

Keith D. Koper
Curriculum Vitae
13 January 2025

Present Position

Keith D. Koper, Ph.D.

Professor in Dept. of Geology & Geophysics

Director of Seismograph Stations

University of Utah

115 South 1460 East

Salt Lake City, Utah 84112

quake.utah.edu (web)

koper@seis.utah.edu (email)

(801)-585-3669 (voice)

(801)-585-5585 (fax)

@KeithKoper (Twitter/X)

Education

Ph.D. (Geophysics), Washington University, 1998

B.A. (Math, Geology, ISP), Northwestern University, 1993

Professional Experience

Professor, Dept. of Geology & Geophysics, Univ. of Utah, 2015–present

Director, Univ. of Utah Seismograph Stations, 2010–present

Guest Scientist, Los Alamos National Laboratory, 2016–2021

Assoc. Professor, Dept. of Geology & Geophysics, Univ. of Utah, 2010–2015

Assoc. Professor, Dept. of Earth & Atmos. Sciences, Saint Louis University, 2006–2010

Asst. Professor, Dept. of Earth & Atmos. Sciences, Saint Louis University, 2001–2006

Post-doc, Dept. of Geosciences, University of Arizona, 1998–2001

Academic Recognition

Celebrate U Honoree, Univ. Utah, 2016

Certificate of excellence in reviewing, *Earth Planet. Sci. Lett.*, 2012

Doornbos Prize, IUGG-SEDI, 2006

Citation from Saint Louis University for excellence in research, 2003

Tolman Geoscience Fellowship, Washington University, 1993–1995

Research Interests

array seismology; Earth's ambient seismic noise field; forensic seismology and exotic sources; rupture imaging of giant earthquakes; seismicity and tectonics of the intermountain West; mining induced earthquakes; structure and dynamics of Earth's deep interior—especially the core

Recent Professional Service

Editor-in-Chief, *The Seismic Record*, 2020–present

Member of U.S. Air Force Seismic Review Panel, 2011–present

Vice-Chair & Chair of Utah Seismic Safety Commission, 2010–2023

Member of *Eos* editorial/scientific advisory board, 2010–2021

Member of Federal Advisory Committee on Earthquake Hazard Reduction, 2019

Table of Contents

1. Teaching & Mentoring	3
1.1 Courses taught	3
1.2 Undergraduate researchers supervised	4
1.3 Graduate students supervised	4
1.4 Post-doctoral researchers supervised	5
1.5 Visiting students mentored	5
2. Research	5
2.1 Invited academic talks	5
2.2 External funding	6
2.3 Peer-reviewed journal publications	8
2.4 Other scientific publications	18
2.5 Google Scholar profile	30
3. Service	30
3.1 Professional service	30
3.2 University, college, and departmental service	32
4. Administration	33
5. Acronyms	33

1. Teaching & Mentoring

1.1 Courses taught

Seismology and Nuclear Explosions, EAS-130, SLU – An intro level science course for non-science majors that was designated as a SLU2K course, meaning that enrollment was capped at 19 students, only freshmen could register, and discovery-based learning techniques were emphasized. Taught seven times: fall 2002, fall 2003, fall 2006, fall 2007, fall 2008, fall 2009, and spring 2009.

Introduction to Earthquakes, EAS-193, SLU – An intro level science course designed to fulfill the science requirement of a college-wide core curriculum; enrollment of ~40–50 students. Taught four times: fall 2001, fall 2002, fall 2003, and fall 2005.

Earth Dynamics, EAS-437, SLU – An upper level undergraduate class designated as a required course for geoscience majors; enrollment of ~4–8 students. Taught three times: spring 2005, spring 2006, and spring 2010.

Time Series Analysis, EAS-512, SLU – A graduate course on signal processing with enrollment of ~5–10 students. Taught four times: spring 2003, spring 2005, spring 2007, spring 2009.

Exploration Seismology, EAS-551, SLU – A graduate course on refraction and reflection seismology with enrollment of ~5 students. Taught once in fall 2009.

Geoscience Journal Club, EAS-591, SLU – A seminar course in which grad students present recent scientific papers. Enrollment is typically 10–20 students. Taught three times: spring 2003, fall 2005, fall 2006.

Array Seismology, EAS-593, SLU – A special topics graduate course on array seismology with enrollment of ~5 students. Taught once in fall 2007.

Geophysical Inverse Theory, EAS-610, SLU – A graduate course on inverse theory with enrollment of ~5–10 students. Taught four times: spring 2004, spring 2006, spring 2008, and spring 2010.

Graduate Seminar - Mantle Transition Zone, EAS-619, SLU – A special topics graduate course on the mantle transition zone with enrollment of ~5 students. Taught once in spring 2002.

Dynamic Earth, GEO3100, Utah – A new core class required for undergraduate who are majoring in geosciences, with enrollment of 10-15 students. Co-taught in fall 2024, spring 2025.

Signal/Image Processing, GEO5320/6320, Utah - A course on digital signal processing that was cross-listed for advanced undergraduates and graduate students with enrollment of 10–15 students. Taught seven times: spring 2011, spring 2013, fall 2014, spring 2017, fall 2018, spring 2021, fall 2022.

Graduate Seminar - Earth's Inner Core, GEO6920-03, Utah – A special topics graduate course on the inner core with enrollment of 5–10 students. Taught once in fall 2011.

Graduate Seminar – Seismology Topics, GEO6920-17, Utah – A special topics graduate seismology seminar with enrollment of 4–5 students. Taught once in spring 2021.

Graduate Seminar – Seismology Topics, GEO6920-92, Utah – A special topics graduate

seismology seminar with enrollment of 4–5 students. Taught once in spring 2023.
Earthquake Seismology and Risk Assessment, GEO-5330/6330, Utah – A course on earthquake seismology that was cross-listed for advanced undergraduates and graduate students with enrollment of 10–15 students. Taught four times: spring 2012, spring 2014, fall 2015, spring 2018. Revised and renamed to "*Seismic Sources*" and taught in fall 2019 and fall 2021.

1.2 Undergraduate researchers supervised

Riley Murray, 2022–2023, Utah (w/ Baker)
 Zachary Claerhout, 2021–2022, Utah (w/ Burlacu)
 Avery Conner, 2019–2020, Utah (w/ Burlacu)
 Barrett Johnson, 2019–2020, Utah (w/ Burlacu)
 Alysha Armstrong, 2018–2020, Utah (w/ Burlacu)
 Jonathan Voyles, 2017–2020, Utah (w/ Burlacu)
 Nick Forbes, 2018–2019, Utah (w/ Burlacu & Jewell)
 Aini Mokhdhari, 2017–2018, Utah (w/ Burlacu)
 Arvind Parapuzha, 2016, Utah (w/ Burlacu)
 Afiq Mokhtar, 2015–2016, Utah (w/ Burlacu)
 Greg Bobetich, 2015–2016, Utah (w/ Burlacu)
 Kyler Goddard, 2014–2015, Utah (w/ Burlacu)
 Eli Workman, 2013–2014, Utah (w/ Burlacu)
 Derrick Chambers, 2013, Utah (w/ Pankow, McCarter)
 Yeou Hui Wong, 2012–2013 Utah (w/ Burlacu)
 Gavin Thomas, 2012, Utah (w/ Burlacu)
 Kevin Seats, 2007–2010, SLU
 Boston Fodor, 2005–2007, SLU
 Marina Dombrovskaya, 2003–2005, SLU
 Veronica Parker, 2002–2005, SLU
 Teresa Herrmann, 2002, SLU
 Jill Franks, 2001–2003, SLU
 Moira Pyle, 2001–2002, SLU
 Alisa Miller, 2000–2001, Arizona

1.3 Graduate students supervised

Geng, Jiaqi, Ph.D., 2024-present, Utah
 Hutchings, Sean, M.S. 2023; Ph.D. 2024–present, Utah
 Armstrong, Alysha, Ph.D., 2020–present, Utah (co-advised with Baker)
 Forbes, Nick, M.S., 2023, Utah
 Holt, Monique, Ph.D., 2021, Utah
 Guanning Pang, Ph.D., 2021, Utah
 Chase Batchelor, M.S., 2016, Utah (co-advised with Pankow)
 Derrick Chambers, M.S., 2015, Utah (co-advised with McCarter, Pankow)
 Oner Sufri, M.S., 2009, SLU; Ph.D. 2015, Utah
 Tex Kubacki, M.S., 2014, Utah (co-advised with Pankow, McCarter)
 Christine Gammans, M.S., 2013, Utah (co-advised with Pankow, Pechmann)

Kevin Kwong, M.S., 2013, Utah
Kim Dyal, M.S.S.S.T, 2012, Utah
Veronica Parker, M.S., 2010, SLU
Yan Xu, Ph.D., 2009, SLU
Zuihong (Kathy) Zou, Ph.D., 2007, SLU
Felipe Leyton, Ph.D., 2006, SLU

1.4 Post-doctoral researchers supervised

James Holt, 2019–2021, Utah
Jamie Farrell, 2014–2015, Utah
Moir Pyle, 2009–2012, SLU/Utah
Ali Fatehi, 2006–2008, SLU
Raef Abd-Elmoneam Elsayed, 2002–2003, SLU

1.5 Visiting Students Mentored

Holt, James, Ph.D. student from Univ. Liverpool, 2018–2019 (w/ Pechmann)
Zongshan Li, undergraduate student from USTC, summer of 2017
Wenying Li, undergraduate student from USTC, summer of 2016
Qiaoxia Liu, Ph.D. student from USTC, all of 2015

2. Research

2.1 Invited Academic Talks

"*Forensic Seismology in the Intermountain West of the U.S.*", Sandia National Laboratory, July 28, 2022
"Forensic Seismology in the Intermountain West of the U.S.", Stanford University, June 2, 2022
"New observations and Interpretations of the Fine-Scale Structure of Earth's Solid Inner Core", University of Utah, March 3, 2022
"Geophysical Characterization of a Small-area Collapse in the Trona Mining District of SWyoming During February 2019", USGS NEIC virtual seismology seminar, November 19, 2020.
"Analysis of the March 2020 Magna, Utah, Earthquake Sequence: Evidence for a Listric Wasatch fault", University of Oregon virtual geophysics seminar, October 23, 2020.
"Forensic Seismology in the Western U.S.", Colorado School of Mines, Golden, CO, October 10, 2019
"Using CTBTO International Monitoring System (IMS) Seismic Arrays for Basic Science", invited keynote, European Seismological Commission Meeting, Malta, Sept. 4, 2018.
"Imaging Earth's Inner Core with Seismic Arrays", Southern Methodist University, Dallas, TX, April 26, 2018.
"Mining Induced Earthquakes in Utah", Southern Methodist University, March 24, 2017.
" M_L - M_C : A Possible Depth Discriminant for Small Seismic Events Recorded at Local Distances", Los Alamos National Laboratory, Sept. 15, 2016.
"Fine-Scale Heterogeneity in Earth's Inner Core", Earth Life Science Institute, Tokyo Tech, Tokyo, Japan, Feb. 10, 2016.

"Earthquake Early Warning in the Intermountain West", Basin and Range Province Seismic Hazards Summit III, Salt Lake City, UT, Jan. 13, 2015.
"Source Physics - An Academic Perspective", 2014 Review of Monitoring Research, Albuquerque, NM, June 19, 2014.
"Seismic Network Monitoring at Yellowstone", Yellowstone Volcano Observatory consortium meeting, Mammoth Springs, MT, May 7, 2014.
"Using Seismology to Observe Ocean Storms and Storminess", NAS Workshop on Observations of Sea-Level Rise and Storminess in California, Irvine, CA, June 20, 2013.
"Rupture Imaging of Recent Giant Earthquakes", Northwestern University, Jan. 11, 2013.
"Observations of Earth's Background Seismic Radiation", New Mexico Tech, Sept. 22, 2011.
"Initial Rupture Models for the Mw 9.0 Tohoku Earthquake of 11 March 2011", Utah Geological Association, May 9, 2011, Salt Lake City.
"The M6.3 New Zealand Earthquake of Feb. 21, 2011 & M9.0 Japan Earthquake of March 11, 2011", Utah Seismic Safety Commission, April 28, 2011, Salt Lake City.
"Using Arrays to Characterize and Locate Sources of Short-Period Seismic Noise", European Geophysical Union General Assembly, April 2011, Vienna.
 University of Utah, October, 2009
 Southern Methodist University, February, 2009
 USGS - National Earthquake Information Center, December, 2008
 University of Chicago, May, 2008
 Georgia Tech. University (two talks), March, 2008
 Washington University, October, 2007
 USGS - National Earthquake Information Center, August, 2007
 University of Minnesota, May, 2007
 Saint Louis University, November, 2006
 10th SEDI Meeting, Prague, Czech Republic, July, 2006
 University of Illinois, November, 2005
 Carnegie Institution of Washington, October, 2005
 University of Kentucky, April, 2005
 Princeton University, March, 2005
 University of Missouri, Columbia, May, 2003
 Northwestern University, Spring 2002
 Lawrence Livermore National Laboratory, Summer 2002
 Washington University, Fall, 2001
 Saint Louis University, Spring, 2001
 University of Florida, Spring, 2001
 Rice University, Spring, 2001
 Purdue University, Winter, 2000
 University of Hawaii, Winter, 2000
 University of Wyoming, Winter, 2000
 Lawrence Livermore National Laboratory, Fall 1999

2.2 External funding

23. Feature Augmented Prediction of Seismic Depth for Event Screening, Air Force Research Laboratory, May 8, 2022 – July 8, 2024, subcontract #2 to Univ. Utah via ARA, \$193,617 (Keith D. Koper, PI)
22. Machine Intelligence Solutions for Nuclear Explosion Monitoring, Air Force Research Laboratory, November 1, 2020 – September 30, 2021, subcontract #1 to Univ. Utah via ARA, \$43,200 (Keith D. Koper, PI; Kristine Pankow, co-PI)
21. Operation and Maintenance of the Yellowstone Regional Seismic Network and Earthquake Information System, United States Geological Survey, G21AC10068, Feb. 1, 2021 – Jan. 31, 2026, \$2,042,840, estimated (Keith D. Koper, PI; Jamie Farrell, co-PI)
20. Relative Contributions to Long Duration Signals from Shallow Seismic Events, Air Force Research Laboratory, July 1, 2020 – June 30, 2023, \$369,971 (Keith D. Koper, PI)
19. Regional and Urban Seismic Monitoring: Wasatch Front, Utah, and Neighboring Intermountain West, United States Geological Survey, USGS-G20AP00036, Feb. 1, 2020 – Jan. 31, 2025, \$4,056,000, estimated (Keith D. Koper, PI; Kristine Pankow, co-PI)
18. Regional and Urban Seismic Monitoring: Wasatch Front, Utah, and Neighboring Intermountain West, United States Geological Survey, USGS-G15AC00028 Supplemental Award, Sept. 1, 2019 – Jan. 31, 2020, \$157,000, (Keith D. Koper, PI; Kristine Pankow, co-PI)
17. Regional and Urban Seismic Monitoring: Wasatch Front, Utah, and Neighboring Intermountain West, United States Geological Survey, USGS-G15AC00028 Supplemental Award, Oct. 1, 2018 – Sept. 30, 2019, \$170,000, (Keith D. Koper, PI; Kristine Pankow, co-PI)
16. Collaborative Research: The origin and propagation of shallow water microseisms: a multidisciplinary study at Yellowstone Lake, National Science Foundation, NSF-1760094, April 1, 2018 – March 30, 2020, \$176,563 to Utah (Jamie Farrell, Utah PI; Keith D. Koper, Utah co-PI; Robert Sohn, WHOI PI)
15. Geophysical Monitoring and Characterization of the Utah Region, Dept. of Energy, Sandia National Laboratory, January 1, 2019 – December 30, 2020, \$229,000 (Keith D. Koper, PI; Kristine Pankow, co-PI)
14. Mapping Fine-Scale Structure in Earth's Inner Core with a Global Arrays of Seismic Arrays, National Science Foundation, EAR-1722542, July 1, 2017 – June 30, 2020, \$270,000 (Keith D. Koper, PI)
13. Evaluation of M_L - M_C as a Possible Depth Discriminant at Local Distances, Air Force Research Laboratory, FA9453-17-C-0022, June 1, 2017 – May 30, 2020, \$324,931 (Keith D. Koper, PI)
12. MIS Analysis and DINSAR Measurements – Tools for Improving Mine Ground Control Safety, National Institute for Occupational Safety and Health, 200-2016-90240, Sept. 1, 2016 – Oct. 31, 2021, \$1,225,764, (Michael K. McCarter, PI; Jessica Wempen, co-PI; Keith D. Koper co-PI).

11. Operation and Maintenance of the Yellowstone Regional Seismic Network and Earthquake Information System, United States Geological Survey, USGS-G16AC00029, Feb. 1, 2016 – Jan. 31, 2019, \$914,205, (Keith D. Koper, PI; Jamie Farrell, co-PI)
10. Regional and Urban Seismic Monitoring: Wasatch Front, Utah, and Neighboring Intermountain West, United States Geological Survey, USGS-G15AC00028, Feb. 1, 2015 – Jan. 31, 2020, \$3,962,400, (Keith D. Koper, PI; Kristine Pankow, co-PI)
9. Operation and Maintenance of the Yellowstone Regional Seismic Network and Earthquake Information System, United States Geological Survey, USGS-G13AC00018, Feb. 1, 2013 – Jan. 31, 2016, \$804,037, (Keith D. Koper, PI)
8. Regional and Urban Seismic Monitoring: Wasatch Front, Utah, and Neighboring Intermountain West, United States Geological Survey, USGS-G10AC00085, 2010 – 2015, \$3,153,149, (Keith D. Koper, PI; Kristine Pankow, co-PI)
7. Upgrades to Earthquake Monitoring Systems in the Utah Region, United States Geological Survey, USGS-G09AC00467, \$458,025, (Kristine Pankow, PI; Keith D. Koper, co-PI)
6. Location and Characterization of Ambient Seismic Noise Using USArray, National Science Foundation, EAR-0951558, 2010–2013, \$243,656, (Keith D. Koper, PI)
5. Seismic Imaging of the Inner Core Boundary region, National Science Foundation, EAR-0537438, 2006–2010, \$193,871, (Keith D. Koper, PI)
4. Modeling P Wave Multipathing at Regional Distances (13° – 30°) in Southeast Asia, Air Force Research Laboratory, FA8718-06-C-0003, 2005–2007, \$149,301 (Keith D. Koper, PI)
3. Mapping the Fine Structure of Earth’s Inner Core with Seismic Array Data, National Science Foundation, EAR-0229103, 2003–2006, \$147,937 (Keith D. Koper, PI)
2. Upgrade of Computer Facilities for the Seismology Research Group at Saint Louis University, National Science Foundation, EAR-0214259, 2002–2005, \$67,425, Keith D. Koper (PI), Lupei Zhu (co-PI), Robert B. Herrmann (co-PI), Brian J. Mitchell (co-PI), Timothy M. Kusky (co-PI)
1. Analysis of Steep Angle Seismic Reflections from Earth’s Inner and Outer Core, National Science Foundation, EAR0087330, 2000–2003, \$80,196 (Keith D. Koper, PI)

2.3 Peer reviewed journal publications

([†]indicates student or post-doc mentoring by Dr. Koper)

109. [†]Hutchings, S. J., K. D. Koper, R. Burlacu, Q. Zeng, F.-C. Lin, and G. Zandt (2025). Upper mantle earthquakes along the edge of the Wyoming craton, *Geophys. Res. Lett.*, under review.
108. [†]Hutchings, S. J., A. Pitarka, and K. D. Koper (2025). Simulating broadband (0–3 Hz) ground motion for the 2020 M_w 5.7 Magna, Utah, earthquake using the Wasatch Front Community Velocity Model with stochastic velocity perturbations and topography, *Seism. Res. Lett.*, under review.

107. [†]Hutchings, S. J., A. Pitarka, K. D. Koper, R. Burlacu, and J. R. [†]Voyles (2025). Simulating high-frequency seismograms in realistic Earth models to better understand source discrimination based on differential magnitudes ($M_L - M_C$), *Seism. Res. Lett.*, under review.
106. [†]Armstrong, A. D., B. Baker, and K. D. Koper (2025). Feature-based magnitude estimates for small earthquakes in the Yellowstone region, *Bull. Seism. Soc. Am.*, under review.
105. Vidale, J. E., W. Wang, R. Wang, G. [†]Pang, and K. D. Koper (2025). Annual-scale variability in both the rotation rate and near-surface of Earth's inner core, *Nat. Geosci.*, in press.

—2024 Peer-Reviewed Journal Publications—

104. Koper, K. D., R. Burlacu, A. D. [†]Armstrong, R. B. Hermann (2024), Classifying small earthquakes, explosions and collapses in the western United States using physics-based features and machine learning, *Geophys. J. Inter.*, 239, 1257–1270.
103. Wang, W., J. E. Vidale, G. [†]Pang, K. D. Koper, and R. Wang (2024). Inner core backtracking by seismic waveform change reversals, *Nature*, 631, 340–343.
102. Koper, K. D., R. Burlacu, R. [†]Murray, B. Baker, R. Tibi, and A. Mueen (2024). Inferring the focal depths of small earthquakes in southern California using physics-based waveform features, *Bull. Seism. Soc. Am.*, 114, 2376–2396.

—2023 Peer-Reviewed Journal Publications—

101. [†]Armstrong, A., Z. [†]Claerhout, B. Baker, and K. D. Koper (2023). A deep learning phase picker with calibrated Bayesian-derived uncertainties for earthquakes in the Yellowstone volcanic region, *Bull. Seism. Soc. Am.*, 113, 2323–2344.
100. [†]Pang, G., K. D. Koper, S.-M. [†]Wu, W. Wang, M. Lasbleis, and G. Euler (2023). Enhanced inner core fine-scale heterogeneity toward the Earth's center, *Nature*, 620, 570–575.
99. Farrell, J., K. D. Koper, and R., Sohn (2023). The relationship between wind, waves, bathymetry, and microseisms in Yellowstone Lake, Yellowstone National Park, *J. Geophys. Res.*, 123, e2022JB025943.

—2022 Peer-Reviewed Journal Publications—

98. Dzubay, A., J. R. Moore, R. Finnegan, E. K. Jensen, P. R. Geimer, and K. D. Koper (2022). Rotational components of normal modes measured at a natural sandstone tower (Kane Springs Canyon, Utah, U.S.A.), *Seismic Record*, 2, 260–268.
97. [†]Wu, S.-M., G. [†]Pang, and K. D. Koper (2022). A search for large-scale variations in the fine-scale structure of Earth's inner core, *J. Geophys. Res.*, 127, e2022JB024420.
96. Kong, Q., R. Wang, W. R. Walter, M. Pyle, K. Koper, and B. Schmandt (2022). Combining deep learning with physics based features in explosion-earthquake

- discrimination, *Geophys. Res. Lett.*, 49, e2022GL098645, doi:10.1029/2022GL098645.
95. †Pang, G., and K. D. Koper (2022). Excitation of Earth's inner core rotational oscillation during 2001–2003 captured by earthquake doublets, *Earth Planet. Sci. Lett.*, 584, 117504, doi:10.1016/j.epsl.2022.117504.
 94. †Holt, J., J. C. Pechmann, and K. D. Koper (2022). Recalibration of the local magnitude (M_L) scale for earthquakes in the Yellowstone volcanic region, *Bull. Seism. Soc. Am.*, 112, 905–920, doi:10.1785/0120210240.
- 2021 Peer-Reviewed Journal Publications—
93. Wang, R., B. Schmandt, M. †Holt, and K. D. Koper (2021). Advancing local distance discrimination of explosions and earthquakes with joint P/S and M_L - M_C classification, *Geophys. Res. Lett.*, e2021GL09572148, doi:10.1029/2021GL095721.
 92. Li, J., M. Chen, K. D. Koper, T. Zhou, S. Li, G. Li (2021). FastTrip: A fast MPI-accelerated 1D triplication waveform inversion package for constraining mantle transition zone discontinuities, *Seism. Res. Lett.*, 92, 2647–2656, doi:10.1785/0220200475.
 91. Gold, R. D., J. Bormann, and K. D. Koper (2021). Preface to the focus section of the 2020 Intermountain West earthquakes, *Seism. Res. Lett.*, 92, 636–639, doi:10.1785/0220210001.
 90. Tibi, R., P. Hammond, R. Brogan, C. J. Young, and K. D. Koper (2021). Deep learning denoising applied to regional distance seismic data in Utah, *Bull. Seism. Soc. Am.*, 111, 775–790, doi:10.1785/0120200292.
 89. †Holt, J., K. M. Whidden, K. D. Koper, K. L. Pankow, K. Mayeda, J. C. Pechmann, B. Edwards, R. Gök, and W. R. Walter (2021). Towards robust and routine determination of M_w for small earthquakes: Application to the 2020 M_w 5.7 Magna, Utah, seismic sequence, *Seism. Res. Lett.*, 92, 725–740, doi:10.1785/0220200320.
 88. Baker, B., M. M. †Holt, K. L. Pankow, K. D. Koper, and J. Farrell (2021). Monitoring the 2020 Magna, Utah, earthquake sequence with nodal seismometers and machine learning, *Seism. Res. Lett.*, 92, 787–801, doi:10.1785/0220200316.
 87. Pankow, K. L., J. Rusho, J. C. Pechmann, J. M. Hale, K. Whidden, R. Sumsion, J. †Holt, M. Mesimeri, D. Wells, and K. D. Koper (2021). Responding to the 2020 Salt Lake Valley, Utah, earthquake sequence during the COVID-19 pandemic shutdown, *Seism. Res. Lett.*, 92, 6–16, doi:10.1785/0220200265.
 86. Koper, K. D., M. M. †Holt, J. R. †Voyles, R. Burlacu, M. L. Pyle, R. Wang, and B. Schmandt (2021). Discrimination of small earthquakes and buried single-fired chemical explosions at local distances (<150 km) in the Western U. S. from comparison of local magnitude (M_L) and coda duration magnitude (M_C), *Bull. Seism. Soc. Am.*, 111, 558–570, doi:10.1785/0120200188.
 85. Johnson, S. A., D. J. A. Chambers, M. S. Boltz, and K. D. Koper (2021). Application

of a convolutional neural network for seismic phase picking of mining-induced seismicity, *Geophys. J. Inter.*, 224, 230–240, doi:10.1093/gji/ggaa449.

—2020 Peer-Reviewed Journal Publications—

84. †Pang, G., K. D. Koper, M. Mesimeri, K. L. Pankow, B. Baker, J. Farrell, J. †Holt, P. Roberson, R. Burlacu, J. C. Pechmann, K. Whidden, M. M. †Holt, A. Allam, and C. DuRoss (2020), Evidence for a listric Wasatch fault from the 2020 Magna, Utah, earthquake sequence, *Geophys. Res. Lett.*, 47, e2020GL089798, doi:10.1029/2020GL089798.
83. Anthony, R. E., A. T. Ringler, D. C. Wilson, M. Bahavar, and K. D. Koper (2020), How processing methodologies can distort and bias power spectral density estimates of seismic background noise, *Seism. Res. Lett.*, 91, 1694–1706, doi:10.1785/0220190212.
82. Xu, Y., Koper, K. D., Burlacu, R., Herrmann, R. B., and Li, D.-N. (2020), A new uniform moment tensor catalog for Yunnan, China, from January 2000 through December 2014, *Seism. Res. Lett.*, 91, 891–900, doi:10.1785/0220190242.
81. Pankow, K. L., Stickney, M., Ben-Horin, J. Y., Litherland, M., Payne, S., Koper, K. D., Bilek, S. L., and Bogolub, K. (2020), Regional seismic network monitoring in the Eastern Intermountain West, *Seism. Res. Lett.*, 91, 631–646, doi:10.1785/0220190209.
80. Koper, K. D. (2020), The importance of regional seismic networks in monitoring nuclear test-ban treaties, *Seism. Res. Lett.*, 91, 573–580, doi:10.1785/0220190160.
79. Wu, S.-M., F.-C. Lin, J. Farrell, B. Shiro, L. Karlstrom, P. Okubo, and K. D. Koper (2020), Spatiotemporal seismic structure variations associated with the 2018 Kilauea eruption based on temporary dense geophone arrays, *Geophys. Res. Lett.*, 47, doi:10.1029/2019GL086668.
78. †Voyles, J., M. M. †Holt, J. M. Hale, K. D. Koper, R. Burlacu, and D. J. A. Chambers (2020), A new catalog of explosion source parameters in the Utah region with application to M_L - M_C based depth discrimination at local distances, *Seism. Res. Lett.*, 91, 222–236, doi:10.1785/0220190185.

—2019 Peer-Reviewed Journal Publications—

77. †Holt, M. M., K. D. Koper, W. Yeck, S. D’Amico, Z. Li, J. M. Hale, and R. Burlacu (2019), On the portability of M_L - M_C as a depth discriminant for small seismic events recorded at local distances, *Bull. Seismol. Soc. Am.*, 109, 1661–1673.
76. Ye, L., T. Lay, H. Kanamori, and K. D. Koper (2019), Reply to: Comment by Rodrigo Cienfuegos on “Rapidly Estimated Seismic Source Parameters for the 16 September 2015 Illapel, Chile, M_w 8.3 Earthquakes” by Lingling Ye, Thorne Lay, Hiroo Kanamori, and Keith D. Koper, *Pure Appl. Geophys.*, 176, 2753, doi:10.1007/s00024-019-02214-3.
75. †Pang, G., K. D. Koper, J. M. Hale, R. Burlacu, J. Farrell, and R. B. Smith (2019),

The 2017–2018 Maple Creek earthquake sequence in Yellowstone National Park, USA, *Geophys. Res. Lett.*, *46*, 4653–4663, doi:10.1029/2019GL082376.

—2018 Peer-Reviewed Journal Publications—

74. Attanayake, J., C. Thomas, V. F. Cormier, M. S. Miller, and K. Koper (2018), Irregular transition layer beneath the Earth’s inner core boundary from observations of antipodal PKIKP and PKIIKP waves, *Geochem. Geophys. Geosyst.*, *19*, 3607–3622, doi:10.1029/2018GC007562.
73. Tibi, R., K. D. Koper, K. L. Pankow, and C. J. Young (2018), Discrimination of anthropogenic events and tectonic earthquakes in Utah using a quadratic function approach with local-distance amplitude ratios, *Bull. Seism. Soc. Am.*, *108*, 2788–2800. doi:10.1785/0120180024.
72. Koper, K. D., K. L. Pankow, J. C. Pechmann, J. M. Hale, R. Burlacu, W. L. Yeck, H. M. Benz, R. B. Herrmann, D. T. Trugman, and P. M. Shearer (2018), Afterslip enhanced aftershock activity during the 2017 earthquake sequence near Sulphur Peak, Idaho, *Geophys. Res. Lett.*, *45*, 5352–5361, doi:10.1029/2018GL078196.
71. †Pang, G., K. D. Koper, M. C. Stickney, J. C. Pechmann, R. Burlacu, K. L. Pankow, S. Payne, and H. M. Benz (2018), Seismicity in the Challis, Idaho region, January 2014 – May 2017: Late aftershocks of the 1983 M_s 7.3 Borah Peak earthquake, *Seism. Res. Lett.*, *89*, 1366–1378, doi:10.1785/0220180058.
70. Tibi, R., K. D. Koper, K. L. Pankow, and C. J. Young (2018), Depth discrimination using Rg-to-Sg spectral amplitude ratios for seismic events in Utah recorded at local distances, *Bull. Seism. Soc. Am.*, *108*, 1355–1368, doi:10.1785/0120170257.

—2017 Peer-Reviewed Journal Publications—

69. Xu, Y., K. D. Koper, and R. Burlacu (2017), Lakes as a source of short-period (0.5–2 s) microseisms, *J. Geophys. Res. Solid Earth*, *122*, 8241–8246.
68. Lay, T., L. Ye, K. D. Koper, and H. Kanamori (2017), Assessment of teleseismically-determined source parameters for the April 25, 2015 M_w 7.9 Gorkha, Nepal earthquake and the May 12, 2015 M_w 7.2 aftershock, *Tectonophysics*, *714–715*, 4–20, doi:10.1016/j.tecto.2016.05.023.
67. Gal, M., A. M. Reading, S. P. Ellingsen, K. D. Koper, and R. Burlacu (2017), Full wavefield decomposition of high frequency secondary microseisms reveals distinct arrival azimuths for Rayleigh and Love waves, *J. Geophys. Res. Solid Earth*, *122*, 4660–4675, doi:10.1002/2017JB014141.
66. Zhang, H., K. D. Koper, K. Pankow, and Z. Ge (2017), Imaging the 2016 M_w 7.8 Kaikoura, New Zealand earthquake with teleseismic P waves: A cascading rupture across multiple faults, *Geophys. Res. Lett.*, *44*, 4790–4798, doi:10.1002/2017GL073801.
65. Moore, J. R., K. L. Pankow, S. R. Ford, K. D. Koper, J. M. Hale, J. Aaron, and C. F. Larsen (2017), Dynamics of the Bingham Canyon rock avalanches (Utah, USA) resolved from topographic, seismic, and infrasound data, *J. Geophys. Res. Earth Surf.*, *122*, 615–640, doi:10.1002/2016JF004036.

64. Workman, E., F.-C. Lin, and K. D. Koper (2017), Determination of Rayleigh wave ellipticity across the Earthscope Transportable Array using single-station and array-based processing of ambient seismic noise, *Geophys. J. Inter.*, *208*, 234–245, doi:10.1093/gji/ggw381.

—2016 Peer-Reviewed Journal Publications—

63. Koper, K.D., J. C. Pechmann, R. Burlacu, K. L. Pankow, J. M. Hale, P. Roberson, and M. K. McCarter (2016), Magnitude based discrimination of manmade seismic events from naturally occurring earthquakes in Utah, USA, *Geophys. Res. Lett.*, *43*, 10,638–10,645, doi:10.1002/2016GL070742.
62. Moore, J. R., M. S. Thorne, K. D. Koper, J. R. Wood, K. †Goddard, R. Burlacu, S. Doyle, E. Stanfield, and B. White (2016), Anthropogenic sources stimulate resonance of a natural rock bridge, *Geophys. Res. Lett.*, *43*, 9669–9676, doi:10.1002/2016GL070088.
61. Lay, T., L. Ye, C. J. Ammon, A. Dunham, and K. D. Koper (2016), The 2 March 2016 Wharton Basin M_w 7.8 earthquake: High stress drop north-south strike-slip rupture in the diffuse oceanic deformation zone between the Indian and Australian Plates, *Geophys. Res. Lett.*, *43*, 7937–7945, doi:10.1002/2016GL069931.
60. †Liu, Q., K. D. Koper, R. Burlacu, S. Ni, F. Wang, C. Zou, Y. Wei, M. Gal, and A. Reading (2016), Source locations of teleseismic P, SV, and SH waves observed in microseisms recorded by a large aperture seismic array in China, *Earth Planet. Sci. Lett.*, *449*, 39–47, doi:10.1016/j.epsl.2016.05.035.
59. Gal, M., A. M. Reading, S. P. Ellingsen, K. D. Koper, R. Burlacu, and S. J. Gibbons (2016), Deconvolution enhanced direction of arrival estimation using 1- and 3-component seismic arrays applied to ocean induced microseisms, *Geophys. J. Inter.*, *206*, 345–359, doi: 10.1093/gji/ggw150.
58. Ye, L., T. Lay, H. Kanamori, and K. D. Koper (2016), Rapidly estimated seismic source parameters for the 16 September 2015 Illapel, Chile M_w 8.3 earthquake, *Pure Appl. Geophys.*, *173*, 321–332, doi:10.1007/s00024-015-1202-y.

—2015 Peer-Reviewed Journal Publications—

57. Huang, H.-H., F. C. Lin, V. C. Tsai, and K. D. Koper (2015), High-resolution probing of inner core structure with seismic interferometry, *Geophys. Res. Lett.*, *42*, 10622–10630, doi:10.1002/2015GL066390.
56. He, X., S. Ni, L. Ye, T. Lay, Q. †Liu, and K. D. Koper (2015), Rapid seismological quantification of source parameters of the 25 April 2015 Nepal earthquake, *Seism. Res. Lett.*, *86*, 1568–1577, doi:10.1075/0220150131.
55. †Chambers, D. J. A., K. D. Koper, K. L. Pankow, and M. K. McCarter (2015), Detecting and characterizing coal mine related seismicity in the Western U.S. using subspace methods, *Geophys. J. Inter.*, *203*, 1388–1399.
54. Gal, M., A. M. Reading, S. P. Ellingsen, L. Gualtieri, K. D. Koper, R. Burlacu, H. Tkalcic, and M. A. Hemer (2015), The frequency dependence and locations of short period microseisms generated in the Southern Ocean and west Pacific, *J. Geophys. Res. Solid Earth*, *120*, 5764–5781, doi:10.1002/2015JB012210.

53. [†]Pyle, M. L., K. D. Koper, G. G. Euler, and R. Burlacu (2015), Location of high-frequency P-wave microseismic noise in the Pacific Ocean using multiple small aperture arrays, *Geophys. Res. Lett.*, **42**, 2700–2708, doi:10.1002/2015GL063530.
52. Koper, K. D., and R. Burlacu (2015), The fine structure of double-frequency microseisms recorded by seismometers in North America, *J. Geophys. Res. Solid Earth*, **120**, 1677–1691, doi:10.1002/2014JB011820.

—2014 Peer-Reviewed Journal Publications—

51. [†]Sufri, O., K. D. Koper, R. Burlacu, and B. de Foy (2014), Microseisms from Superstorm Sandy, *Earth Planet. Sci. Lett.*, **402**, 324–336.
50. Ye, L., T. Lay, K. D. Koper, R. Smalley Jr., L. Rivera, M. G. Bevis, A. F. Zakrajsek, and F. N. Teferle (2014), Complementary slip distributions of the August 4, 2003 M_w 7.6 and November 17, 2013 M_w 7.8 South Scotia Ridge earthquakes, *Earth Planet. Sci. Lett.*, **401**, 215–226.
49. Gal, M., A. M. Reading, S. P. Ellingsen, K. D. Koper, S. J. Gibbons, and S. P. Näsholm (2014), Improved implementation of the fk and Capon methods for array analysis of seismic noise, *Geophys. J. Inter.*, **198**, 1045–1054.
48. [†]Kubacki, T., K. D. Koper, K. L. Pankow, and M. K. McCarter (2014), Changes in mining induced seismicity before and after the 2007 Crandall Canyon mine collapse, *J. Geophys. Res. Solid Earth*, **119**, 4876–4889, doi:10.1002/2014JB011037.
47. Reading, A. M., K. D. Koper, M. Gal, L. S. Graham, H. Tkalčić, and M. A. Hemer (2014), Dominant seismic noise sources in the Southern Ocean and West Pacific, 2000–2012, recorded at the Warramunga Seismic Array, Australia, *Geophys. Res. Lett.*, **41**, 3455–3463, doi:10.1002/2014GL060073.
46. Pankow, K. L., J. R. Moore, J. M. Hale, K. D. Koper, T. M. [†]Kubacki, K. M. Whidden, and M. K. McCarter (2014), Massive landslide at Utah copper mine generates wealth of geophysical data, *GSA Today*, **24**, 4–9, doi:10.1130/GSATG191A.1.

—2013 Peer-Reviewed Journal Publications—

45. Yue, H., T. Lay, J. T. Freymueller, K. Ding, L. Rivera, N. A. Ruppert, and K. D. Koper (2013), Supershear rupture of the 5 January 2013 Craig, Alaska (M_w 7.5) earthquake, *J. Geophys. Res.*, **118**, 5903–5919, doi:10.1002/2013JB010594.
44. Ye, L., T. Lay, H. Kanamori, and K. D. Koper (2013), Energy release of the 2013 M_w 8.3 Sea of Okhotsk earthquake and deep slab stress heterogeneity, *Science*, **341**, 1380–1384.
43. [†]Thomas, G., K. D. Koper, R. Burlacu, and D. Drobeck (2013), A model of ambient seismic noise recorded by the Utah regional network of strong-motion seismometers, *Seism. Res. Lett.*, **84**, 759–771, doi:10.1785/0220130026.
42. Koper, K. D., and C. J. Ammon (2013), Planning a global array of broadband seismic arrays, *EOS Trans., AGU*, **94**, p. 300.
41. Lay, T., L. Ye, H. Kanamori, Y. Yamazaki, K. F. Cheung, K. [†]Kwong, and K. D. Koper (2013), The October 28, 2012 M_w 7.8 Haida Gwaii underthrusting earthquake

and tsunami: Slip partitioning along the Queen Charlotte Fault transpressional plate boundary, *Earth Planet. Sci. Lett.*, 375, 57–70.

—2012 Peer-Reviewed Journal Publications—

40. Yue, H., T. Lay, and K. D. Koper (2012), En echelon and orthogonal fault ruptures of the 11 April 2012 great intraplate earthquakes, *Nature*, 490, 245–249.
39. Lay, T., H. Kanamori, C. J. Ammon, K. D. Koper, A. R. Hutko, L. Ye, H. Yue, and T. M. Rushing (2012), Depth-varying rupture properties of subduction zone megathrust faults, *J. Geophys. Res.*, 117, B04311, doi:10.1029/2011JB009133.
38. [†]Sufri, O., K. D. Koper, and T. Lay (2012), Along-dip seismic radiation segmentation during the 2007 M_w 8.0 Pisco, Peru earthquake, *Geophys. Res. Lett.*, 39, L08311, doi:10.1029/2012GL051316.
37. Koper, K. D., A. R. Hutko, T. Lay, and O. [†]Sufri (2012), Imaging short-period seismic radiation from the 27 February 2010 Chile (M_w 8.8) earthquake by back-projection of P, PP, and PKIKP waves, *J. Geophys. Res.*, 117, B02308, doi:10.1029/2011JB008576.

—2011 Peer-Reviewed Journal Publications—

36. Koper, K. D., A. R. Hutko, T. Lay, C. J. Ammon, and H. Kanamori (2011), Frequency-dependent rupture process of the 2011 M_w 9.0 Tohoku earthquake: Comparison of short-period P wave backprojection images and broadband seismic rupture models, *Earth Planets Space*, 63, 599–602.
35. Koper, K. D., A. R. Hutko, and T. Lay (2011), Along-dip variation of teleseismic short-period radiation from the 11 March 2011 Tohoku earthquake (M_w 9.0), *Geophys. Res. Lett.*, 38, L21309, doi:10.1029/2011GL049689.

—2010 Peer-Reviewed Journal Publications—

34. Koper K. D., and V. L. [†]Hawley (2010), Frequency dependent polarization analysis of ambient seismic noise recorded at a broadband seismometer in the Central United States, *Earthquake Science*, 23, 439–447.
33. [†]Xu, Y., R. B. Herrmann, and K. D. Koper (2010), Source parameters of regional small-to-moderate earthquakes in the Yunnan-Sichuan region of China, *Bull. Seism. Soc. Am.*, 100, 2518–2531.
32. Lay T., C. J. Ammon, H. Kanamori H., L. Rivera, K. D. Koper, and A. R. Hutko (2010), The 2009 Samoa-Tonga great earthquake triggered doublet, *Nature*, 466, 964–968.
31. Lay, T., C. J. Ammon, H. Kanamori, K. D. Koper, O. [†]Sufri, and A. R. Hutko (2010), Teleseismic inversion for rupture process of the 27 February 2010 Chile (M_w 8.8) earthquake, *Geophys. Res. Lett.*, 37, L13301, doi:10.1029/2010GL043379.
30. Koper, K. D., K. [†]Seas, and H. M. Benz (2010), On the composition of Earth's short period seismic noise field, *Bull. Seism. Soc. Am.*, 100, 606–617.
29. [†]D'Amico, S., K. D. Koper, R. B. Herrmann, A. Akinci, and L. Malagnini (2010), Imaging the rupture of the M_w 6.3 April 6, 2009 L'Aquila, Italy earthquake using back-projection of teleseismic P-waves, *Geophys. Res. Lett.*, 37, L03301,

doi:10.1029/2009GL042156.

—2009 Peer-Reviewed Journal Publications—

28. Koper, K. D., B. de Foy, and H. M. Benz (2009), Composition and variation of noise recorded at the Yellowknife seismic array, 1991–2007, *J. Geophys. Res.*, **114**, B10310, doi:10.1029/2009JB006307.
27. †Xu, Y., and K. D. Koper (2009), Detection of a ULVZ at the base of the mantle beneath the Northwest Pacific, *Geophys. Res. Lett.*, **36**, L17301, doi:10.1029/2009GL039387.
26. Koper, K. D., and A. †Fatehi (2009), Array analysis of regional distance P-coda in south Asia, *Bull. Seism. Soc. Am.*, **99**, 2509–2522.
25. †Xu, Y., K. D. Koper, O. †Sufri, L. Zhu, and A. R. Hutko (2009), Rupture imaging of the M_w 7.9 12 May 2008 Wenchuan earthquake from back projection of teleseismic P waves, *Geochem. Geophys. Geosyst.*, **10**, Q04006, doi:10.1029/2008GC002335.

—2008 Peer-Reviewed Journal Publications—

24. Koper, K. D., R. B. Herrmann, and H. M. Benz (2008), Overview of open seismic data from the North Korea event of 9 October 2006, *Seism. Res. Lett.*, **79**, 178–185.
23. †Zou, Z., K. D. Koper, and V. F. Cormier (2008), The structure of the base of the outer core inferred from seismic waves diffracted around the inner core, *J. Geophys. Res.*, **113**, B05314, doi:10.1029/2007JB005316.
22. Peng, Z., K. D. Koper, J. E. Vidale, F. †Leyton, and P. Shearer (2008), Inner-core fine-scale structure from scattered waves recorded by LASA, *J. Geophys. Res.*, **113**, B0931, doi:10.1029/2007JB005412.
21. Koper, K. D., and B. de Foy (2008), Seasonal anisotropy in short-period seismic noise recorded in South Asia, *Bull. Seism. Soc. Am.*, **98**, 3033–3045.

—2007 Peer-Reviewed Journal Publications—

20. †Zou, Z., F. †Leyton, and K. D. Koper (2007), Partial melt in the lowermost mantle near the base of a plume, *Geophys. J. Int.*, **168**, 809–817.
19. †Leyton, F., and K. D. Koper (2007), Using PKiKP coda to determine inner core structure: 1. Synthesis of coda envelopes using single-scattering theories, *J. Geophys. Res.*, **112**, B05316, doi:10.1029/2006JB004369.
18. †Leyton, F., and K. D. Koper (2007), Using PKiKP coda to determine inner core structure: 2. Determination of Q_C , *J. Geophys. Res.*, **112**, B05317, doi:10.1029/2006JB004370.
17. Flanagan, M., S. C. Myers, and K. D. Koper (2007), Regional traveltime uncertainty and seismic location improvement using a three-dimensional a priori velocity model, *Bull. Seism. Soc. Am.*, **97**, 804–825.

—2005 Peer-Reviewed Journal Publications—

16. Koper, K. D., and M. †Dombrovskaya (2005), Seismic properties of the inner core boundary from PKiKP/P amplitude ratios, *Earth Planet. Sci. Lett.*, **237**, 680–694.
15. †Leyton, F., K. D. Koper, L. Zhu, and M. †Dombrovskaya (2005), On the lack of

seismic discontinuities in the inner core, *Geophys. J. Inter.*, 162, 779–786.

—2004 Peer-Reviewed Journal Publications—

14. Koper, K. D., and M. L. [†]Pyle (2004), Observations of PKiKP/PcP amplitude ratios and implications for Earth structure at the boundaries of the liquid core, *J. Geophys. Res.*, 109, B03301, doi:10.1029/2003JB002750.
13. Koper, K. D., J. M. [†]Franks, and M. [†]Dombrovskaya (2004), Evidence for small-scale heterogeneity in Earth's inner core from a global study of PKiKP coda waves, *Earth Planet. Sci. Lett.*, 228, 227–241.

—2003 Peer-Reviewed Journal Publications—

12. Koper, K. D., M. L. [†]Pyle, and J. M. [†]Franks (2003), Constraints on aspherical core structure from PKiKP-PcP differential travel times, *J. Geophys. Res.*, 108 (B3), 2168, doi:10.1029/2002JB001995.
11. Koper, K. D., T. C. Wallace, and R. C. Aster (2003), Seismic recordings of the Carlsbad, New Mexico pipeline explosion of 19 August 2000, *Bull. Seism. Soc. Am.*, 93, 1427–1432.
10. Robertson Maurice, S. D., D. A. Wiens, K. D. Koper, and E. Vera (2003), Crustal and upper mantle structure of southernmost South America inferred from regional waveform inversion, *J. Geophys. Res.*, 108 (B1), 2038, doi:10.1029/2002JB001828.

—2002 Peer-Reviewed Journal Publications—

9. Koper, K. D., T. C. Wallace, R. E. Reinke, and J. A. Leverette (2002), Empirical scaling laws for truck bomb explosions based on seismic and acoustic data, *Bull. Seism. Soc. Am.*, 92, 527–542.

—2001 Peer-Reviewed Journal Publications—

8. Al-Eqabi, G. I., K. D. Koper, and M. E. Wyssession (2001), Source characterization of Nevada Test Site explosions and Western U.S. earthquakes using L_g waves: Implications for regional source discrimination, *Bull. Seism. Soc. Am.*, 91, 140–153.
7. Koper, K. D., T. C. Wallace, S. R. Taylor, and H. E. Hartse (2001), Forensic seismology and the sinking of the Kursk, *EOS Trans., AGU*, 82, pp. 37,45–46.
6. Koper, K. D., T. C. Wallace, S. R. Taylor, and H. E. Hartse (2001), Reply to Comment by J. Northrop, Forum, *EOS Trans., AGU*, 82, pp. 244.

—2000 Peer-Reviewed Journal Publications—

5. Koper, K. D. and D. A. Wiens (2000), The waveguide effect of metastable olivine in slabs, *Geophys. Res. Lett.*, 27, 573–576.

—1999 Peer-Reviewed Journal Publications—

4. Koper, K. D., T. C. Wallace, and D. Hollnack (1999), Seismic analysis of the 7 August 1998 truck-bomb blast at the American embassy in Nairobi, Kenya, *Seism. Res. Lett.*, 70, 512–521.
3. Koper, K. D., D. A. Wiens, L. M. Dorman, J. A. Hildebrand, and S. C. Webb (1999), Constraints on the origin of slab and mantle wedge anomalies in Tonga from the ratio

- of S to P velocities, *J. Geophys. Res.*, *104*, 15089–15104.
2. Koper, K. D., M. E. Wyss, and D. A. Wiens (1999), Multimodal function optimization with a niching genetic algorithm: A seismological example, *Bull. Seism. Soc. Am.*, *89*, 978–988.

—1998 Peer-Reviewed Journal Publications—

1. Koper, K. D., D. A. Wiens, L. M. Dorman, J. A. Hildebrand, and S. C. Webb (1998), Modeling the Tonga slab: Can travel time data resolve a metastable olivine wedge?, *J. Geophys. Res.*, *103*, 30079–30100.

2.4 Other scientific publications (some peer-reviewed or lightly reviewed)

—2024 Other Scientific Publications—

136. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2024, quarterly report of Univ. Utah Seismograph Stations, pp. 1–17.
135. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2024, quarterly report of Univ. Utah Seismograph Stations, pp. 1–42.
134. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2024, quarterly report of Univ. Utah Seismograph Stations, pp. 1–20.
133. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2024, quarterly report of Univ. Utah Seismograph Stations, pp. 1–51.
132. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2024, quarterly report of Univ. Utah Seismograph Stations, pp. 1–24.
131. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2024, quarterly report of Univ. Utah Seismograph Stations, pp. 1–49.
130. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, R. B. Smith, and K. L. Pankow (2024), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–22.
129. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2024), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.

—2023 Other Scientific Publications—

128. Bowman, S., R. Burlacu, J. Crofts, D. Kilb, K. Koper, E. Morton, and D. Worthen (2023). *On the Feasibility of Implementing an Earthquake Early Warning (EEW) System in Utah*, special report to the Utah State Legislature, pp. 1–64, <https://doi.org/10.34191/EEW-2023>.
127. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, R. B. Smith, and K. L. Pankow (2023), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–21.
126. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2023), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
125. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, R. B. Smith, and K. L. Pankow (2023), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–22.
124. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2023), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
123. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. D. Koper, R. B. Smith, and K. L. Pankow (2023), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–27.
122. Burlacu, R., P. M. Roberson, J. M. Hale, K. D. Koper, and K. L. Pankow (2023), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2023, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
121. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, R. B. Smith, and K. L. Pankow (2023), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–24.
120. Burlacu, R., P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, and K. L. Pankow (2023), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–31.

—2022 Other Scientific Publications—

119. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, R. B. Smith, and K. L. Pankow (2022), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.
118. Burlacu, R., P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, and K. L. Pankow (2022), Earthquake Activity in the Utah Region Preliminary Epicenters July

- 1 – September 30, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–45.
117. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, R. B. Smith, and K. L. Pankow (2022), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–19.
116. Burlacu, R., P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, and K. L. Pankow (2022), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.
115. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, R. B. Smith, and K. L. Pankow (2022), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–23.
114. Burlacu, R., P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, and K. L. Pankow (2022), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–45.
113. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, R. B. Smith, and K. L. Pankow (2022), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2022, quarterly report of Univ. Utah Seismograph Stations, pp. 1–20.
112. Burlacu, R., P. M. Roberson, J. M. Hale, Z. Claerbout, K. D. Koper, and K. L. Pankow (2022), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–41.

—2021 Other Scientific Publications—

111. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerbout, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–44.
110. Burlacu, R., P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerbout, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–43.
109. Koper, K. D. (2021). Introducing *The Seismic Record*—A new, open-access journal from the Seismological Society of America, *Seismic Record*, 1, 1–2, doi:10.1785/0320210005.
108. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerbout, K. D.

- Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–26.
107. Burlacu, R., P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–36.
106. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–20.
105. Burlacu, R., P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2021, quarterly report of Univ. Utah Seismograph Stations, pp. 1–35.
104. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–21.
103. Burlacu, R., P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2021), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–36.

—2020 Other Scientific Publications—

102. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–21.
101. Burlacu, R., P. M. Roberson, J. M. Hale, B. Ericksen, Z. Claerhout, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–40.
100. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, B. Ericksen, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–25.
99. Burlacu, R., P. M. Roberson, J. M. Hale, B. Ericksen, N. Forbes, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–64.

98. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, B. Ericksen, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–19.
97. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Ericksen, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2020, quarterly report of Univ. Utah Seismograph Stations, pp. 1–70.
96. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–19.
95. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, M. Haynes, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2020), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–34.

—2019 Other Scientific Publications—

94. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–18.
93. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–34.
92. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–15.
91. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–35.
90. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2019, quarterly report of Univ. Utah Seismograph Stations, pp. 1–18.
89. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2019, quarterly report of Univ. Utah

Seismograph Stations, pp. 1–45.

88. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–18.
87. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2019), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.

—2018 Other Scientific Publications—

86. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–22.
85. Burlacu, R., P. M. Roberson, J. M. Hale, N. Forbes, B. Johnson, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
84. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–22.
83. Burlacu, R., P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
82. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–35.
81. Burlacu, R., P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2018, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
80. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–20.
79. Burlacu, R., P. M. Roberson, J. M. Hale, A. Parapuzha, N. Forbes, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2018), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.

—2017 Other Scientific Publications—

78. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, N. Forbes, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–49.
77. Burlacu, R., P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, N. Forbes, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
76. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–38.
75. Burlacu, R., P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
74. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–18.
73. Burlacu, R., P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2017, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
72. Koper, K. D. (2016), Geophysics, in *Encyclopedia Britannica 2017 Book of the Year*, Encyclopedia Britannica, Inc., p. 170.
71. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–17.
70. Burlacu, R., P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2017), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.

—2016 Other Scientific Publications—

69. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–16.
68. Burlacu, R., P. M. Roberson, J. M. Hale, J. Stanley, A. Parapuzha, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
67. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, G. Bobetich, A. Mokhtar, K. D.

- Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–15.
66. Burlacu, R., P. M. Roberson, J. M. Hale, G. Bobetich, A. Mohktar, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–31.
65. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, G. Bobetich, A. Mokhtar, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 - March 31, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–14.
64. Burlacu, R., P. M. Roberson, J. M. Hale, G. Bobetich, A. Mohktar, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 - March 31, 2016, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
63. Koper, K. D. (2016), Geophysics, in *Encyclopedia Britannica 2016 Book of the Year*, Encyclopedia Britannica, Inc., p. 170.
62. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, G. Bobetich, A. Mokhtar, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–17.
61. Burlacu, R., P. M. Roberson, J. M. Hale, G. Bobetich, A. Mohktar, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2016), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–31.

—2015 Other Scientific Publications—

60. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–15.
59. Burlacu, R., P. M. Roberson, J. M. Hale, K. J. Goddard, G. Bobetich, A. Mohktar, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
58. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–15.
57. Burlacu, R., P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–30.
56. Lerner-Lam, A., C. Ji, C. Dalton, F. Haslinger, L. Kellogg, L. Kong, K. Koper, T. Lay, and G. Suarez (2015), *Global Seismographic Network External Review*,

- Incorporated Research Institutions for Seismology, Washington, DC, pp. 1–51.
55. Woodard, J. B. et al. (20 authors) (2015), *Report of the Energy and Climate Programs External Review Committee*, Lawrence Livermore National Laboratory, June 8–11, 2015, Livermore, CA, pp. 1–47.
 54. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1–March 31, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–17.
 53. Stein J., K. L. Pankow, K. D. Koper, and M. K. McCarter (2015), Discriminating mining induced seismicity from natural tectonic earthquakes in the Wasatch Plateau region of central Utah, 34th International Conference on Ground Control in Mining, Morgantown, WV, July 28–30, pp. 1–9.
 52. [†]Chambers, D. J. A., M. K. McCarter, K. D. Koper, and K. L. Pankow (2015), Application of regional subspace detection to identify mining related seismicity, 34th International Conference on Ground Control in Mining, Morgantown, WV, July 28–30, pp. 1–6.
 51. Burlacu, R., P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2015, quarterly report of Univ. Utah Seismograph Stations, pp. 1–31.
 50. West, M., S. Bilek, P. Bodin, G. Kent, K. Koper, W.-Y. Kim, N. Ruppert, V. Tsai, and J. Vidale (2015), Tracking North America: Long-term Observation to Build on the Legacy of USArray, whitepaper for workshop on Future Seismic and Geodetic Facility Needs in the Geosciences, Leesburg, VA, May 4–6, pp. 1–2.
 49. Koper, K. D., Dalton, C. A., Ampuero, J.-P. (2015), A Global Array of Broadband Arrays, whitepaper for workshop on Future Seismic and Geodetic Facility Needs in the Geosciences, Leesburg, VA, May 4–6, pp. 1–2.
 48. Burlacu, R., P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 - December 31, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.
 47. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2015), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–17.
 46. Koper, K. D. (2015), Geophysics, in *Encyclopedia Britannica 2015 Book of the Year*, Encyclopedia Britannica, Inc., pp. 226–227.
 45. Hylland, M., B. Carey, C. DuRoss, J. Johnson, K. Koper, K. Pankow (2015), Basin and Range Province Seismic Hazards Summit III – Field Trip Guide, edited by M. Hylland, Utah Geological Survey, pp. 1–21.
 44. [†]Chambers, D. J. A., J. M. Wempen, M. K. McCarter, K. L. Pankow, and K. D. Koper (2015), Correlation of newly detected mining induced seismicity with subsidence in a Wyoming mining district, 2015 SME Annual Conference & Expo, Denver, CO, Feb. 15–18, pp. 1–9.

—2014 Other Scientific Publications—

43. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, R. B. Smith, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Yellowstone Region Preliminary Epicenters July 1 – September 30, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–22.
42. Burlacu, R., P. M. Roberson, J. M. Hale, K. J. Goddard, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 – September 30, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–33.
41. Burlacu, R., P. M. Roberson, J. M. Hale, K. J. Goddard, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 – June 30, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–36.
40. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, K. J. Goddard, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Yellowstone Region Preliminary Epicenters April 1 – June 30, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–23.
39. Burlacu, R., P. M. Roberson, J. M. Hale, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 – March 31, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–32.
38. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Yellowstone Region Preliminary Epicenters January 1 – March 31, 2014, quarterly report of Univ. Utah Seismograph Stations, pp. 1–28.
37. Farrell, J., R. Burlacu, P. M. Roberson, J. M. Hale, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Yellowstone Region Preliminary Epicenters October 1 – December 31, 2013, quarterly report of Univ. Utah Seismograph Stations, pp. 1–23.
36. Burlacu, R., P. M. Roberson, J. M. Hale, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2014), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 – December 31, 2013, quarterly report of Univ. Utah Seismograph Stations, pp. 1–34.
35. Koper, K. D. (2014), Geophysics, in *Encyclopedia Britannica 2014 Book of the Year*, Encyclopedia Britannica, Inc., pp. 226–227.

—2013 Other Scientific Publications—

34. [†]Kubacki, T. M., K. D. Koper, K. L. Pankow, and M. K. McCarter (2013), Cross-correlation detection of seismic events related to the Crandall Canyon Mine collapse, 32nd International Conference on Ground Control in Mining, Morgantown, WV, July 31 - Aug. 1, pp. 1-6.
33. Koper, K. D. (2013), Geophysics, in *Encyclopedia Britannica 2013 Book of the Year*, Encyclopedia Britannica, Inc., p. 226.
32. Burlacu, R., P. M. Roberson, J. M. Hale, Y. H. Wong, N. S. Mohammad Jamaal, S. Whittaker, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2013), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 - September 30, 2013,

- quarterly report of Univ. Utah Seismograph Stations, pp. 1-35.
31. Burlacu, R., P. M. Roberson, J. M. Hale, Y. H. Wong, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2013), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 - June 30, 2013, quarterly report of Univ. Utah Seismograph Stations, pp. 1-37.
 30. Burlacu, R., P. M. Roberson, J. M. Hale, Y. H. Wong, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2013), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 - March 31, 2013, quarterly report of Univ. Utah Seismograph Stations, pp. 1-30.
 29. Burlacu, R., P. M. Roberson, J. M. Hale, Y. H. Wong, N. S. Mohammad Jamaal, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2013), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 - December 31, 2012, quarterly report of Univ. Utah Seismograph Stations, pp. 1-31.

—2012 Other Scientific Publications—

28. Koper, K. D. (2012), Geophysics, in Encyclopedia Britannica 2012 Book of the Year, Encyclopedia Britannica, Inc., pp. 226-227.
27. Burlacu, R., P. M. Roberson, J. M. Hale, S. Whittaker, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2012), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 - September 30, 2012, quarterly report of Univ. Utah Seismograph Stations, pp. 1-34.
26. Burlacu, R., P. M. Roberson, J. M. Hale, S. Whittaker, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2012), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 - June, 30 2012, quarterly report of Univ. Utah Seismograph Stations, pp. 1-32.
25. Burlacu, R., P. M. Roberson, J. M. Hale, C. Volk, S. Whittaker, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2012), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 - March 31, 2012, quarterly report of Univ. Utah Seismograph Stations, pp. 1-35.
24. Burlacu, R., P. M. Roberson, J. M. Hale, C. Volk, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2012), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 - December 31, 2011, quarterly report of Univ. Utah Seismograph Stations, pp. 1-42.

—2011 Other Scientific Publications—

23. Koper, K. D. (2011), Geophysics, in Encyclopedia Britannica 2011 Book of the Year, Encyclopedia Britannica, Inc., pp. 225-226.
22. Burlacu, R., P. M. Roberson, J. M. Hale, C. Volk, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2011), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 - September 30, 2011, quarterly report of Univ. Utah Seismograph Stations, pp. 1-33.
21. Burlacu, R., P. M. Roberson, J. M. Hale, C. Gray, H. Willis, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2011), Earthquake Activity in the Utah Region Preliminary Epicenters April 1 - June 30, 2011, quarterly report of Univ. Utah Seismograph Stations, pp. 1-30.

20. Burlacu, R., P. M. Roberson, J. M. Hale, C. Gray, H. Willis, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2011), Earthquake Activity in the Utah Region Preliminary Epicenters January 1 - March 31, 2011, quarterly report of Univ. Utah Seismograph Stations, pp. 1-32.
19. Burlacu, R., P. M. Roberson, J. M. Hale, C. Gray, H. Willis, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2011), Earthquake Activity in the Utah Region Preliminary Epicenters October 1 - December 31, 2010, quarterly report of Univ. Utah Seismograph Stations, pp. 1-34.

—2010 Other Scientific Publications—

18. Koper, K. D. (2010), Geophysics, in Encyclopedia Britannica 2010 Book of the Year, Encyclopedia Britannica, Inc., pp. 229-230.
17. Burlacu, R., P. M. Roberson, J. M. Hale, W. Pomerleau, K. D. Koper, J. C. Pechmann, and K. L. Pankow (2010), Earthquake Activity in the Utah Region Preliminary Epicenters July 1 - September 30 2010, quarterly report of Univ. Utah Seismograph Stations, pp. 1-33.

—2009 Other Scientific Publications—

16. Koper, K. D. (2009), Geophysics, in Encyclopedia Britannica 2009 Book of the Year, Encyclopedia Britannica, Inc., pp. 226-227.

—2008 Other Scientific Publications—

15. Koper, K. D. (2008), Geophysics, in Encyclopedia Britannica 2008 Book of the Year, Encyclopedia Britannica, Inc., pp. 228-229.
14. Koper, K. D. and A. Fatehi (2008), Modeling P Wave Multipathing at Regional Distances in Southeast Asia, Final Technical Report FA8718-06-C-0003, Air Force Research Lab, pp. 1-82.

—2007 Other Scientific Publications—

13. Koper, K. D. (2007), Geophysics, in Encyclopedia Britannica 2007 Book of the Year, Encyclopedia Britannica, Inc., pp. 199-200.
12. Fatehi, A., and K. D. Koper (2007), Modeling P Wave Multipathing in Southeast Asia, in Proceedings of the 29th Monitoring Research Review, Denver, CO, pp. 1-11.

—2006 Other Scientific Publications—

11. [†]Fatehi, A., and K. D. Koper (2006), Characterization of P Wave Propagation and Multipathing in the Upper Mantle Beneath South Asia, Proceedings of the 28th Seismic Research Review: Ground-Based Nuclear Explosion Monitoring Technologies, pp. 8-14.
10. Flanagan, M. P., S. C. Myers, and K. D. Koper (2006), Regional Travel- Time Uncertainty and Seismic Location Improvement using a Three-Dimensional a priori Velocity Model, Proceedings of the 28th Seismic Research Review: Ground-Based Nuclear Explosion Monitoring Technologies, pp. 407-416.
9. Koper, K. D. (2006), Geophysics, in Encyclopedia Britannica 2006 Book of the Year, Encyclopedia Britannica, Inc., pp. 168-169.

—2005 Other Scientific Publications—

8. Koper, K. D. (2005), Geophysics, in Encyclopedia Britannica 2005 Book of the Year, Encyclopedia Britannica, Inc., pp. 169-170.

—2004 Other Scientific Publications—

7. Koper, K. D. (2004), Seismic Analysis of the Toulouse Disaster of September 21, 2001, expert report prepared for Total.

—2002 Other Scientific Publications—

6. Koper, K. D. (2002), Seismic Observations of the 19 August 2000 Pipeline Explosion Near Carlsbad, New Mexico, expert witness report prepared for law firm of Spence, Moriarty, and Schuster.

—2000 Other Scientific Publications—

5. Reinke, R. E., J. A. Leverette, K. D. Koper, and T. C. Wallace (2000), Divine Buffalo 7 Seismic, Acoustic, and Electric Measurements, DB07 technical report for DTRA.
4. Koper, K. D., and T. C. Wallace (2000), Propagation characteristics of regional seismic phases in and around Siberia, Technical Report for Defense Threat Reduction Agency under contract DSWA01-97-C-0123.

—1999 Other Scientific Publications—

3. Wiens, D. A., K. D. Koper, J. J. McGuire, and N. Snider (1999), Seismological Constraints on Slab Structure and the Mechanism of Deep Earthquakes, in Mysen, B., D. Ulmer, P. and Walter, M., conveners, Processes and Consequences of Deep Subduction, Terra Nostra, 99, pp 115–117, Alfred-Wegener-Stiftung, Bonn, Germany.
2. Koper, K. D., and T. C. Wallace (1999), Regional Wave Propagation in Siberia, in Proceedings of 21st Annual Symposium on Monitoring a Comprehensive Test Ban Treaty (CTBT), Las Vegas, Nevada.

—1998 Other Scientific Publications—

1. Koper, K. D. (1998), Computational Approaches to Seismology, Ph.D. thesis, Washington University, St. Louis, MO.

2.5 Google Scholar profile

My Google Scholar profile can be accessed at:

<http://scholar.google.com/citations?user=YqHsIWQAAAAJ&hl=en>

It provides a freely available measure of scientific impact by automatically tracking citations and keeping a running calculation of the h-index and i10-index.

3. Service

3.1. Professional service

Editor-in-Chief, *The Seismic Record*, 2020–present
 Member of U.S. Air Force Seismic Review Panel, 2011–present
 Vice-Chair & Chair of Utah Seismic Safety Commission, 2010–2023
 Member of DOE external review panel on Signal Analysis for SNL, 2022
 Member of Seismological Society of America subcommittee to update the joint SSA-AGU statement on the Comprehensive Nuclear Test Ban Treaty, 2022
 Member of AGU Aki Award Subcommittee, 2019–2020
 Member of *Eos* editorial/scientific advisory board, 2010–2021
 Guest Editor, *Seismological Research Letters* special focus section on 2020 Intermountain West earthquakes, 2020–2021
 Member/Chair of SSA Richter Award Subcommittee, 2018–2020
 Member of AGI Critical Needs Working Group, 2019–2020
 Member of external review panel for Dept. of Earth Sciences and Center for Earthquake Information at Univ. of Memphis, 2019
 Member of DOE external review panels on Signal Analysis for LANL, LLNL, and SNL, 2019
 Member of IRIS board of directors, 2016–2018
 "Forensic Seismology for Situational Awareness: Seismic Monitoring Beyond Earthquakes", invited briefing to U.S. Senate staffers, Washington D.C., June 19, 2018
 Member of Seismological Society of America subcommittee to update the joint SSA-AGU statement on the Comprehensive Nuclear Test Ban Treaty, 2017
 Member of DOE external review panels on Signal Analysis for LANL, LLNL, and SNL, 2016
 Member of NSF Geophysics SCEC5 external review panel, 2016
 Member of LLNL external review committee for energy and climate, 2015
 Member of NSF IRIS/GSN external review panel, 2015
 Co-convener of fall AGU session on microseisms, San Francisco, CA, 2014
 Co-convener IRIS special interest group on global arrays, Sunriver, OR, 2014
 Co-organizer of IASPEI session on array seismology, Gothenburg, Sweden, 2013
 Co-organizer of IRIS workshop on array seismology, Rayleigh, NC, 2013
 Co-chair of organizing committee for 2013 Annual meeting of Seismological Society of America, 2012–2013
 Chair of the Incorporated Research Institutions for Seismology (IRIS) Data Management System Standing Committee (DMSSC), 2008–2011; member of DMSSC 2004–2007, 2012
 Chair of Incorporated Research Institutions for Seismology (IRIS) Data Products Working Group (DPWG), 2009–2012
 Associate Editor for Bulletin of the Seismological Society of America, 2003–2010
 Member of Seismological Society of America (SSA) and American Geophysical Union (AGU)
 Peer review of proposals submitted to: The National Science Foundation programs of Geophysics, CSEDI, Earthscope, Instrumentation and Facilities; Incorporated Research Institutions for Seismology; the National Nuclear Security Administration;

the United States Geological Survey NEHRP; program; the Australian Research Council. About 5–10 reviews per year.

Peer review of manuscripts submitted to: Bulletin of the Seismological Society of America; Earth and Planetary Science Letters; Earth, Planets, Space; EOS Trans. AGU; Geophysical Journal International; Geophysical Research Letters; International Journal of Coal Geology; Journal of Earth Science; Journal of Geophysical Research; Journal of Seismology; Nature; Nature Communications; Physics of the Earth and Planetary Interiors; Progress in Earth and Planetary Science; Pure and Applied Geophysics; Science; Seismological Research Letters; Soils and Foundations. About 10–12 reviews per year.

3.2 University, college, and departmental service

Member of departmental awards committee (Utah), 2024–2025.

Member of college executive/advisory committee (Utah), 2016–2023

Member of departmental undergraduate affairs committee, 2022

Member of departmental awards committee, 2022

Chair of departmental awards committee (Utah), 2020

Member of departmental merit review committee (Utah), 2020

Member of ad-hoc faculty RPT committee (Utah), 2020

Member of college RPT committee (Utah), 2016, 2020

Member of University of Utah Faculty Senate, 2019–2022

Member of Univ. Utah Senate Personnel & Elections Committee, 2019–2022

Chair of departmental merit review committee (Utah), 2019

Member of departmental undergraduate affairs committee (Utah), 2019

Member of departmental merit review committee (Utah), 2016

Member of departmental lecture series committee (Utah), 2015–2016

Member of departmental strategic planning committee (Utah), 2014–2015

Member of geophysics special funds committee (Utah), 2014–2016

Member of departmental space committee (Utah), 2013–2014

Member of departmental graduate affairs committee (Utah), 2011–2014

Chair of departmental ad-hoc RPT sub-committee (Utah), 2013, 2015, 2017

Chair of search committee for tectonophysicist (Utah), 2011

Member of search committee for exploration seismologist (Utah), 2010–2011

Member of ad-hoc faculty RPT committee (Utah), 2010, 2015

Director of geoscience graduate programs (SLU), 2007–2009

Member of university research committee (SLU), 2002–2006

Departmental rep. for geoscience E&O (SLU), 2001–2005

Member of search committee for departmental chair (SLU), 2003–2004

Member of search committee for geology faculty member (SLU), 2004

Member of Ph.D. thesis committee (Beshara Sholy, 2002, SLU; Mohammed Fnais, 2004, SLU; Hongyi Li, 2005, SLU; Ali Fatehi, 2006, SLU; Sara Pozgay, 2007, WashU; Risheng Chu, 2008, SLU; Hongfeng Yang, 2010, SLU; Sebastiano d'Amico, 2010, SLU; Hongzhu Cai, 2015, Utah; Yao Yao, 2016, Utah; Lisa Linville 2017, Utah; Wei Lin, 2018, Utah; Michael Jorgensen, 2019, Utah; Feng Lin, 2020, Utah; Sin-Mei, 2020, Utah; Paul Geimer, 2021, Utah; Riley Finnegan, 2023, Utah; Erin Jensen, 2023, Utah; Daniel Wells, 2023, Utah; Gkogkas Konstantinos, 2024, Utah; Santiago

Rabade, 2024, Utah)
Member of M.S. thesis committee (Rachel Huson, 2002, SLU; Julia Kurpan, 2007, SLU;
Kevin Jensen, 2013, Utah; Mark Hale, 2013, Utah; Yao Yao, 2013, Utah; Lisa
Linville, 2014, Utah; Stefanie Whittaker, 2014, Utah; Alison Starr, 2015, Utah; Jared
Stein, 2015, Utah; Steven Potter, Utah, 2017; Andy Trow, Utah, 2018; Dallon Coons,
Utah, 2018; Amy Record, Utah, 2020)
Member of M.S.S.S.T committee (Mindy Timothy, 2014; Kristel Hansen, 2014)

4. Administration

I have been director of the University of Utah Seismograph Stations (UUSS) since July 2010. UUSS is a distinct organizational unit within the Department of Geology and Geophysics that focuses on research, education, and public service related to earthquakes and seismic monitoring. We have ~21 full time equivalent employees, and an annual budget of approximately \$3,000,000. I am responsible for overall leadership, management, and stewardship of UUSS. Electronic versions of UUSS annual reports for are available from the UUSS web page (<https://quake.utah.edu/tag/annual>).

5. Acronyms

AGU – American Geophysical Union
AFRL – Air Force Research Laboratory
CSEDI – Cooperative Studies of Earth's Deep Interior (an NSF program)
CTBTO – Comprehensive Nuclear Test Ban Treaty Organization
DINSAR – Differential Interferometric Synthetic Aperture Radar
DMS – Data Management System (a component of IRIS)
DPWG – Data Products Working Group (a component of IRIS)
DOE – U.S. Department of Energy
EAS – Department of Earth & Atmospheric Sciences at SLU
GSN – Global Seismic Network
E&O – Education and outreach
EOS – EOS Transactions of the AGU (a weekly newsletter)
IASPEI – International Association of Seismology and Physics of the Earth's Interior
IRIS – Incorporated Research Institutions for Seismology
ISP – Integrated Science Program (an explicit major at Northwestern Univ.)
IUGG – International Union of Geodesy and Geophysics
LANL – Los Alamos National Laboratory
LLNL – Lawrence Livermore National Laboratory
MIS – Mining induced seismicity
M.S.S.S.T. – Masters of Secondary School Science Teaching (a UU degree program)
NAS – National Academy of Sciences
NEHRP – National Earthquake Hazard Reduction Program
NSF – National Science Foundation
PI – Principal Investigator
RPT – Rank, promotion, and tenure
SCEC – Southern California Earthquake Center
SEDI – Study of Earth's Deep Interior

SLU – Saint Louis University
SME – The Society for Mining, Metallurgy & Exploration
SNL – Sandia National Laboratory
SSA – Seismological Society of America
UU – University of Utah
UUSS – University of Utah Seismograph Stations
USGS – United States Geological Survey
USTC – University of Science & Technology, Hefei, China
WHOI – Woods Hole Oceanographic Institution