

Curriculum Vitae

Benjamin Kamine Holtzman

Division of Seismology, Geology and Tectonophysics
Lamont Doherty Earth Observatory (LDEO), Columbia University
61 Route 9W, Palisades, New York, 10964
benh@ldeo.columbia.edu, (1-845-365-8382)
<http://www.ldeo.columbia.edu/~benh>
<http://www.seismicsoundlab.org>
CV current as of September 24, 2020

Born in New York City, March 25, 1973

American citizen

Languages: English, French

Current employment

Lamont Research Professor (Senior Staff), LDEO

Scientist-in-Residence, Computer Music Center (Adjunct Assistant Professor, Dept. of Music)

Education

2003 Ph.D. Geophysics, University of Minnesota (UMN), David Kohlstedt, advisor

1998 M.Sc. Geology, UMN, Christian Teyssier, advisor

1995 Sc.B. magna cum laude, Geological Sciences, Brown University, Jan Tullis, advisor

Fellowships

2004-2006 Postdoctoral Fellowship, Lamont Doherty Earth Observatory, Columbia University

2004 Postdoctoral Research Fellowship, Ministre de la Recherche, Montpellier, France

2004 Chateaubriand Fellowship to École Normale Supérieure, Paris. (declined)

2004 Postdoctoral Fellowship, Carnegie Institution of Washington (declined)

2001-2002 Doctoral Dissertation Fellowship, UMN

2000-2001 *Fulbright Fellowship* to France, Laboratoire de Tectonophysique, Montpellier

1996-7 Graduate School Fellowships, UMN

Honors

2020 Seismological Society of America/ IRIS Distinguished Lecturer for 2021

2018 “Make Our Planet Great Again” Short-term visit grant to France (Univ. Montpellier)

2011 NSF *CAREER* Award, Geophysics

2000 Emmons and Goldich ('99) Prizes, Department of Geology and Geophysics, UMN

1995 Department of Geological Sciences Senior Prize, Brown University

1995 Sc.B. magna cum laude, Brown University

1995 Sigma Xi Scientific Honor Society, Brown University Chapter

Visiting researcher/professor positions

05-06/2021 Visiting Professor, Deep Springs College, CA

11/2018 Dept. of Mechanics and Civil Engineering, École Polytechnique, Montpellier, France

10/2017 Dept. of Mechanics and Civil Engineering, École Polytechnique, Montpellier, France

02/2015 Dept. de Géologie, École Normale Supérieure, Paris, France

01-04/2012 Lab. de Mécanique et Genie Civile, U. Montpellier II, France

11/2010-03/2011 Earth Resources Lab, Massachusetts Institute of Technology

2008 Earthquake Research Institute, University of Tokyo, Japan (April)

2007 Earthquake Research Institute, University of Tokyo, Japan (March-July)

2006 Earthquake Research Institute, University of Tokyo, Japan (April)

Employment History

07/2020-present LDEO, Lamont Research Professor (Senior Staff)
07/2014-06/2020 LDEO, Lamont Associate Research Professor (Senior Staff)
07/2013-2014 LDEO, Lamont Associate Research Professor (Junior Staff)
07/2010-06/2013 LDEO, Lamont Assistant Research Professor
04/2007-06/2010 LDEO, Doherty Associate Research Scientist
09/2004-03/2007 LDEO, Postdoctoral Research Fellow

Publications

37 peer reviewed publications + 2 submitted.

Number of citations: ~1972 as of September, 2020

(* = corresponding author)

Ten most representative

[p30] **B. K. Holtzman***, A. Paté, J. Paisley, F. Waldhauser, D. Repetto, “Machine learning reveals cyclic changes in seismic source spectra in Geysers geothermal field.” *Science Advances* 4, eaao2929. DOI: 10.1126/sciadv.aao2929, **2018**

[p31] **B. K. Holtzman***, A. Chrysochoos, L. Daridon. “A thermomechanical framework for analysis of microstructural evolution: Application to olivine rocks at high temperature”, *Journal of Geophysical Research*, Vol. 123, DOI: 10.1029/2018JB015613, **2018**

[p32] H.C.P. Lau, **B. K. Holtzman**. “ ‘Measures of dissipation in viscoelastic media’ extended: Towards continuous characterization across very broad geophysical time scales.” *Geophysical Research Letters*, **2019**

[p37] A. Barth, L. Karlstrom, **B. K. Holtzman**, A. Niyak, A. Paté. “Sonification and animation of multivariate data illuminates geyser eruption dynamics”, *in press, Computer Music Journal*.

[p19] C. Bellis and **B. K. Holtzman***. “Sensitivity of seismic measurements to frequency-dependent attenuation and upper mantle structure: an initial approach”, *Journal of Geophysical Research, Solid Earth*, 119, 5497-5517, doi:10.1002/2013JB010831, **2014**

[p23] **B. K. Holtzman**. “Questions on the existence, persistence and mechanical effects of a very small melt fraction in the asthenosphere”, *Geophysics, Geochemistry, and Geosystem*, doi: 10.1002/2015GC006102, January, **2016**

[p14] **B. K. Holtzman*** and J.-M. Kendall, “Organized Melt, Seismic Anisotropy, and Plate Boundary Lubrication”, article 2010GC003296, *Geophysics, Geochemistry, and Geosystems* 11, Q0AB06, doi:10.1029/2010GC003296, **2010**

[p13] D.L. Kohlstedt and **B. K. Holtzman**. “Shearing Melt Out of the Earth: An Experimentalist’s Perspective on the Influence of Deformation on Melt Extraction”, *Annual Reviews of Earth and Planetary Sciences*, vol. 37, **2009**

[p18] **B. K. Holtzman***, J. Candler, M. Turk and D. Peter, “Seismic Sound Lab: Sights, Sounds and Perception of the Earth as an Acoustic Space”, *Sound, Music, and Motion*, Lecture Notes in Computer Science, Volume 8905, pp 161-174, **2014**

[p4] **B. K. Holtzman***, D.L. Kohlstedt, M.E. Zimmerman, F. Heidelbach, T. Hiraga, and J. Hustoft. “Melt segregation and strain partitioning: Implications for seismic anisotropy and mantle flow,” *Science*

Educational Activities

Teaching

“Mechanisms and Measurement of Seismic Wave Attenuation”, graduate seminar, LDEO, Fall, 2012

“Crustal Deformation”, graduate course, co-taught with C. Scholz, Dept. of Earth & Environmental Sciences, Columbia Univ., Spring, 2010, 2015-2017

“Sonic and Visual Representation of Data”, Dept. of Music (Computer Music Center), Columbia Univ., Spring 2017-2020.

Outreach and Public Understanding of Science activities:

Director and founder of the Seismic Sound Lab, based at LDEO and the Computer Music Center, Columbia. Current activities detailed on our website: <http://www.seismicsoundlab.org>

· IRIS/Seismological Society of America Distinguished Lecturer, 2021.

· Consultant on exhibit design for the Hall of Planet Earth, Am. Museum of Natural History, NYC, 2017.

· Outreach Co-ordinator, WAVES Marie Curie International Training Network (L. Boschi, PI) · Developed and presented “SeismoDome” Special Program on Seismology at the Hayden Planetarium, American Museum of Natural History, May 2014; Nov. 2014; Jan., Nov. 2016, Nov. 2017

· Performance: “Co-seismic Piano”, an earthquake sound/jazz collaborative performance with Jason Moran (<http://www.jasonmoran.com>) as part of the “Entertaining Science” series at the Cornelia Street Cafe, NYC, Dec. 1, 2013

· Installation: B. Holtzman, J. Candler, M. Turk and D. Repetto. “Seismic Sound Lab: Sights, Sounds and Perception of the Earth as an Acoustic Space”, Installation of interactive exhibit at *Computer Music and Multi-disciplinary Research* (CMMR) conference, Marseille, France, October, 2013.

· “Sounds of Seismology” exhibits for LDEO Open House, 2006-2019, and other venues in NYC area

· Consultants for Evidence Design (Brooklyn) and the Museum of Science and Industry (Chicago), FocusTerra (ETH Zurich) on the design of exhibits on waves in the solid Earth.