

# HELEN A. JANISZEWSKI

POSTDOCTORAL FELLOW

DEPARTMENT OF TERRESTRIAL MAGNETISM | CARNEGIE INSTITUTION FOR SCIENCE

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## EDUCATION

COLUMBIA UNIVERSITY | New York, NY

Ph.D. in Seismology, Department of Earth and Environmental Sciences 2017  
M.Phil. in Seismology, Department of Earth and Environmental Sciences 2016  
M.A. in Seismology, Department of Earth and Environmental Sciences 2014

RUTGERS UNIVERSITY | New Brunswick, NJ

B.S. (summa cum laude) in Geological Sciences (Highest Honors) and Physics 2012  
Minors: Mathematics, Russian Language

## PROFESSIONAL HISTORY

POSTDOCTORAL FELLOW

DTM, Carnegie Institution for Science, Washington, DC 2017 - present

GRADUATE RESEARCH FELLOW

Lamont Doherty Earth Observatory, Columbia University, Palisades, NY 2012 - 2017

LAMONT SUMMER INTERN

Lamont Doherty Earth Observatory, Columbia University, Palisades, NY 2010

UNDERGRADUATE RESEARCH INTERN

Dept. of Earth & Planetary Sciences, Rutgers University, New Brunswick, NJ 2009 - 2012

## FELLOWSHIPS AND AWARDS

Carnegie DTM Postdoctoral Fellowship 2017 - 2019

Geoprisms Student AGU Prize - Honorable Mention 2016

AGU Outstanding Student Presentation Award - Tectonophysics 2016

Geoprisms Student AGU Prize - Honorable Mention 2015

National Science Foundation Graduate Research Fellowship 2012 - 2015

EPS Chair Award, Earth & Planetary Sciences, Rutgers University 2012

Vinton Gwinn Award, Earth & Planetary Sciences, Rutgers University 2011

George O. Scott Award, Earth & Planetary Sciences, Rutgers University 2011

Noemi B. Koller Scholarship, Physics & Astronomy, Rutgers University 2011

Phi Beta Kappa 2011

## PUBLICATIONS

2. Janiszewski, H. A., G. A. Abers, Imaging the plate interface in the Cascadia seismogenic zone: New constraints from offshore receiver functions, *Seismological Research Letters*, v. 86 no. 5 p. 1261-1269, doi: 10.1785/0220150104. 2015
1. Janiszewski, H. A., G. A. Abers, Shillington, D.J., and J. A. Calkins, Crustal structure along the Aleutian island arc: New insights from receiver functions constrained by active source data, *Geochem. Geophys. Geosys.*, 14, 2977-2992, doi: 10.1002/ggge.20211. 2013

**IN PREPARATION**

Janiszewski, H. A., J. B. Gaherty, G. A. Abers, H. Gao, Amphibious surface wave phase velocity measurements of the Cascadia subduction zone

Janiszewski, H. A., Z. Eilon, J. B. Gaherty, G. A. Abers, Automated quality control for ocean bottom seismometer noise analysis and corrections

Janiszewski, H. A., G. A. Abers, A. Becel, H. Carton, Seismic reflectivity heterogeneity along the Cascadia plate interface

**INVITED TALKS**

OBS Symposium, Pop-Up Talk, Portland, ME	2017
Department Seminar, Cornell University, Ithaca, NY	2017
DTM Weekly Seminar, DTM Carnegie Institution of Washington, Washington, DC	2017
Geophysics Seminar, Woods Hole Oceanographic Institution, Woods Hole, MA	2017
Lamont Summer Intern Seminar, Lamont Doherty Earth Observatory, Palisades, NY	2016
Seismology Student Workshop, Lamont Doherty Earth Observatory, Palisades, NY	2016
Amphibious Array Facility Workshop, Snowbird, UT	2014
Geophysics Group Seminar, Yale University, New Haven, CT	2014

**PROFESSIONAL SERVICE****SEISMOLOGY STUDENT WORKSHOP PLANNING COMMITTEE**

5th Annual Seismology Student Workshop (with G. Coffey, T. Larson, R. Marzen, K. Olson)	2017
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4th Annual Seismology Student Workshop (with G. Coffey, C. Eddy, Z. Eilon, K. Olson)	2016
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3rd Annual Seismology Student Workshop (with C. Eddy, Z. Eilon, K. Olson)	2015
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**AGU FALL MEETING**

Primary Convener, OSPA Liason: New Insights on the Cascadia Subduction Zone from Offshore and Amphibious Studies	2017
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Session Chair: Scientific Advances from Subduction Zone Observatories	2015
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**REVIEWER**

Journal of Geophysical Research: Solid Earth, NSF EAR Earthscope	2016 -
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**INSTITUTIONAL SERVICE****GRADUATE STUDENT ADVISORY COUNCIL | Columbia University**

Vice President of Administration	2014 - 2016
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Communications Chair	2013 - 2014
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**GRADUATE STUDENT FIELD TRIP PLANNING COMMITTEE**

Pacific Northwest (with C. Eddy, Z. Eilon, J. Gale, P. Moulik, H. Rabinowitz)	2014
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**TEACHING****COLUMBIA UNIVERSITY | Dept. of Earth & Environmental Sciences**

Teaching Assistant: Plate Tectonics (graduate and undergraduate)	2016
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Teaching Assistant: Quantitative Methods of Data Analysis (graduate)	2014
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Teaching Assistant: Earth's Environmental System: Solid Earth (undergraduate)	2013
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**FIELD****ENAM COMMUNITY SEISMIC EXPERIMENT**

Service run for broadband instruments (North Carolina, USA).	2015
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**QUEBEC MAINE III**

Broadband seismometer deployment (Northern Maine, USA).	2013
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**RIDGE2TRENCH**

MGL1211 Cruise on the R/V Marcus G. Langseth (Juan de Fuca plate). 2012  
 Ship to shore instrument deployment (Western Washington, USA). 2012

**FIELD COURSES**

Pacific Northwest, WA, USA: Graduate student field trip ([Field Guide](#)). 2014  
 Adirondacks, NY, USA: Graduate student field trip ([Field Guide](#)). 2013  
 North Anatolian Fault Zone, Turkey: Field mapping course ([SDSMT](#)). 2011

**OUTREACH**

Lamont Doherty Earth Observatory Open House 2012, 2014  
 Columbia University Girls Science Day, Experiment Leader 2012, 2013

**SELECTED CONFERENCE PRESENTATIONS**

Janiszewski, H. A., J. B. Gaherty, G. A. Abers, H. Gao, Shoreline-crossing shear-velocity structure of the Juan de Fuca plate and Cascadia subduction zone from surface waves and receiver functions, presented at the 2017 EGU General Assembly, Vienna, Austria. 2017

Janiszewski, H. A., J. B. Gaherty, G. A. Abers, H. Gao, Shoreline-crossing shear-velocity structure of the Juan de Fuca plate and Cascadia subduction zone from surface waves and receiver functions, Abstract T31D-2944 presented at the 2016 Fall Meeting, AGU, San Francisco, Calif. 2016

Abers, GA, HA Janiszewski, KM Keranen, J Li, DM Saffer, DJ Shillington, K Schindler, Seismic signals from the slab surface within and downdip of the thrust zone: blind men and the elephant?, Abstract T51I-06 presented at the 2016 Fall Meeting, AGU, San Francisco, Calif. 2016

Janiszewski, H. A., J. B. Gaherty, G. A. Abers, Surface Wave Imaging of the Cascadia Subduction Zone Using an Amphibious Dataset, 2016 Subduction Zone Observatory Workshop, Boise, ID. 2016

Janiszewski, H. A., J. B. Gaherty, Surface-Wave Imaging of the Juan de Fuca Plate and Cascadia Subduction Zone, 2016 IRIS Workshop, Vancouver, WA. 2016

Janiszewski, H. A., J. B. Gaherty, G. A. Abers, Surface-Wave Imaging of the Juan de Fuca Plate and Cascadia Subduction Zone, Abstract T44B-03 presented at the 2015 Fall Meeting, AGU, San Francisco, Calif. (Talk) 2015

Janiszewski, H. A., J. B. Gaherty, G. A. Abers, Imaging the Cascadia subduction zone with surface wave, 2015 OBS Symposium, Vancouver, WA 2015

Janiszewski, H. A., G. A. Abers, H. D. Carton, J. B. Gaherty, Imaging the Locked Zone of the Cascadia Subduction Zone Using Receiver Functions from the Cascadia Initiative, Abstract T41E-07 presented at the 2014 Fall Meeting, AGU, San Francisco, Calif. (Talk) 2014

Abers, GA, HA Janiszewski, KM Keranen, DM Saffer, DJ Shillington, Seismic imaging constraints on megathrust fault zone properties, Abstract T11A-4536 presented at the 2014 Fall Meeting, AGU, San Francisco, Calif. 2014

Janiszewski, H. A., G. A. Abers, J. B. Gaherty, H. D. Carton, Imaging the downgoing Juan de Fuca crust using receiver functions from the Cascadia Initiative, 2014 Amphibious Array Facility Workshop, Snowbird, UT. (Talk) 2014

Janiszewski, H. A., G. A. Abers, H. D. Carton, S. C. Webb, J. B. Gaherty, A. M. Trehu, Imaging the Cascadia Thrust Zone using Active and Passive-Source Seismic Data, 2014 IRIS Workshop, Sunriver, OR. 2014

Janiszewski, H. A., G. A. Abers, H. D. Carton, S. C. Webb, J. B. Gaherty, A. M. Trehu, Active and passive-source imaging of the Cascadia subduction zone using both onshore and offshore data, Abstract S12A-03 presented at the 2013 Fall Meeting, AGU, San Francisco, Calif. (Talk) 2013

- Shillington DJ, HJ Van Avendonk, MD Behn, **HA Janiszewski**, GA Abers, PB Kelemen, OE Jagoutz, Combining seismic and geochemical constraints on magmatic processes in the Aleutian arc, Abstract V12B-04 presented at the 2013 Fall Meeting, AGU, San Francisco, Calif. 2013
- Carbotte, SM, J Canales, HD Carton, S Han, JC Gibson, **HA Janiszewski**, G Horning, MR Nedimovic, GA Abers, AM Trehu, Juan de Fuca Plate Ridge-to-Trench Experiment: initial results from active source seismic imaging of the Juan de Fuca plate and Cascadia fore-arc, Abstract S12A-04 presented at the 2013 Fall Meeting, AGU, San Francisco, Calif. 2013
- Carton, HD, J Canales, **HA Janiszewski**, SM Carbotte, GA Abers, AM Trehu, MR Nedimovic, Structure of the Juan de Fuca Plate and Washington Forearc from 2D Travel Time Tomography of OBS and Land Seismometer Data along and East-West Transect, Abstract S12C-2444 presented at the 2013 Fall Meeting, AGU, San Francisco, Calif. 2013
- Levin, VL, M Shakhnovich, **HA Janiszewski**, SW Roecker, Lateral Variation in Seismic Anisotropy Beneath Western Tibet Likely Controlled by the Shape of Subducting Indian Lithosphere, Abstract T23A-2635 presented at the 2012 Fall Meeting, AGU, San Francisco, Calif. 2012
- Carbotte, SM, J Canales, HD Carton, MR Nedimovic, S Han, M Marjanovic, JC Gibson, **HA Janiszewski**, G Horning, M Delescluse, L Watremez, A Farkas, B Biescas Gorriz, G Bornstein, LB Childress, B Parker, Evolution and hydration of the Juan de Fuca crust and uppermost mantle: A plate-scale seismic investigation from ridge to trench, Abstract T13H-01 presented at the 2012 Fall Meeting, AGU, San Francisco, Calif. 2012
- Janiszewski, H. A.**, V. L. Levin, Use of synthetic receiver functions to interpret their behavior when encountering several boundaries, Abstract S51C-2247 presented at the 2011 Fall Meeting, AGU, San Francisco, Calif. 2011
- Janiszewski, H. A.**, G. A. Abers, J. A. Calkins, and D. J. Shillington, Using passive source seismic data to determine the crustal structure of the Aleutian island arc, Abstract G21B-0807 presented at the 2010 Fall Meeting, AGU, San Francisco, Calif. 2010