MONICA D. KOHLER
CURRICULUM VITAE

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APPOINTMENTS

Research Professor, Dept. of Mechanical and Civil Engineering, Caltech	2018-present
Research Assistant Professor, Dept. of Mechanical and Civil Engineering, Caltech	2015-2018
Senior Research Fellow, Dept. of Mechanical and Civil Engineering, Caltech	2011-2015
Assistant Researcher, Dept. of Computer Sciences, UCLA	2007-2011
Assistant Research Engineer, Dept. of Computer Sciences, UCLA	2003-2007
Assistant Researcher, Dept. of Earth and Space Sciences, UCLA	1998-2003
Postdoctoral Researcher, Dept. of Earth and Space Sciences, UCLA	1995-1998

EDUCATION

Ph.D., Geophysics, California Institute of Technology	1995
A.B., Geological Sciences (*magna cum laude),* Harvard University	1988

AWARDS AND GRANTS

U.S. Geological Survey NEHRP (PI and co-PI)	1999-2001, 2003-2011, 2013-2015, 2021-present
California Strong Motion Instrumentation Program	2022-present
NVIDIA Applied Research Accelerator Program	2022-present
Southern California Earthquake Center (PI)	1996-2002, 2006-2007, 2009-2012, 2014-2016, 2020-2021
NSF: EAR-GPH (PI), OCE-MG&G (PI), OIA-CDI (PI), Hazards-SEES (co-PI)	1998-2000, 2010-2016
Conrad N. Hilton Foundation (PI)	2018-present
Computers and Structures, Inc. (PI)	2018-2020
JPL Presidents and Directors Fund (co-PI)	2017-2018
JPL Research and Technology Development Fund (PI)	2014-2018
U.S. Geological Survey Earthquake Early Warning Project (Project Manager)	2014-2018
Caltech Terrestrial Hazard Observation and Reporting project (co-PI and PI)	2014-2016, 2021-present
Hewlett-Packard Labs Innovation Research Program (PI)	2011-2014
NSF Center for Embedded Networked Sensing at UCLA (project scientist)	2002-2009

PROFESSIONAL MEMBERSHIPS

Earthquake Engineering Research Institute	2014-present
Seismological Society of America	2014-present
American Geophysical Union	1991-present

PROFESSIONAL SERVICE

Affiliated Faculty Member, Natural Hazards Risk and Resiliency Research Center (NHR3) at UCLA	2020-present
Incorporated Research Institutions for Seismology (IRIS) Marine Seismology Symposium Organizing Committee (Invited session speakers, planned agendas, led plenary session)	2020-2021
Chair, IRIS Working Group on Long-Term Seafloor Seismographs	2017-2020

Seismological Society of America Frank Press Award subcommittee 2015-2020
Chair, regular and special session, 11th National Conference on Earthquake Engineering 2017-2018
(Invited session speakers, coordinated paper submissions, moderated sessions)
IRIS Global Seismographic Network Standing Committee 2016-2018
Project Scientist STEM education program for girls; STEM career presentation 2016
IRIS Ocean Bottom Seismometer Instrument Pool (OBSIP) Oversight Committee 2012-2016
IRIS Ocean Bottom Seismometer Symposia Steering Committees 2013, 2015
(Invited session speakers, planned agendas, led plenary sessions)
Pasadena Leadership program for leaders in diverse communities; presentation 2013
U.S. Geological Survey Multi-Hazards Demonstration Project in Southern California 2007
Chair, IRIS Data Management System Standing Committee 2002
Chair, Southern California Earthquake Center (SCEC) Borderland Working Group 2002
Caltech Task Force on Undergraduate Residence Life Initiatives 2001
SCEC II Education and Outreach Planning Committee 2001
IRIS Data Management System Standing Committee 1999-2001

INVITED SEMINARS/PRESENTATIONS 1996-present

University of California Irvine (Dept. of Computer Sciences, Networked Systems group)
University of California San Diego (Dept. of Structural Engineering)
University of California Los Angeles (Dept. of Earth, Planetary and Space Sciences)
California Strong Motion Instrumentation Program Seminar
Massey University, NZ (Joint Centre for Disaster Research)
Stanford University (Dept. of Civil and Environmental Engineering)
Indian Institute of Technology (IIT) Hyderabad (Dept. of Civil Engineering)
University of Southern California (Dept. of Civil and Environmental Engineering)
University of Southern California (Dept. of Earth Sciences)
University of California Los Angeles (Dept. of Civil and Environmental Engineering)
University of California Los Angeles (Geophysics group)
ShakeAlert Earthquake Early Warning R&D workshop
California Earthquake Authority Research Forum (plenary speaker and panel member)
California State University Northridge (Dept. of Geological Sciences)
California State University Northridge (Dept. of Civil Engineering)
USGS-Menlo Park Earthquake Science Center
University of California Riverside (Dept. of Earth and Planetary Sciences)
Colorado School of Mines (Dept. of Geophysics)
University of California Santa Barbara (Dept. of Earth Sciences)
IRIS Ocean Bottom Seismometer Symposium (plenary)
American Geophysical Union Fall Meeting sessions in Seismology
Southern California Earthquake Center Annual Meeting (plenary)
Seismological Society of America Town Hall (speaker and panel member)
4th China-Japan-U.S. Symposium on Structural Control and Monitoring
Geological Society of America Annual Meeting
Ocean Mantle Dynamics Workshop (plenary)
Caltech Earthquake Research Affiliates yearly meetings

SEISMIC NETWORK/EXPERIMENT MANAGEMENT

PI/co-PI/Co-leader, Community Seismic Network project. 2009-present

- Leading long-term research strategy, data analysis and products, proposal-writing, external partnership development, graduate student research guidance.
- Planning lab testing and field deployments.

Project Manager, West Coast ShakeAlert Earthquake Early Warning project. 2014-2018

- Led development of the ShakeAlert Test and Certification Platform involving stress tests of algorithms with historic and real-time earthquakes.

- Led weekly meetings, and bi-weekly conference calls involving science and IT admin staff from Caltech, U. C. Berkeley, U. Washington, USGS-Pasadena and USGS-Menlo Park.

PI/Co-PI, lab and field testing of multi-tiered, portable, wireless, MEMS accelerometer network (ShakeNet) for instrumenting civil structures. 2007-2012

PI/Chief Scientist, R/V New Horizon two-week cruise to recover 34 ocean bottom seismometers from offshore southern California. 2011

- Managed eight undergraduate and graduate student volunteers from three academic institutions.
- Oversaw collection of 3.5 KHz sub-bottom profiler echosounder, Acoustic Doppler Current Profiler, meteorological, sea surface, and navigation datasets.

PI/Chief Scientist, R/V Melville two-week cruise to deploy 34 ocean bottom seismometers off the coast of southern California. 2010

- Managed nine undergraduate and graduate student volunteers from five academic institutions.
- Oversaw collection of 12 KHz multibeam bathymetry, gravimeter, towed magnetometer, 3.5 KHz sub-bottom profiler echosounder, Acoustic Doppler Current Profiler, meteorological, sea surface, and navigation datasets.

PI/Manager, operations and maintenance of the 72-channel UCLA Factor building, borehole, and free-field seismic array. 2002-2008

- Managed one staff engineer.
- Led financial, expansion, and upgrade aspects of network hardware and software.

PI/Leader, technical design, financial, deployment, operational, data management, and field assistant management of the Los Angeles Region Seismic Experiment II deploying 83 short-period and broadband seismometers in greater Los Angeles for six months. 1998-1999

Leader, technical design, financial, deployment, operational, data management, and field assistant management of the Los Angeles Basin Passive Seismic Experiment deploying 18 short-period seismometers in southeastern Los Angeles County for nine months. 1997

PRESS INTERACTIONS

In-person, telephone, and occasional video interviews with journalists covering topics in seismology and earthquake engineering. Media outlets include: 1998-present
Wired.com, Temblor.net, Orange County Business Journal, KLCS - PBS station in Los Angeles, Los Angeles Times, U.S. News, Pasadena Sun, ScienceNews, Our Amazing Planet, Los Angeles Times magazine, Pasadena Star News

PEER REVIEWER

Proposals

National Science Foundation (EAR Geophysics, Tectonophysics, Continental Dynamics, Ocean Sciences, special programs) 1998-present

U.S. Geological Survey NEHRP external program 1999, 2003, 2006

Southern California Earthquake Center internal grant program 2002

Journals 1998-present

Earthquake Spectra; Sensors; Seismological Research Letters; Earthquake Engineering and Structural Dynamics; Journal of Structural Engineering; IEEE Instrumentation and Measurement Magazine; IEEE Conference on Robotics and Automation; Journal of the American Acoustical Society; Geophysical Journal International; Bulletin of the Seismological Society of America; Geophysical Research Letters; Journal of Geophysical Research; Geology; AGU Monograph; Earth and Planetary Science Letters

REVIEW PANEL MEMBER

National Science Foundation	2015, 2016, 2018
USGS NEHRP external program	1999, 2003, 2006
Southern California Earthquake Center, internal grant program	2002

TEACHING EXPERIENCE

Lecturer for CE 180 "Experimental Methods in Earthquake Engineering" 2009, 2011, 2013
Caltech, Dept. of Mechanical and Civil Engineering
Graduate-level course. http://kohler.caltech.edu/Courses/CE180.html.

Lecturer for ME 96 "Mechanical Engineering Laboratory" 2012, 2013
Caltech, Dept. of Mechanical and Civil Engineering
Undergraduate-level course. https://sites.google.com/site/me96spring/.

Lecturer for ESS 8 "Earthquakes" 1995, 2002
UCLA, Dept. of Earth and Space Sciences
Undergraduate-level course.

PUBLICATIONS

(Published pdfs are available from kohler.caltech.edu/publications/index.html.)

PEER-REVIEWED JOURNAL ARTICLES AND BOOK CHAPTERS

Abdelbarr, M. H., **M. D. Kohler**, and S. F. Masri, Structural identification and monitoring of a 52-story high-rise building in downtown Los Angeles based on short-term wind vibration measurements, *Structural Health Monitoring*, accepted, 2022.

Filippitzis, F., **M. D. Kohler**, T. H. Heaton, J. L. Beck, Sparse Bayesian learning for damage identification using nonlinear models: Application to weld fractures of steel-frame buildings, *Struct. Control and Health Monitoring*, *29*(*2*), doi:10.1002/stc.2870, 2022.

Tamhidi, A., N. Kuehn, S. F. Ghahari, A. J. Rodgers, **M. D. Kohler**, E. Taciroglu, Y. Bozorgnia, Conditioned simulation of ground-motion time series at uninstrumented sites using Gaussian Process Regression, *Bull. Seis. Soc. Am*., *112(1)*, 331-347, doi:10.1785/0120210054, 2022.

Sumy, D., S. K. McBride, C. von Hillebrandt-Andrade, **M. D. Kohler**, J. Orcutt, S. Kodaira, K. Moran, D. McNamara, T. Hori, E. Vanacore, B. Pirenne, and J. Collins, Long-term ocean observing for international capacity development around tsunami early warning. Pp. 70–77 in *Frontiers in Ocean Observing: Documenting Ecosystems, Understanding Environmental Changes, Forecasting Hazards*. E. S. Kappel, S. K. Juniper, S. Seeyave, E. Smith, and M. Visbeck, eds, A Supplement to *Oceanography 34(4*), https://doi.org/10.5670/oceanog.2021.supplement.02-27, 2021 (Invited contribution).

Filippitzis, F., **M. D. Kohler**, T. H. Heaton, R. W. Graves, R. W. Clayton, R. G. Guy, J. J. Bunn, and K. M. Chandy, Ground motions in urban Los Angeles from the 2019 Ridgecrest earthquake sequence, *Earthquake Spectra*, *37*(*4*), 2493-2522, doi:10.1177/87552930211003916, 2021.

Kohler, M. D., F. Filippitzis, T. H. Heaton, R. W. Clayton, R. G. Guy, J. J. Bunn, and K. M. Chandy, 2019 Ridgecrest earthquake reveals areas of Los Angeles that amplify shaking of high-rises, *Seis. Res. Lett*., *91*(6), 3370–3380, doi:10.1785/0220200170, 2020.

Kohler, M. D., D. Bowden, J.-P. Ampuero, and J. Shi, Globally scattered 2011 Tohoku tsunami waves identified by a seafloor sensor array in the northeast Pacific Ocean, *J. Geophys Res*., *125*(11), doi: 10.1029/2020JB020221, 2020.

Kohler, M. D., D. Smith, J. Andrews, A. Chung, R. Hartog, I. Henson, D. Given, R. de Groot, and S. Guiwits, Earthquake Early Warning ShakeAlert 2.0: public rollout, *Seis. Res. Lett*., *91*(3), 1763–1775, doi:10.1785/0220190245, 2020.

Clayton, R., **M. Kohler**, R. Guy, J. Bunn, T. Heaton, and M. Chandy, CSN/LAUSD network: A dense accelerometer network in Los Angeles schools, *Seis. Res. Lett.*, *91*(2A), 622-630, doi:10.1785/0220190200, 2020.

Abdelbarr, M. H., A. Massari, **M. D. Kohler**, and S. F. Masri, Decomposition approach for damage detection, localization, and quantification for a 52-story building in downtown Los Angeles, *J. Engineering Mechanics*, *146* (9), doi:10.1061/(ASCE)EM.1943-7889.0001809, 2020.

Kohler, M. D., K. Hafner, J. Park, J. C. E. Irving, J. Caplan-Auerbach, J. Collins, J. Berger, A. M. Trehu, B. Romanowicz, B. Woodward, A Plan for a long-term, automated, broadband seismic monitoring network on the global seafloor, *Seis. Res. Lett.*, 91 (3), 1343–1355, doi:10.1785/0220190123, 2020.

Marsaglia, K. M., B. Rodriguez, D. S. Weeraratne, H. G. Greene, N. Shintaku, and **M. D. Kohler**, Tracing the Arguello submarine canyon system from shelf origins to an abyssal sink, *SEPM Society for Sedimentary Geology*, SEPM Special Publication 110, doi: 10.2110/sepmsp.111.14, 2019.

Kohler, M. D., A. Allam, A. Massari, and F.-C. Lin, Detection of building damage using Helmholtz tomography, *Bull. Seis. Soc. Am.*, *108* (5A): 2565-2579, https://doi.org/10.1785/0120170322, 2018.

Massari, A., R. W. Clayton, and **M. Kohler**, Damage detection by template matching of scattered waves, *Bull. Seis. Soc. Am.*, *108* (5A), 2556-2564, https://doi.org/10.1785/0120170319, 2018.

Ebrahimian, H., **M. D. Kohler**, A. Massari, and D. Asimaki, Parametric estimation of dispersive viscoelastic layered media with application to structural health monitoring, *Soil Dynamics and Earthquake Engineering*, *105*, 204-223, https://doi.org/10.1016/j.soildyn.2017.10.017, 2018.

Kong, Q., R. M. Allen, **M. D. Kohler**, T. H. Heaton, and J. Bunn, Structural health monitoring of buildings using smartphone sensors, *Seis. Res. Lett.*, *89*(2A), 594-602, doi: 10.1785/0220170111, 2018.

Kohler, M. D., E. S. Cochran, D. Given, S. Guiwits, D. Neuhauser, I. Henson, R. Hartog, P. Bodin, V. Kress, S. Thompson, C. Felizardo, J. Brody, R. Bhadha, and S. Schwarz, Earthquake Early Warning ShakeAlert System: West Coast Wide Production Prototype, *Seis. Res. Lett.*, *89*(1), 99-107, doi: 10.1785/0220170140, 2018.

Cochran, E. S., **M. D. Kohler**, D. Given, S. Guiwits, M-A Meier, M. Ahmad, I. Henson, J. Andrews, and R. Hartog, Earthquake Early Warning ShakeAlert System: Testing and Certification Platform, *Seis. Res. Lett.*, *89*(1), 108-117, doi: 10.1785/0220170138, 2018.

Ramsay, J., **M. D. Kohler**, P. M. Davis, X. Wang, W. Holt, and D. S. Weeraratne, Anisotropy from SKS splitting across the Pacific-North America plate boundary offshore southern California, *Geophys. J. Int.*, *207*(1), 244-258, doi: 10.1093/gji/ggw271, 2016.

Kohler, M. D., A. Massari, T. H. Heaton, H. Kanamori, E. Hauksson, R. Guy, R. W. Clayton, J. Bunn, and K. M. Chandy, Downtown Los Angeles 52-story high-rise and free-field response to an oil refinery explosion, *Earthquake Spectra*, *32*(3), 1793-1820, doi: 10.1193/062315EQS101M, 2016.

Bowden, D. C, **M. D. Kohler**, V. C. Tsai, and D. S. Weeraratne, Offshore Southern California lithospheric velocity structure from noise cross-correlation functions, *J. Geophys. Res.*, *121*(5), 3415-3427, doi:10.1002/2016JB012919, 2016.

Clayton, R. W., T. Heaton, **M. Kohler**, M. Chandy, R. Guy, and J. Bunn, Community Seismic Network: a dense array to sense earthquake strong motions, *Seis. Res. Lett.*, *86*, 1354-1363, doi: 10.1785/0220150094, 2015.

Lin, F-C., **M. D. Kohler**, P. Lynett, A. Ayca, and D. Weeraratne, The March 11, 2011 Tohoku tsunami wavefront mapping across offshore southern California, *J. Geophys. Res.*, *120*, 3350–3362, doi:10.1002/2014JB011524, 2015.

Legg, M. R., **M. D. Kohler**, N. Shintaku, and D. S. Weeraratne, High-resolution mapping of two large-scale transpressional fault zones in the California Continental Borderland: Santa Cruz-Catalina Ridge and Ferrelo faults, *J. Geophys. Res.*, *120*, 915–942. doi:10.1002/2014JF003322, 2015.

Reeves, Z., V. Lekic, N. Schmerr, **M. D. Kohler**, and D. Weeraratne, Lithospheric structure across the continental borderland from receiver functions, *Geochemistry, Geophysics, Geosystems*, *15*, 246-266, doi: 10.1002/2014GC005617, 2015.

Cheng, M. H., **M. D. Kohler**, and T. H. Heaton, Prediction of wave propagation in buildings using data from a single seismometer, *Bull. Seis. Soc. Am.*, *105*, *1*, 107–119, doi: 10.1785/0120140037, 2015.

Faulkner, M., R. Clayton, T. Heaton, K. M. Chandy, **M. Kohler**, J. Bunn, R. Guy, A. Liu, M. Olson, M. H. Cheng, and A. Krause, Community sense and response systems: your phone as quake detector, *Communications of the Association for Computing Machinery (CACM)*, *57*, 66-75, 2014.

Lawrence, J. F., E. S. Cochran, A. Chung, A. Kaiser, C. M. Christensen, R. Allen, J. W. Baker, B. Fry, T. Heaton, D. Kilb, **M. D. Kohler**, and M. Taufer, Rapid earthquake characterization using MEMS accelerometers and volunteer hosts following the M_w7.2 Darfield, New Zealand earthquake, *Bull. Seis. Soc. Am*, 104, 184-192, doi:10.1785/0120120196, 2014.

Fuis, G. S., D. S. Scheirer, V. E. Langenheim, and **M. D. Kohler**, A new perspective on the geometry of the San Andreas fault in southern California and its relationship to lithospheric structure, *Bull. Seis. Soc. Am. 102, 236-251*, doi:10.1785/0120110041, 2012.

Clayton, R., T. Heaton, M. Chandy, A. Krause, **M. Kohler**, J. Bunn, R. Guy, M. Olson, M. Faulkner, M. H. Cheng, L. Strand, R. Chandy, D. Obenshain, A. Liu, and M. Aivazis, Community Seismic Network, *Annals of Geophysics*, *54*, *6*; doi: 10.4401/ag-5269, 2011.

Prieto, G. A., J. F. Lawrence, A. I. Chung, and **M. D. Kohler**, Predicting earthquake response of civil structures from ambient noise, *Bull. Seis. Soc. Am.*, *100*, 2322–2328, doi: 10.1785/0120090285, 2010.

Kohler, M. D., T. H. Heaton, and S. C. Bradford, Propagating waves in the steel, moment-frame Factor building during earthquakes, *Bull. Seis. Soc. Am.*, *97*, 1334-1345, doi: 10.1785/0120060148, 2007.

Davey, F. J., D. Eberhart-Phillips, **M. D. Kohler**, S. Bannister, G. Caldwell, S. Henrys, M. Scherwath, T. Stern, and H. J. A. Van Avendonk, Geophysical structure of the Southern Alps orogen, South Island, New Zealand, in *A Continental Plate Boundary: Tectonics at South Island, New Zealand*, edited by D. Okaya, T. Stern, and F. Davey, American Geophysical Union Monograph, *175*, 47-73, doi: 10.1029/175GM04, 2007.

Fuis, G. S., **M. D. Kohler**, M. Scherwath, U. ten Brink, H. J. A. Van Avendonk, and J. M. Murphy, A comparison between the transpressional plate boundaries of South Island, New Zealand, and Southern

California, USA: the Alpine and San Andreas fault systems, in *A Continental Plate Boundary: Tectonics at South Island, New Zealand*, edited by D. Okaya, T. Stern, and F. Davey, American Geophysical Union Monograph, *175*, 307-327, doi: 10.1029/175GM16, 2007.

Husker, A. L., **M. D. Kohler,** and P. M. Davis, A basin-edge diffraction catastrophe identified in seismic amplitudes measured in the Los Angeles basin, *Bull. Seis. Soc. Am.*, *96*, 147-164, 2006.

Kohler, M. D., P. M. Davis, and E. Safak, Earthquake and ambient vibration monitoring of the steel frame UCLA Factor building, *Earthquake Spectra*, *21*, 715-736, 2005.

Kohler, M. D., H. Magistrale, and R. W. Clayton, Mantle heterogeneities and the SCEC reference three-dimensional seismic velocity model version 3, *Bull. Seis. Soc. Am.*, *93*, 757-774, 2003.

Fuis, G. S., R. W. Clayton, P. M. Davis, T. Ryberg, W. J. Lutter, D. A. Okaya, E. Hauksson, C. Prodehl, J. M. Murphy, M. L. Benthien, S. A. Baher, **M. D. Kohler**, K. Thygesen, G. Simila, and G. R. Keller, Fault systems of the 1971 San Fernando and 1994 Northridge earthquakes, southern California: Relocated aftershocks and seismic images from LARSE II, *Geology, 31*, 171-174, 2003.

Kohler, M. D. and D. Eberhart-Phillips, Intermediate-depth earthquakes in a region of continental convergence: South Island, New Zealand, *Bull. Seis. Soc. Am.*, *93*, 85-93, 2003.

Kohler, M. D. and D. Eberhart-Phillips, Three-dimensional lithospheric structure below the New Zealand Southern Alps, *J. Geophys. Res*., *107(B10)*, 2225, doi:10.1029/2001JB000182, 2002.

Houseman, G. A., E. A. Neil, and **M. D. Kohler**, Lithospheric instability beneath the Transverse Ranges of California, *J. Geophys. Res.*, *105*, 16237-16250, 2000.

Kohler, M. D., Lithospheric deformation beneath the San Gabriel Mountains in the Southern California Transverse Ranges, *J. Geophys. Res*., *104*, 15025-15041, 1999.

Kohler, M. D., Three-dimensional velocity structure of the outermost core from waveform inversion of body waves, *Phys. Earth Plan. Int.*, *101*, 85-104, 1997.

Kohler, M. D. and P. M. Davis, Crustal thickness variations in Southern California from Los Angeles Region Seismic Experiment passive phase teleseismic travel times, *Bull. Seis. Soc. Am.*, *87*, 1330-1344, 1997.

Kohler, M. D., J. E. Vidale, and P. M. Davis, Complex scattering within D" observed on the very dense Los Angeles Region Seismic Experiment passive array, *Geophys. Res. Lett*., *24*, 1855-1858, 1997.

Fuis, G. S., D. A. Okaya, R. W. Clayton, W. J. Lutter, T. Ryberg, T. M. Brocher, T. M. Henyey, M. L. Benthien, P. M. Davis, J.Mori, R. D. Catchings, U. S. ten Brink, **M. D. Kohler**, K. D. Klitgord, and R. G. Bohannon, Images of crust beneath Southern California will aid study of earthquakes and their effects, *Eos, Trans., Am. Geophys. Union* (article), *77*, 173, 1996.

Kohler, M. D. and T. Tanimoto, One-layer global inversion for outermost core velocity, *Phys. Earth Plan. Int*., *72*, 173-184, 1992.

Kohler, M. D. and D. J. Stevenson, Modeling core fluid motions and the drift of magnetic field patterns at the CMB by use of topography obtained by seismic inversion, *Geophys. Res. Lett*., *17*, 1473-1476, 1990.

PEER-REVIEWED CONFERENCE PROCEEDINGS PAPERS

Kohler, M. D., F. Filippitzis, R. W. Graves, A. Massari, T. Heaton, R. Clayton, J. Bunn, R. Guy, and K. M. Chandy, Variations in ground motion amplification in the Los Angeles basin due to the 2019 M7.1 Ridgecrest Earthquake: Implications for the long-period response of infrastructure, *ASCE Lifelines Conference 2021-2022*, 2022.

Filippitzis, F., **M. D. Kohler**, and T. H. Heaton, Identification of sparse damage in steel-frame buildings using dense seismic array measurements, *12th International Workshop on Structural Health Monitoring (IWSHM 2019*), doi:10.12783/shm2019/32398, Stanford University, September 10-12, 2019.

Kohler, M. D., R. Guy, J. Bunn, A. Massari, R. Clayton, T. Heaton, K. M. Chandy, H. Ebrahimian, and C. Dorn, Community Seismic Network and localized earthquake situational awareness, *11th U.S. National Conference on Earthquake Engineering* (*11NCEE*), Los Angeles, CA, June 25-29, 2018.

Ebrahimian, H., **M. Kohler**, A. Massari, and D. Asimaki, Parametric estimation of wave dispersion for system identification of building structures, *Experimental Vibration Analysis for Civil Engineering Structures conference* (*EVACES2017*), San Diego, CA, July 12-14, 2017.

Massari, A., **M. Kohler**, R. Clayton, R. Guy, T. Heaton, J. Bunn, K. M. Chandy, and D. Demetri, Dense building instrumentation application for city-wide structural health monitoring and resilience, *16th World Conference on Earthquake Engineering* (*16WCEE*), Santiago, Chile, January 9-13, 2017.

Shi, J., **M. D. Kohler**, J. N. Sutton, and J-P Ampuero, Mapping coherent, time-varying wavefronts from the 2011 Tohoku tsunami into enhanced, time-dependent warning messages, *16th World Conference on Earthquake Engineering* (*16WCEE*), Santiago, Chile, January 9-13, 2017.

Kohler, M. D., T. H. Heaton, M. H. Cheng, and P. Singh, Structural health monitoring through dense instrumentation by community participants: the Community Seismic Network and Quake-Catcher Network, *10th U.S. National Conference on Earthquake Engineering* (*10NCEE*), Anchorage, Alaska, July 21-25, 2014.

Kohler, M. D., T. H. Heaton, and M. H. Cheng, The Community Seismic Network and Quake-Catcher Network: enabling structural health monitoring through instrumentation by community participants, *Proceedings of the SPIE Smart Structures/Non-destructive Evaluation Conference*, San Diego, CA, March 10-14, 2013.

Heckman, V., **M. Kohler**, and T. Heaton, A damage detection method for instrumented civil structures using prerecorded Green's functions and cross-correlation, *Proceedings of the 6th International Workshop on Advanced Smart Materials and Smart Structures Technology, ANCRiSST2011*, Dalian, China, July 25-26, 2011.

Heckman, V.M., **M. D. Kohler**, and T. H. Heaton, A method to detect structural damage using high-frequency seismograms, *Proceedings of the 8th International Conference on Urban Earthquake Engineering* (*8CUEE*), Tokyo, Japan, March 7-8, 2011.

Heckman, V. M., **M. D. Kohler**, and T. H. Heaton, Detecting failure events in buildings: a numerical and experimental analysis, *Proceedings of the 9th U.S. National and 10th Canadian Conference on Earthquake Engineering (9USN/10CCEE): Reaching Beyond Borders*, Toronto, Canada, July 25-29, 2010.

Kohler, M. D., T. H. Heaton, and V. Heckman, A time-reversed reciprocal method for detecting high-frequency events in civil structures with accelerometer arrays, *Proceedings of the 5th International Workshop on Advanced Smart Materials and Smart Structures Technology, ANCRiSST2009*, Boston, MA, July 30-31, 2009.

Kohler, M. D., T. H. Heaton, R. Govindan, P. Davis, and D. Estrin, Using embedded wired and wireless seismic networks in the moment-resisting steel frame Factor building for damage identification, *Proceedings of the 4th China-Japan-U.S. Symposium on Structural Control and Monitoring*, Hangzhou, China, October 16-17, 2006.

PEER-REVIEWED SCIENTIFIC REPORTS

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Jones, L., R. Bernknopf, S. Cannon, D. A. Cox, L. Gaydos, J. Keeley, **M. Kohler**, H. Lee, D. Ponti, S. Ross, S. Schwarzbach, M. Shulters, A. W. Ward, and A. Wein, increasing resiliency to natural hazards—a strategic plan for the multi-hazards demonstration project in southern California: *U.S. Geological Survey Open-File Report, 2007–1255*, 2007.

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