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RESEARCH AND TEACHING INTERESTS

- Mechanical modeling of societally relevant Earth system processes
- Geophysical observation using direct field observation, seismology, and remote sensing

PROFESSIONAL EXPERIENCE

- 2018 – **Lecturer, Research Associate, and Principal Investigator**, Dept. of Earth and Planetary Sciences, Harvard University
- 2017–2018 **Postdoctoral Research Associate**, Dept. of Earth and Planetary Sciences, Harvard University. Supervisor: James Rice (Dept. of Earth and Planetary Sciences and School of Engineering and Applied Sciences).

EDUCATION

- 2017 **Doctor of Philosophy**, Geophysics, Stanford University. Supervisor: Eric Dunham (Dept. of Geophysics and Institute for Computational and Mathematical Engineering)
- 2011 **Master of Science**, Earth Science, University of California, Riverside. Supervisor: Gareth Funning (Dept. of Earth Science).
- 2008 **Bachelor of Arts**, Mathematics, Cornell University
- 2004 **Associate of Arts**, Mathematics, Lake Tahoe Community College

PUBLICATIONS

* *Student Advisee/Co-advisee*

2020

14. **Lipovsky, B. P.**, “Ice shelf rift propagation: stability, three dimensional effects, and the role of marginal weakening” (2020). *The Cryosphere*. [Link](#).

2019

13. P. Danré, J. Yin*, **Lipovsky, B. P.**, M. Denolle, “Earthquakes Within Earthquakes: Patterns in Rupture Complexity” (2019). *Geophysical Research Letters*. [Link](#).
12. S. Olinger*, **Lipovsky, B. P.**, D. Wiens, R. Aster, P. Bromirski, Z. Chen, P. Gerstoft, A. Nyblade, R. Stephen “Tidal and Thermal Stresses Drive Seismicity along a Major Ross Ice Shelf Rift” (2019). *Geophysical Research Letters*. [Link](#).
11. **Lipovsky, B.P.**, Meyer, C.R., Zoet, L.K., McCarthy, C., Hansen, D.D., Rempel, A.W., Gimbert, F., “Glacier sliding, seismicity, and sediment entrainment” (2019). *Annals of Glaciology*. [Link](#).

10. Gräff, D.*, **Lipovsky, B.P.**, Walter, F.. “Crack wave resonances within the basal water layer” (2019). *Annals of Glaciology*. [Link](#).
9. Minchew, B. M., Meyer, C.R., Pegler, S.S., **Lipovsky B.P.**, Rempel, A.W., Gudmundsson, G.H. and Iverson, N.R., “Comment on: “Friction at the bed does not control fast glacier flow” by L. A. Stearns and C. J. van der Veen” (2019). *Science*. [Link](#).

2018

7. Schöpa, A., Chao, W., **Lipovsky, B.P.**, Hovius, N., White, R. S., Green, R. G., Turowski, J. M. Dynamics of the Askja Caldera July 2014 landslide from seismic signal analysis: precursor, motion and aftermath (2018). *Earth Surface Dynamics*, Special issue “From Process to Signal - Advancing Environmental Seismology.” [Link](#).
6. **Lipovsky, B.P.** (2018), “Ice shelf rift propagation and the mechanics of wave-induced fracture”. *J. Geophys. Res. Oceans* [Link](#).

2017

5. **Lipovsky, B.P.**, and Dunham, E. M. (2017), “Slow-slip events on the Whillans Ice Plain, Antarctica, described using rate-and-state friction as an ice stream sliding law”. *J. Geophys. Res. Earth Surface* [Link](#).

2016

4. Mordret, A., Mikesel, D., Harig, C., **Lipovsky, B. P.** , Prieto, G. A. (2016) “Monitoring southwest Greenland’s ice sheet melt with ambient seismic noise”. *Science Advances*. [Link](#).
3. **Lipovsky, B.P.**, and Dunham, E.R. (2016), “Tremor during ice stream stick-slip” . *The Cryosphere*. [Link](#).

2015

2. **Lipovsky, B.P.**, and Dunham, E.R. (2015), “Vibrational modes of hydraulic fractures: Inference of fracture geometry from resonant frequencies and attenuation” . *J. Geophys. Res.* [Link](#).

2014

1. Gonzalez A., Gonzalez-Garcia J.J., Sandwell, D.T., Fialko, Y., Agnew, D.C., **Lipovsky, B.P.**, Fletcher, J.M., Nava-Pichardo, F.A. (2014) GPS coseismic and postseismic surface displacements of the El Mayor-Cucapah earthquake. *J. Geophys. Res.* [Link](#).

HONORS, FELLOWSHIPS, AND AWARDS

2017	Early Career Scientist Outstanding Presentation Award, WCRP/IOC Conference on Regional Sea Level Changes and Coastal Impacts
2017–2018	Postdoctoral Fellowship, Dept. of Earth and Planetary Sciences, Harvard University
2011–2015	Mannon Family Fellowship, Dept. of Geophysics, Stanford University
2010	AGU Outstanding Student Paper Award

GRANTS AND FUNDING

- 2020 Lead PI, "An Antarctic Rift Catalog from ICESat-2 Observations" National Aeronautics and Space Administration. \$599,993.
- 2020 Co-PI, "NSFGEO-NERC: Collaborative Research: A new mechanistic framework for modeling rift processes in Antarctic ice shelves validated through improved strain-rate and seismic observations." National Science Foundation. \$362,278.

FIELD WORK

- 2018–2019 "Seismic observations of rapid subglacial hydrological switching," Solmaheimajokull, Iceland and Gorner Glacier, Switzerland.
- 2015 "High resolution heterogeneity at the Base of Whillans Ice Stream and its Control on Ice Dynamics", Whillans Ice Stream, West Antarctica.
- 2012 "Observational constraints on the processes acting in icefalls from seismicity", Juneau Ice Field, Alaska
- 2010–2011 "Rapid postseismic GPS observations following the El Mayor-Cucapah earthquake", Mexicali, Mexico.

TEACHING

- 2019 **Lecturer**, Harvard EPS 268, "Machine Learning Across the Earth and Planetary Sciences".
- 2018 **Lecturer**, Harvard EPS 253, "Glaciology".
- 2013–2016 **Teaching Assistant and Informal Guest Lecturer**, Stanford Geophysics 120/220, "Ice, Water, Fire"

ADVISING

Graduate Students (Co-advised)

- 2018–
2019– **Seth Olinger**, PhD student at Harvard University studying ice shelf seismology.
William Flanagan, Masters student at Harvard University studying subglacial hydrology and seismology.

Undergraduate Students

- 2017 **Vladislav Sevostianov**, Semester-long internship, Harvard University. Laboratory experiments on the frictional properties of ice.
- 2015 **Janine Birnbaum**, Summer internship, Stanford University. Research focusing on finite element modeling of ice stream loading.
- 2014 **Dilia Olivo**, Summer internship, Stanford University. Research focusing on rapidly repeating stick slip motion in glaciers.

SYNERGISTIC ACTIVITIES

<i>ongoing</i>	Reviewer for scientific journals, including: The Cryosphere, Geophysical Research Letters, Journal of Geophysical Research, Science Advances, Nature Communications, Earth and Planetary Science Letters, Journal of Glaciology, Annals of Glaciology, Journal of the Acoustical Society of America, Proceedings of the National Academy of Sciences
<i>ongoing</i>	Reviewer for government agencies, including: the National Aeronautics and Space Administration, the U.S. National Science Foundation, the U. S. Geological Survey, the Swiss National Science Foundation, the Australian Antarctic Division, and the French Polar Institute Paul-Emile Victor (IPEV)
2018-21	Convener, "Environmental seismology: A Geophysical Tool to study Surface and Near Surface Processes" session at the American Geophysical Union Fall Meeting.
2018-20	Convener, "Environmental seismology" session at the Seismological Society of America annual meeting.
2018-19	Scientific Editor, Annals of Glaciology, Special Issue on Cryoseismology
2016	Participant, United States Ice Drilling Program, Science Advisory Board Meeting
2015	Student Member, Cryosphere Faculty Search Committee, Department Geophysics, Stanford
2014	Student presentation judge, Stanford School of Earth Science Research Review
2013	Convener and chair, "Seismicity in the cryosphere", session at the Annual Meeting of the American Geophysical Union
2011-2012	Member, Graduate Student Advisory Council, Department of Geophysics
2010-2012	Student Representative, American Geophysical Union, Geodesy Section
2009-2010	University of California-Riverside Earth Science Graduate Association, President

INVITED PRESENTATIONS

- 2019 American Geophysical Union, Fall Meeting, Cryosphere section, “ Pathways to eureka from unexplained phenomena and interdisciplinary approaches to glaciology”
- 2019 Institut de Physique du Globe de Paris
- 2019 Antarctic Research Centre, University of Wellington
- 2019 School of Surveying, University of Otago
- 2019 American Physical Society, “Physics of Natural Phenomena” session.
- 2019 Department of Geology and Geophysics, Woods Hole Oceanographic Institution
- 2019 Department of Mechanical Engineering, University of Colorado at Boulder
- 2018 Grands Séminaires ISTerre, Institut des Sciences de la Terre, Université Grenoble Alpes
- 2018 Institut des Géosciences de l’Environnement, Université Grenoble Alpes
- 2017 Brown University Department of Earth, Environmental and Planetary Sciences, Department Colloquium
- 2017 Lamont Doherty Earth Observatory, Seismology Seminar
- 2016 Massachusetts Institute of Technology, Friday Informal Seminar Hour
- 2016 University of Kansas
- 2016 University of Washington, Glaciology Lunch
- 2015 University of California, Santa Cruz
- 2015 Massachusetts Institute of Technology, Friday Informal Seminar Hour
- 2014 American Geophysical Union Fall Meeting, Invited Presentation
- 2014 Scripps Institution of Oceanography, Institute of Geophysics and Planetary Physics, University of California–San Diego
- 2014 California Institute of Technology
- 2013 Earthquake Research Institute, University of Tokyo, Japan
- 2010 Southern California Earthquake Center Annual Meeting: Workshop on Transient Anomalous Strain Detection
- 2010 USGS Public Lecture Series Symposium at Pasadena City College
- 2009 Southern California Earthquake Center Annual Meeting: Workshop on Transient Anomalous Strain Detection