B.**, Bürgmann, R., Fielding, E., Hensley, S. and Schulz, W.H., 2016. 3D surface deformation derived from airborne interferometric UAVSAR: Application to the Slumgullion Landslide. University of Oregon, Dept. of Earth Sciences: May 6, 2016. Eugene, OR.

Service

Reviewer for Science Advances

Reviewer for Pure and Applied Geophysics

Member of the northern California earthquake alarm response
which computes and publishes near real-time earthquake information for both the scientific community and the public, 2011-2017

Co-chair/convener for AGU F.M. 2017 Session

“Slow slip, Tectonic Tremor, and the Brittle-to-Ductile Transition Zone:
What mechanisms control the diversity of slow and fast earthquakes?”

Co-chair/convener for JPGU 2017 Session

“Shallow and intermediate depth intraslab earthquakes:
seismogenesis and rheology of the slab”

Co-chair/convener for AGU F.M. 2016 Session

“Advances in Understanding of Tremor, Slow Slip,
and Other Slow Earthquake Phenomena”

Mentor and co-advisor to undergraduate students

Sam Birch (Now graduate student at Cornell in Dept. of EAS)

Ellen Knappe (Now graduate student at Univ. Montana in Geosciences)

Ian Ekblaw (Now Research Analyst at LBNL)

Owen Nelson (UC Berkeley Undergraduate)

Teaching

Dept. of EPS, UC Berkeley

Graduate Student Assistant, Geologic Field Studies, Spring 2016

– with Prof. Don DePaolo

Graduate Student Assistant, Earth Science in the Field, Spring 2015

– with Prof. Rudy Wenk

Graduate Student Instructor, Computer Simulations in EPS, Fall 2014

– with Prof. Burkhard Militzer

Graduate Student Assistant, Geologic Field Studies, Spring 2014

– with Prof. DonDePaolo

Graduate Student Instructor, Mathematical Methods in Geophysics, Spring 2013
– with Assoc. Prof. Steven Pride
Graduate Student Instructor, Geodynamics, Fall 2012
– with Prof. Michael Manga
Graduate Student Instructor, History and Evolution of Planet Earth , Spring 2011,
– with Prof. Bruce Buffett

Dept. of Mathematics, University of Washington

CLUE Tutor (e.g. Calculus, Linear Algebra, Differential Equations) 2008 - 2011

TEFL, Beijing, China

TEFL International, 2007-2008

Languages
and Skills

English (native), Matlab, Python, R, Mathematica, UNIX/Bash/CSH
L^AT_EX, GDAL, C++

References

[Roland Bürgmann](#)

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[Heidi Houston](#)

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University of Washington
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