

WILLIAM CHARLES HAMMOND

Professor of Geodesy and Geophysics

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EDUCATION

Ph.D. University of Oregon, Eugene, Department of Geological Sciences 1994–2000
B.A. Applied Mathematics, University of California, Berkeley 1985–1989

ACADEMIC WORK EXPERIENCE

Professor of Geodesy and Geophysics, Graduate Faculty, Univ. of Nevada, Reno July 1, 2016–present
Visiting scientist for sabbatical leave, INGV, Rome Italy February - June, 2019
Associate Professor in Geodesy and Geophysics, Univ. Nevada, Reno July 1, 2010–June 30, 2016
Assistant Professor in Geodesy and Geophysics, Univ. Nevada, Reno July 1, 2004–June 30, 2010
Postdoctoral Research Geophysicist, U.S.G.S, Earthquake Hazards Team, Menlo Park Jan. 2001–June 2004

PROFESSIONAL ACTIVITY HIGHLIGHTS AND AWARDS

- 2020-2021 NSF EAR Seismic and Geodetic Portfolio Review Committee, a Federal Advisory Committee
- 2018-2021 National Academy of Science, Board on Earth Sciences and Resources
- 2016-2017 NSF EarthScope Series Speaker
- 2015-2016 Associate Editor Bulletin of the Seismological Society of America
- 2015-2016 AGU Geodesy Section Secretary
- 2013 Editors' Citation for Excellence in Refereeing *Journal of Geophysical Research-Solid Earth*
- 2008-2012 Chair, EarthScope Plate Boundary Observatory Advisory Committee
- 2002 USGS Earthquake Hazards Team STAR Performer Award

GRANTS AND CONTRACTS

Active Projects

USGS Earthquake Hazards Program, Supplemental funding to upgrade 6 GPS Receivers in the MAGNET GPS Network backbone, PI W.C. Hammond, \$70,064.00.
USGS Geodetic Networks Program, Western Great Basin Geodetic Network Operations: MAGNET 2020-2025, PI W.C. Hammond, Co-PI G. Blewitt, \$361,196.
NASA ROSES GPS Imaging of time-variable Earth deformation for multi-disciplinary science, PI G. Blewitt, Co-Is Hammond and Kreemer \$477,585.
NASA ROSES Sea Level Change Team, Using satellite measurements to improve regional estimates of the impacts of sea level change, \$225,519 subcontract to UNR, PI Steve Nerem, UNR Institutional PI W.C. Hammond.
NASA ROSES Sea Level Change Team, Global interconnections of cryosphere and solid Earth, sea-level change and ice mass balance, \$203,876 subcontract to UNR, PI Erik Ivins, UNR Institutional PI G. Blewitt.
Idaho National Laboratory, Geodetic analysis of fault slip rates in the Centennial Tectonic Belt, Eastern Snake River Plain and surrounding regions, PI: W.C. Hammond, \$79,548.85.

Past Projects (since 2004)

USGS Earthquake Hazards Program, Supplemental Funding for a Socially Distant MAGNET GPS Response to the May 15, 2020 Monte Cristo Range, Nevada Earthquake, \$46,175.23.
NSF EAR Geophysics, RAPID: Collaborative: Response to the Searles Valley Earthquake Sequence, UNR Institutional PI W.C. Hammond \$19,000.
USGS Geodetic Networks Program, Supplemental Funding for MAGNET GPS Network to Address Deferred Maintenance of GPS Receivers, PI W.C. Hammond, \$145,000.
NASA ROSES, GPS Imaging of solid Earth's flex and flow, PI Blewitt, Co-Is Hammond and C. Kreemer \$445,363.
USGS NEHRP Geodetic Networks Program, Western Great Basin geodetic network operations, 2015-2020, \$327,854, PI Hammond, Co-PI Blewit.

USGS NEHRP Geodetic Networks Program, Supplement to Western Great Basin geodetic network operations, 2015-2020, \$94,227, PI Hammond, Co-PI Blewitt.

UNR International Activities Travel Grant, Analogs between active crustal deformation in Italy and the Sierra Nevada/Great Basin transition, \$1,200.

DOE Frontier Observatory for Research in Geothermal Energy (FORGE), Stage 2 Collection of baseline data for Fallon enhanced geothermal research, GPS task, PI J. Faults, \$29,943.

USGS NEHRP, Robust estimation of fault slip, block rotation and off-fault strain rates in the Walker Lane from GPS data, \$70,938, PI W.C. Hammond.

NASA ROSES A.15 Sea Level, Observation-Driven Projections of Future Regional Sea Level Change, \$164,436 subcontract to UNR, PI S. Nerem, Institutional PI Blewitt.

NSF EarthScope, Revealing the Nature of Contemporary Uplift and Collapse in the Sierra Nevada - Great Basin System (II), PI Blewitt, Co-PIs Hammond, Plag, \$407,197.

Pacific Gas and Electric, Analysis of GPS and InSAR data to estimate vertical land motion of coastal California near Diablo Canyon nuclear power plant, PIs W.C. Hammond and R. Burgette, \$20,000.

NASA ROSES ACCESS, Plug and Play GPS for Earth Scientists: Providing Immediate Access to Low-Latency Geodetic Products for Rapid Modeling and Analysis of Natural Hazards, \$146,687 subcontract to UNR, Institutional PI Blewitt and Co-PIs Hammond and C. Kreemer.

NASA ROSES, Extending the Global Geodetic Observing System to high frequencies and low latencies, \$362,909, PI Blewitt, Co-PIs Plag and Hammond.

JAXA, ALOS-2 RA4, Using ALOS-2 Data for Research in Crustal Deformation, Earthquakes and Geothermal Resources in the Northwest Basin and Range, United States, PI Hammond, 8 Co-PIs, data grant.

DOE EERE, Discovering Blind Geothermal Systems in the Great Basin Region: An Integrated Geologic and Geophysical Approach for Establishing Geothermal Play Fairways, PI J. Faults.

Southern California Earthquake Center, Measuring Ventura Area Uplift: A Four-Technique Geodetic Study of Vertical Tectonics Combining GPS, InSAR, Leveling and Tide Gauges, PIs W.C. Hammond (UNR) and R. Burgette, New Mexico State University, Las Cruces, \$25,000.

USGS NEHRP Geodetic Networks, Western Great Basin geodetic network operations, 2010-2014, \$312,994, PI Hammond (Co-PIs Kent, Smith, Biasi).

NSF EarthScope, Using geodesy to separate transient and steady extension in the Basin and Range Province, \$206,086, PI Hammond (Co-PI Blewitt).

USGS NEHRP, Geodetic constraints on block kinematics and fault slip rates in the greater Las Vegas Area, PIs Kreemer and Hammond, \$54,970.

GeoPentech/Metropolitan Water District of Southern California, InSAR and GPS constraints on vertical tectonic motion near San Geronio Pass, \$10,000.

GeoPentech/Southern California Edison, GPS and InSAR study of Southern CA crustal deformation and slip rates, subcontract for consulting services, SSHAC process on San Onofre Nuclear Generating Station, \$25,000.

DOE Great Basin Center for Geothermal Energy, Seed Grant Program, Reconnaissance InSAR and GPS surface deformation analysis of Salt Wells and Stillwater geothermal areas, \$81,036, PI Hammond, Co-PI J. Bell.

NSF EarthScope, Community Workshop: Real-Time GPS Position Data Products and Formats, \$49,918, PI Mencin (UNAVCO), Co-PIs Hammond and Meertens (UNAVCO).

USGS NEHRP, Using GPS to measure the slip rate of the Honey Lake Fault, California, \$74,281 PI Hammond (Co-PI Kreemer).

NASA ROSES EarthScope Geodetic Imaging, Geodetic imaging of Earth's surface deformation using integrated InSAR and GPS observations, \$405,646, PI Hammond (Co-PIs Blewitt, Kreemer, Plag).

Southern California Earthquake Center, Inversions for Fault Slip Using Geodetic and Geologic data for UCERF3: Block Modeling Using GPS Velocities Corrected for Viscoelastic Postseismic Relaxation, \$20,000, PI Hammond.

GeoGlobal Energy, LLC, Recovery Act: Away from the range front: Intra-basin geothermal exploration, \$144,438, PI Calvin (Co-PIs Bell, Hammond).

NSF EarthScope, Revealing the nature of contemporary uplift and collapse in the Sierra Nevada - Great Basin System, \$468,452, PI Blewitt (Co-PIs Hammond, Plag).

USGS NEHRP, Geodetic and seismologic constraints on the kinematics of the Mohawk Valley Fault Zone, California, \$64,222, PI Kreemer (Co-PI Hammond).

NSF Tectonics/EarthScope, An integrated geologic and geodetic study of strain accumulation and release in the Northern Walker Lane, \$334,853, PI Wesnousky (Co-PIs Hammond, Kreemer).

NSF Tectonics, Quasi-block modeling of Walker Lane Belt tectonic deformation, using geodetic and geologic data to constrain system complexity and time-variable behavior, \$236,779, PI Hammond (Co-PIs Blewitt, Kreemer).

NASA SENH, Development of real time tsunami warning systems using continuous GPS, \$393,920, PI Blewitt (Co-PIs Hammond, Kreemer, Plag)

NASA Space Grant, NASA geophysical space geodesy course development, \$14,554, PI Hammond.

USGS NEHRP, Estimating seismic hazard in the Basin and Range Province using horizontal GPS data: Collaborative research between the University of Nevada, Reno and the USGS, \$66,874, PI Hammond (Co-PI Kreemer).
USGS NEHRP, System design for a GPS component of real-time earthquake source determination and tsunami warning Systems: Collaborative research between University of Nevada, Reno, and Northwestern University, \$80,484, PI Blewitt (Co-PIs Hammond, Kreemer, Plag, Stein, Okal).
DOE Geothermal Program, Targeting of potential geothermal resources in the Great Basin from regional to basin-scale relationships between geodetic strain and geological structures, \$279,375, PI Blewitt (Co-PIs Kreemer, Hammond).

FORMAL TEACHING EXPERIENCE

UNR GPH 455/655 *Global Geophysics and Geodynamics*, Fall 2018, 2020.
UNR GEOL 701(i), *InSAR Data Processing*, Fall 2017.
UNR GPH 411/611/701(i), *Geophysical Geodesy*, Fall 2009, 2011, 2013, 2015, 2017, 2019, 2021
Taught UNR GEOL 701(i), *Western US Tectonic Framework*, Fall 2012.
Graduate Teaching Fellow, University of Oregon section of *Earth Surface Processes and Morph*, Winter 1995.
Graduate Teaching Fellow, University of Oregon section of *Intro. to Geology: Evolving Earth*, Spring 1995.

PROFESSIONAL SOCIETIES

American Geophysical Union, since 1994
Seismological Society of America
Geological Society of America
European Geosciences Union
American Association for the Advancement of Science

PUBLICATIONS

Peer-Reviewed Articles and Maps

Harvey, T. C., B. D. Hamlington, T. Frederikse, R. S. Nerem, C.G. Piecuch, W.C. Hammond, G. Blewitt, P.R. Thompson, D.P.S. Bekaert, F.W. Landerer, J.T. Reager, R.E. Kopp, I. Fenty, D. Trossman, J. Walker, C. Boening, 2021, Drivers of coastal United States relative sea-level trends during the satellite altimeter-era, accepted for publication in *Nature Comm. Earth and Env.*, MS# COMMSENV-20-0199A.
Hammond W.C., G. Blewitt, C. Kreemer, R.S. Nerem, 2021, Global vertical land motion for studies of sea level rise, *J. Geophys. Res. - Solid Earth*, 126(7), e2021JB022355, <https://doi.org/10.1029/2021JB022355>.
Li, X., I.K.D. Pierce, J. Bormann, W.C. Hammond, Z. Zhang, C. Li, W. Zheng, P. Zhang, 2021 Tectonic deformation of the Northeastern Tibetan Plateau and its surroundings revealed with GPS block modeling, *J. Geophys. Res. - Solid Earth*, 126(5), e2020JB020733, <https://doi.org/10.1029/2020JB020733>, special section on the 100-year Anniversary of the Great 1920 Haiyuan Earthquake: *What have we learnt on large continental earthquakes and faults?*
Pan, Y., W. C. Hammond, H. Ding, R. Mallick, X. Xu, C. K. Shum, W. Shen, R. Chen, 2021, GPS Imaging of vertical bedrock displacements: Quantification of two-dimensional vertical crustal deformation in China, accepted for publication in *J. Geophys. Res. - Solid Earth*, 126(4), e2020JB020951, <https://doi.org/10.1029/2020JB020951>.
Pollitz, F. F., W.C. Hammond, C.W. Wicks, 2020, Rupture process of the M6.5 Stanley, Idaho, earthquake inferred from seismic waveform and geodetic data, *Seis. Res. Lett.*, Focus Section on Intermountain West Earthquakes in Spring 2020, <https://doi.org/10.1785/0220200315>.
Hammond, W.C., G. Blewitt, C. Kreemer, R.D. Koehler, S. Dee, 2020, Geodetic observation of seismic cycles before, during and after the 2020 Monte Cristo Range Earthquake using the MAGNET GPS Network, *Seismological Research Letters*, Focus Section on Intermountain West Earthquakes in Spring 2020, <https://doi.org/10.1785/0220200338>.
Martens, H., D. Argus, C. Norberg, G. Blewitt, T.A. Herring, A.W. Moore, W.C. Hammond, C. Kreemer, 2020, Atmospheric pressure loading in GPS positions: Dependency on GPS processing methods and effect on assessment of seasonal deformation in the contiguous U.S. and Alaska, *J. Geodesy*, 94, 115, <https://doi.org/10.1007/s00190-020-01445-w>.
Johnson, K., W.C. Hammond, R. Burgette, S.T. Marshall, and C.C. Sorlien, 2020, Present-day and long-term uplift across the Western Transverse Ranges of Southern California, *J. Geophys. Res. - Solid Earth*, 125(8), <https://doi.org/10.1029/2020JB019672>, [selected by JGR editors for research spotlight in *Eos*, <https://eos.org/research-spotlights/southern-californias-crustal-motion-tells-of-earthquake-hazards>].
Hamlington, B., A.S. Gardner, E. Ivins, J. T. M. Lenaerts, J.T. Reager, D. S. Trossman, E. D. Zaron, S. Adhikari, A. Arendt, A. Aschwanden, B.D. Beckley, D.P.S. Bekaert, G. Blewitt, L. Caron, H.A. Chandanpurkar, K.

- Christianson, R.I. Cullather, R. M. DeConto, J. T. Fasullo, T. Frederikse, J. T. Freymueller, D. M. Gilford, M. Giroto, W. C. Hammond, R. Hock, N. Holschuh, R. E. Kopp, F. Landerer, E. Larour, D. Menemenlis, M. Merrifield, J. X. Mitrovica, R.S. Nerem, I. J. Nias, V. Nieves, S. Nowicki, K. Pangaluru, C.G. Piecuch, D.R. Rounce, N.-J. Schlegel, H. Seroussi, M. Shirzaei, I. Velicogna, N. Vinogradova, T. Wahl, D. N. Wiese, M. J. Willis, 2020, Understanding of contemporary regional sea level change and the implications for the future, *Reviews of Geophysics*, v. 58(8), e2019RG000672, <https://doi.org/10.1029/2019RG000672>.
- Murray, J., N. Bartlow, Y. Bock, B.A. Brooks, J. Foster, J. Freymueller, W.C. Hammond, K. Hodgkinson, I. Johanson, A. Lopez-Venegas, D. Mann, G.S. Mattioli, T. Melbourne, D. Mencin, E. Montgomery-Brown, M.H. Murray, R. Smalley, V. Thomas, 2019, Regional Global Navigation Satellite System networks, *Seismo. Res. Lett.*, 91(2A), 552-572, <https://doi.org/10.1785/0220190113>.
- Anderson, J. G., R.D. Koehler, R. Abercrombie, S. K. Ahdi, S. Angster, J. Bormann, J. N. Brune, S. Dee, C. dePolo, S. Dickinson, M. Dunn, J.E. Faulds, W.C. Hammond, R. Hatch, A. Kell, G. Kent, C. Kreemer, J. Louie, I. Pierce, C. Ruhl, K.D. Smith, W. Taylor, S. Wesnousky, I. Wong, 2019, A seismic hazards overview of the urban regions of Nevada: Recent advancements and research directions, *Seis. Res. Lett.*, 90(4): 1577-1583, <https://doi.org/10.1785/0220180357>.
- Hammond, W.C., C. Kreemer, I. Zaliapin, G. Blewitt, 2019, Drought-triggered magmatic inflation, crustal strain and seismicity near the Long Valley Caldera, Central Walker Lane, *Journal of Geophysical Research - Solid Earth*, 124(6), 6072–6091, <https://doi.org/10.1029/2019JB017354>.
- Blewitt, G., W.C. Hammond, C. Kreemer, 2018, Harnessing the GPS data explosion for tomorrow's science applications, *Eos*, 99, <https://doi.org/10.1029/2018EO104623>. In print version came out in March, 2019 as *Eos* v. 100, n. 3, pp. 19-22.
- Kreemer, C. W.C. Hammond, G. Blewitt, 2018, A robust estimation of the 3D intraplate deformation of the North American plate from GPS, *Journal of Geophysical Research - Solid Earth*, 123, doi: 10.1029/2017JB015257.
- Melgar, D., X. Pérez-Campos, L. Ramirez-Guzman, Z. Spica, V.H. Castro, W.C. Hammond, and E. Cabral-Cano, 2017, Bend faulting at the edge of a flat slab during the 2017 M_w 7.1 Puebla-Morelos, Mexico earthquake, *Geophys. Res. Lett.*, 45, p. 2633–2641, doi: 10.1002/2017GL076895.
- Hammond, W.C., R. Burgette, K. Johnson, G. Blewitt, 2018, Uplift of the Western Transverse Ranges and Ventura area of Southern California: A four-technique geodetic study combining GPS, InSAR, leveling and tide gauges, *Journal of Geophysical Research - Solid Earth*, 122, doi: 10.1002/2017JB014499.
- Hammond, W.C., G. Blewitt, C. Kreemer, 2016, GPS Imaging of vertical land motion in California and Nevada: Implications for Sierra Nevada uplift, *J. Geophys. Res.*, 121, n. 10, p. 7681-7703, doi: 10.1002/2016JB013458.
- Hamlington, B.D., P. Thompson, W.C. Hammond, G. Blewitt, R. Ray, 2016, Assessing the impact of vertical land motion on 20th century global mean sea level estimates, *J. Geophys. Res.-Oceans*, 121, <https://doi.org/10.1002/2016JC011747>.
- Blewitt, G., C. Kreemer, W.C. Hammond, J. Gazeaux, 2016, MIDAS trend estimator for accurate GPS station velocities without step detection, *J. Geophys. Res. Solid Earth*, 121, 2054-2068, doi:10.1002/2015JB012552.
- Bormann, J., W.C. Hammond, C. Kreemer, G. Blewitt, 2016, Accommodation of missing shear strain in the Central Walker Lane, western North America: Constraints from dense GPS measurements, *Earth and Planetary Science Letters*, v. 440, p. 169-177, doi: 10.1016/j.epsl.2016.01.015.
- Aster, R., M. Simons, R. Bürgmann, N. Gomez, W.C. Hammond, S. Holbrook, E. Chaussard, L. Stearns, G. Egbert, J. Hole, T. Lay, S. McNutt, M. Oskin, B. Schmandt, D. Schmidt, J. Vidale, L. Wagner, P. Winberry, 2015, Future geophysical facilities required to address grand challenges in the Earth sciences, A Community report to the National Science Foundation, http://www.iris.edu/hq/files/workshops/2015/05/fusg/reports/futures_report.pdf.
- Melgar, D., J. Geng, B.W. Crowell, J.S. Haase, W.C. Hammond, Y. Bock, R.M. Allen, 2015, Seismogeodesy of the 2014 M_w 6.1 Napa, California, Earthquake: Rapid response and modeling of fast rupture on a dipping strike-slip fault, *J. Geophys. Res.*, 120, doi:10.1029/2015JB011921.
- Hammond, W.C., G. Blewitt, C. Kreemer, 2014, Steady contemporary deformation of the central Basin and Range Province, western United States, *J. Geophys. Res.*, 119 p. 5235–5253, doi:10.1002/2014JB011145.
- Amos, C.B., P. Audet, W. C. Hammond, R. Bürgmann, I. A. Johanson, and G. Blewitt, 2014, Uplift and seismicity driven by groundwater depletion in central California, *Nature*, 509, p. 483-486, doi:10.1038/nature13275.
- Blewitt, G., C. Kreemer, W.C. Hammond, J. Goldfarb, 2013, Terrestrial reference frame NA12 for crustal deformation studies in North America, *J. Geodynamics*, 72, pp. 11-24, ISSN 0264-3707, <http://dx.doi.org/10.1016/j.jog.2013.08.004>.
- Kreemer, C., W.C. Hammond, G. Blewitt, A. Holland, R.A. Bennett, 2012, A geodetic strain rate model for the southwestern United States, scale 1:1,500,000, Nevada Bureau of Mines and Geology publication M178.
- Hammond, W.C., G. Blewitt, Z. Li, C. Kreemer, H.-P. Plag, 2012, Contemporary uplift of the Sierra Nevada, western United States, from GPS and InSAR measurements, *Geology*, v. 40, p. 667-670, doi:10.1130/G32968.1.
- Wesnousky, S., J. Bormann, C. Kreemer, W.C. Hammond, J. Brune, 2012, Neotectonics, geodesy and seismic hazard in the northern Walker Lane of western North America: Thirty kilometers of crustal shear and no strike-slip? *Earth and Planetary Science Letters*, v. 329-330, 133–140, doi:10.1016/j.epsl.2012.02.018.

- Del Pardo, C., B.R. Smith-Konter, L.F. Serpa, C. Kreemer, G. Blewitt, W.C. Hammond, 2012, Interseismic deformation and geologic evolution of the Death Valley Fault Zone, *J. Geophys. Res.* 117, B06404, doi:10.1029/2011JB008552.
- Hammond, W.C., G. Blewitt, C. Kreemer, 2011, Block modeling of crustal deformation of the northern Walker Lane and Basin and Range from GPS velocities, *J. Geophys. Res.*, v. 116, B04402, doi:10.1029/2010JB007817.
- Hammond, W.C., B. A. Brooks, R. Bürgmann, T. Heaton, M. Jackson, A. R. Lowry, S. Anandkrishnan, 2011, The scientific value of high-rate, low-latency GPS data, *Eos* feature article, v. 92(15), doi:10.1029/2011EO150001, p. 125-132.
- Hammond, W.C., G. Blewitt, C. Kreemer, J.R. Murray-Moraleda, J.L. Svarc, 2011, Global Positioning System constraints on crustal deformation before and during the 21 February 2008 Wells, Nevada M 6.0 Earthquake, *in* The 21 February 2008 M_w 6.0 Wells, Nevada Earthquake, NBMG Special Publication 36, eds. C.M. dePolo and D.D. LaPointe.
- Hammond, W.C., Kreemer, C., Blewitt, G., Plag H.-P., 2010, The effect of viscoelastic postseismic relaxation on estimates of interseismic crustal strain accumulation at Yucca Mountain, Nevada, *Geophys. Res. Lett.*, 37, L06307, doi:10.1029/2010GL042795.
- Kreemer, C., G. Blewitt, and W.C. Hammond, 2010, Evidence for an active shear zone in southern Nevada linking the Wasatch Fault to the eastern California Shear Zone, *Geology*, v. 38; no. 5; p. 475–478; doi: 10.1130/G30477.1.
- Hammond, W.C., Kreemer, C., Blewitt, G., 2009, Geodetic constraints on contemporary deformation in the Northern Walker Lane: 3, Central Nevada seismic belt postseismic relaxation: *in* Oldow, J.S., and Cashman, P.H., eds., Late Cenozoic Structure and Evolution of the Great Basin – Sierra Nevada Transition, Geological Society of America, Special Paper 447, p.33-54, doi: 10.1130/2009.2447(03).
- Blewitt, G., Hammond, W.C., Kreemer, C., 2009, Geodetic constraints on contemporary deformation in the Northern Walker Lane: 1, Semi-permanent GPS strategy: *in* Oldow, J.S., and Cashman, P.H., eds., Late Cenozoic Structure and Evolution of the Great Basin – Sierra Nevada Transition, Geological Society of America, Special Paper 447, p.1-16, [https://doi.org/10.1130/2009.2447\(01\)](https://doi.org/10.1130/2009.2447(01)).
- Kreemer, C., Blewitt, G., Hammond, W.C., 2009, Geodetic constraints on contemporary deformation in the Northern Walker Lane: 2, Velocity and strain rate tensor analysis: *in* Oldow, J.S., and Cashman, P.H., eds., Late Cenozoic Structure and Evolution of the Great Basin – Sierra Nevada Transition, Geological Society of America, Special Paper 447, p.17-31, doi: 10.1130/2009.2447(02).
- Blewitt, G. W.C. Hammond, C. Kreemer, H.P. Plag, S. Stein, E. Okal, 2009, GPS for real-time earthquake source determination and tsunami warning systems, *Journal of Geodesy*, vol. 83, pp. 335–343, doi:10.1007/s00190-008-0262-5.
- Kreemer, C. and W.C. Hammond, Geodetic constraints on areal-changes in the Pacific-North America plate boundary zone: What controls Basin and Range extension? 2007, *Geology* v. 35, n.10: p.943-947, doi:10.1130/G23868A.1.
- Hammond, W.C. and W. Thatcher, 2007, Crustal deformation across the Sierra Nevada, Northern Walker Lane, Basin and Range transition, western United States measured with GPS, 2000-2004, *J. Geophys. Res.*, 112, B05411, doi:10.1029/2006JB004625.
- Blewitt, G., C. Kreemer, W.C. Hammond, H.-P. Plag, S.A. Stein, and E. Okal, 2006, Rapid determination of Earthquake magnitude using GPS for Tsunami Warning Systems, *Geophys. Res. Lett.*, 33, L11309, doi:10.1029/2006GL026145.
- Kreemer, K., G., Blewitt, W.C., Hammond, H.-P., Plag, 2006, Global deformation from the Great 2004 Sumatra-Andaman earthquake observed by GPS: Implications for rupture process and global reference frame, 2006, *Earth Planets Space*, v. 58, no. 2, p. 141–148.
- Hammond, W.C. and W. Thatcher, 2005, Northwest Basin and Range tectonic deformation observed with the Global Positioning System, 1999–2003, *J. Geophys. Res.*, v. 100, no. B10, B10104, doi:10.1029/2005JB003751.
- Hammond, W.C. and W. Thatcher, 2004, Contemporary tectonic deformation of the Basin and Range province, western United States: 10 years of observation with the Global Positioning System, *J. Geophys. Res.*, v. 109, no. B8, 8403, doi:10.1029/2003JB002746.
- Hammond, W.C., and D.R. Toomey, 2003, Seismic velocity anisotropy and heterogeneity beneath the Mantle Electromagnetic and Tomography Experiment (MELT) region of the East Pacific Rise from analysis of P and S body waves, *J. Geophys. Res.*, v. 108, no. B4, 2176, doi:10.1029/2002JB001789.
- Toomey, D.R., W.S.D. Wilcock, J.A. Conder, D.W. Forsyth, J.D. Blundy, E.M. Parmentier, W.C. Hammond, 2002, Asymmetric mantle dynamics in the MELT region of the East Pacific Rise, *Earth and Planetary Science Letters*, v. 200, p. 287–295.
- Hammond, W.C., and E.D. Humphreys, 2000, Upper mantle seismic wave velocity: The effect of realistic partial melt geometries, *J. Geophys. Res.*, v. 105, p. 10,975–10,986.
- Hammond, W.C., and E.D. Humphreys, 2000, Upper mantle seismic wave attenuation: The effect of realistic partial melt distribution, *J. Geophys. Res.*, v. 105, p. 10,987–10,999.
- Toomey, D.R., W.S.D. Wilcock, S.C. Solomon, W.C. Hammond, J.A. Orcutt, 1998, Mantle seismic structure beneath the MELT region of the East Pacific Rise from P and S wave tomography, *Science*, v. 280, p. 1224–1227.

Hammond, W.C., 2000, Dynamics, flow and melt content of the southern East Pacific Rise upper mantle from teleseismic tomography, Ph.D. thesis, Univ. of OR, Eugene.

Peer-Reviewed Book Chapters

Weldon, R.J., G. de Lamare, D. Yule, W. C. Hammond, A. Streig, A. Sarmiento, T. Freeman, J. Shamma, M. Beikaie, A. Rodriguez, 2017, Chapter 8: San Andreas Fault-South Branch surface deformation modeling, Chapter in AEG Book: Applied Geology in California, Special Publication Number 26, R. Anderson, H. Ferriz eds.

Peer-Reviewed Conference Proceedings

García-Cañada, L., and W.C. Hammond, 2020, Advances in GNSS time series filtering for volcano monitoring in the Canary Islands, May 26-29, 2020, Asamblea Hispano Portuguesa de Geodesia y Geofísica, Toledo, Spain, <https://congreso.ign.es/web/10asambleahpgg/inicio>.

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- Hammond, W.C., C. Kreemer, G. Blewitt, 2017, GPS Imaging suggests links between climate, magmatism, seismicity, and tectonics in the Sierra Nevada-Long Valley Caldera-Walker Lane system, western United States, Abstract G41A-02, Fall AGU Meeting, New Orleans, LA, Dec. 11-15, 2017.
- Hammond, W.C., 2017, Effects of water on active crustal deformation in California and Nevada from GPS data, NSF EarthScope Hydrogeodesy Synthesis Workshop, UC San Diego, Scripps IGPP, October 25-27, 2017, [INVITED].
- Kraner, M.L., W.C. Hammond, C. Kreemer, I. Zaliapin, 2017, Seasonal variation of strain in Central California and its correlation with seismicity, NSF EarthScope Hydrogeodesy Synthesis Workshop, UC San Diego, Scripps IGPP, October 25-27, 2017.
- Kraner, M.L., W. C. Hammond, C. Kreemer, and I. Zaliapin, 2017, Correlating seasonal strain patterns to seismicity in central California, SCEC Annual Meeting, Palm Springs, CA, Sept 10-13, 2017.
- Kreemer, C., W.C. Hammond, G. Blewitt, W.R. Peltier, K. Roy, 2017, Constraints on intra-continental strain rates and glacial isostatic adjustment from thousands of GPS velocities, IGS Workshop 2017, Paris, France, July 3-7, 2017.
- Blewitt, G., C. Kreemer, W.C. Hammond, 2017, Robust realization of a no-net rotation reference frame on a deforming tectonic plate, IAG Symposium, July 30-Aug. 6, Kobe, Japan.
- Hammond, W.C., and L. Flesch, 2017, Eye-popping EarthScope Science: A synthesis, celebration and exploration of new horizons for geodetic and geodynamic imaging, Plenary Talk at EarthScope National Meeting, Anchorage Alaska, May 26-28, 2017 [INVITED].

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- Kreemer, C., W.C. Hammond, G. Blewitt, 2017, A robust estimation of the North American intra-continental strain rate field with implications for seismic hazard, SSA Annual Meeting, Denver CO, April 18-20, 2017 [INVITED].

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- Blewitt G., C. Kreemer, W.C. Hammond, 2016, Fixing a reference frame to a moving and deforming continent, Abstract G34B-02, Fall AGU Meeting, San Francisco, CA [INVITED].
- Hammond, W.C., G. Blewitt, 2016, GPS Imaging of time-variable earthquake hazard: The Hilton Creek fault, Long Valley California, Abstract G51B-1112, Fall AGU Meeting, San Francisco, CA.
- Kraner, M., W. C. Hammond, C. Kreemer, A.A. Borsa, G. Blewitt, 2016, GPS Imaging of time-dependent seasonal strain in Central California, Abstract G42A-01, Fall AGU Meeting, San Francisco, CA.
- Anderson, B.J., R. Schumer, S.W. McCoy, W. C. Hammond, 2016, Analysis of fault rupture potential resulting from large-scale groundwater withdrawal: Application to Spring Valley, Nevada, Abstract S31B-2751, Fall AGU Meeting, San Francisco, CA.
- Kraner, M., W. C. Hammond, C. Kreemer, 2016, GPS Imaging of Time-Dependent Seasonal Strain in Central California, SCEC Annual Meeting, Palm Springs, CA Sept. 9-11, 2016.
- Hammond, W.C., G. Blewitt, C. Kreemer, R. Burgette, K. Johnson, C. Meertens, F. Boler, 2016, New Constraints on Uplift and Earthquake Potential in Southern California from Geodetic Imaging of Vertical Crustal Motion, SCEC Annual Meeting, Palm Springs, CA Sept. 11-14, 2016 [INVITED KEYNOTE].
- Brailo, C., G.M. Kent, S.G. Wesnousky, W.C. Hammond, A.M. Kell, I.K. Pierce, C.J. Ruhl, K. D. Smith, 2016, A LiDAR and GPS study of the greater Truckee Meadows: Evidence for a distinct transition from primarily east-west dominated extension to NW-trending right-lateral slip centered in Reno, Nevada, SSA Annual Meeting, April 20-22, 2016, Reno, NV.
- Wesnousky, S.G., I.K. Pierce, E. Milawsky, J. Louie, C. Kreemer, W.C. Hammond, J. Faulds, C. Carlson, J. Brune, J.M. Bormann, 2016, Neotectonics Brings Interesting Challenges To The Assessment Of Seismic Hazard In The Northern Walker Lane, SSA Annual Meeting, April 20-22, 2016, Reno, NV.
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- Hammond, W.C., G. Blewitt, C. Kreemer, 2016, GPS Imaging of crustal strain and uplift rates in the western United States, UNAVCO Science Workshop, Broomfield, CO, March 28-31, 2016.
- Kraner, M., C. Kreemer, W.C. Hammond, G. Blewitt, 2016, Anatomy of Seasonal Motion in California: How Well Can GPS Data Determine the Station's Geologic Setting?, UNAVCO Science Workshop, Broomfield, CO, March 28-31, 2016.
- Blewitt, G., W.C. Hammond, C. Kreemer, 2016, Operational GPS Imaging system at multiple scales for Earth science and monitoring of geohazards, Abstract EGU 17867, 2016-European Geoscience Union General Assembly, Vienna, Austria, April 17-22, 2016 [INVITED].
- Faulds, J.E., N. H. Hinz, M. F. Coolbaugh, D. L. Siler, L. A. Shevenell, J. H. Queen, C. M. dePolo, W. C. Hammond, and C. Kreemer, 2015, Discovering geothermal systems in the Great Basin region: An integrated geologic, geochemical, and geophysical approach for establishing geothermal play fairways, 41st Annual Stanford Geothermal Workshop, February 22-24, 2016.
- Hammond, W.C., G. Blewitt, C. Kreemer, GPS Imaging of the Uplift of the Sierra Nevada Mountain Range, Western United States, Keynote Talk at the 11th Annual AfricaArray Workshop, Johannesburg, South Africa, 2016 [INVITED KEYNOTE].

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- Tamisiea, M., S. P. D. Williams, C.W. Hughes, R.M. Bingley, G. Blewitt, W.C. Hammond, C. Kreemer, 2015, Multiple geodetic observations for identifying glacial isostatic adjustment and the causes of sea-level change, AGU Fall meeting session G53A-08, Dec. 14-18, San Francisco, CA.
- Meertens, C., F. Boler, S. Wier, G. Blewitt, W.C. Hammond, C. Kreemer, 2015, Plug and Play GPS for Earth Scientists: Providing Immediate Access to Low-Latency Geodetic Products for Rapid Modeling and Analysis of Natural Hazards, AGU Fall meeting session G11B-0983, Dec. 14-18, San Francisco, CA.
- Hammond, W.C., G. Blewitt, C. Kreemer, 2015, GPS Imaging of Sierra Nevada uplift, AGU Fall meeting session G21C-06, Dec. 14-18, San Francisco, CA [INVITED].

- Hammond, W.C., G. Blewitt, B. Hamlington, 2015, GPS imaging of global vertical land motion for sea level studies, AGU Fall meeting session G53A-04, Fall AGU Dec. 14-18, San Francisco, CA.
- Blewitt, G., W.C. Hammond, C. Kreemer, 2015, GPS Imaging of solid Earth flex and flow: A new paradigm, session U009, Fall AGU Dec. 14-18, San Francisco, CA [INVITED].
- Blewitt, G., W.C. Hammond, C. Kreemer, Z. Altamimi, 2015, Independent assessment of ITRF site velocities using GPS imaging, session G017, Fall AGU Dec. 14-18, San Francisco, CA, [INVITED].
- Hammond, W.C., G. Blewitt, B. Hamlington, 2015, GPS Imaging of global vertical crustal motion for sea level studies, NASA Sea level change workshop, UCLA Conference center, Lake Arrowhead, CA, November 10-12, 2015.
- Burgette, R., K. Johnson, W.C. Hammond, 2015, Observations of vertical deformation across the western Transverse Ranges and constraints on Ventura area fault slip rates, SCEC Annual Meeting, Palm Springs, CA Sept. 9-11, 2015.
- Shaw, J.H., M. Barrall, R. Burgette, J. F. Dolan, E. Geist, J. Grenader, T. Gobel, W.C. Hammond, E. Hauksson, J.A. Hubbard, K. Johnston, L. McAuliffe, S. Marshall, C. Nicholson, D. Oglesby, A. Plesch, L. Reynolds, T. Rockwell, K. Ryan, A. Simms, C. Sorlien, C. Tape, H.K. Thio, and S. Ward, 2015, The Ventura special fault study area: Assessing the potential for large, multi-segment thrust fault earthquakes and their hazard implications, SCEC Annual Meeting, Palm Springs, CA Sept. 9-11, 2015.
- Wesnousky, S. G., J. Bormann, C. Kreemer, W. Hammond, and J. Brune, 2015, Neotectonics, geodesy, and seismic hazard in the northern Walker Lane of western North America: Thirty kilometers of crustal shear and no strike-slip?, 6th International INQUA meeting on Paleoseismology, Active Tectonics, and Archaeoseismology, April 19-24, Pescina, Italy Miscellanea INGV, Abstracts Volume 6th International INQUA meeting, Anno 2015-Numero 27, ISSN 2039-6651, 529-532, [INVITED].
- Hammond, W.C., G. Blewitt, C. Kreemer, 2015, GPS Imaging of solid Earth flex and flow using EarthScope networks, EarthScope National Meeting, Stowe, VT, June 14-17, 2015 [INVITED].
- Hammond, W.C., G. Blewitt, C. Kreemer, 2015, GPS Imaging of solid Earth flex and flow: The future of geodetic networks, Lightning talk with white paper for NSF workshop on *Future Seismic and Geodetic Facility Needs in the Geosciences*, Lansdowne Resort and Conference Center, Leesburg, United States, May 4-6, 2015 [INVITED].
- G. de Lamare, R. Weldon, D Yule, W. C. Hammond, T. Freeman, and A. Rodriguez, 2015, San Andreas Fault surface deformation modeling for protection of critical southern California infrastructure, SSA Annual Meeting, Pasadena, CA, April 21-23, 2015.

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- Hammond W.C., C. Kreemer, and G. Blewitt, 2014, Co- and postseismic slip on the West Napa Fault seen with GPS after the South Napa Earthquake of August 24, 2014, S33F-4907, Fall AGU Dec. 15-19, San Francisco, CA.
- Resor, P.G., V.S. Cronin, W.C. Hammond, B. Pratt-Sitaula, S.E. Olds, 2014, A Teachable Moment in Earth Deformation: An Undergraduate Strain Module Incorporating GPS Measurement of the August 24, 2014 M6.0 South Napa Earthquake, S33F-4951, Fall AGU Dec. 15-19, San Francisco, CA.
- Chacko, R., W. C. Hammond, G. Blewitt, 2014, Magmatic-Tectonic Interactions: Implications for Seismic Hazard Assessment in the Long Valley Caldera Region, G31A-0407, Fall AGU Dec. 15-19, San Francisco, CA.
- Hammond, W.C., C. Kreemer, G. Blewitt, J. Broermann, R. A. Bennett, 2014, Geodetic constraints on fault slip rates and seismic hazard in the greater Las Vegas area, T33E-05, Fall AGU Dec. 15-19, San Francisco, CA [INVITED].
- Blewitt, G, C. Kreemer, W.C. Hammond, 2014, Robust, automatic GPS station velocities and velocity time series, G23B-0489, Fall AGU Dec. 15-19, San Francisco, CA.
- C. B. Amos, P. Audet, W. C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt, 2014, Uplift and seismicity driven by groundwater depletion in central California, Fall AGU Dec. 15-19, San Francisco, CA [INVITED].
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- Johnson, K., W.C. Hammond, R. Burgette, 2014, Geodetic constraints on shortening, uplift, and fault slip across the Ventura Basin, SCEC Annual meeting, Palm Springs, CA, Sept. 6-10, 2014.
- Hammond, W.C., R. Burgette, K. Johnson, 2014, Measuring Ventura Area Uplift: A four-technique geodetic study of vertical tectonics combining GPS, InSAR, leveling and tide gauges, SCEC Annual meeting, Palm Springs, CA, Sept. 6-10, 2014.
- Blewitt, G., C.B. Amos, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, 2014, Regional variation in near-surface mass and coulomb stress inferred by GPS, Wegener 2014 Conference, Measuring and Modeling our Dynamic Planet, Leeds, UK, Sept 1-4, 2014.
- Amos, C.B, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, G. Blewitt, 2014, Uplift and seismicity driven by groundwater depletion in central California, 3rd Biennial Structure and Tectonics Forum, SERC, in Golden, CO, June 14-20, 2014.

- Goldfarb, J., J. Broermann, G. Blewitt, W.C. Hammond, R.A. Bennett, C. Kreemer, 2014, What fraction of common-mode errors in the NA12 datum are artifacts of GPS data processing? 2014 UNAVCO Science Workshop, Broomfield, Colorado, March 4-6, 2014.
- Hammond, W.C., G. Blewitt, C. Kreemer, K. Johnson, R. J. Weldon, 2014, Vertical crustal motion across southern California fault systems from GPS and InSAR, 2014 UNAVCO Science Workshop, Broomfield, Colorado, March 4-6, 2014.
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- Amos C, P. Audet, W. C. Hammond, R. Bürgmann, I. A. Johanson, and G Blewitt, 2014, A human-induced mechanism for mountain uplift of the Sierra Nevada and seismicity modulation on the San Andreas Fault, EGU General Assembly, Vienna, Austria, April 7-12, *Geophysical Research Abstracts*, v. 16, 2014.
- Zhang, Y., C. Kreemer, W.C. Hammond, G. Blewitt, 2014, Geodetic inversion of afterslip in viscoelastic Earth media for the 2011 Mw=9.0 Tohoku Earthquake, EGU General Assembly, Vienna, Austria, April 7-12, *Geophysical Research Abstracts*, v. 16, 2014.

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- Hammond, W.C., K. Johnson, R. J. Weldon, G. Blewitt, R. Burgette, 2013, A new look at vertical motion around the San Andreas Fault in the Southern California from integrated GPS and InSAR measurements, Fall AGU session G41C-02, San Francisco, CA, Dec 9-13, 2013.
- Blewitt, G., C. Kreemer, W.C. Hammond, 2013, EarthScope's Plate Boundary Observatory as the mother of invention, Fall AGU, S24A-01, San Francisco, CA, Dec 9-13, 2013 [INVITED].
- Blewitt, G., W.C. Hammond, S. Nerem, 2013, Regional sea level variation: California coastal subsidence, Fall AGU, G33C-02, San Francisco, CA, Dec 9-13, 2013 [INVITED].
- Kreemer, C., G. Blewitt, W.C. Hammond, 2013, The GPS velocity field in the Western U.S. and what it tells us about earthquakes, seismic hazard, and driving forces, Fall AGU, S23C-05, San Francisco, CA, Dec 9-13, 2013 [INVITED].
- Amos C, P. Audet, W. C. Hammond, R. Bürgmann, I. A. Johanson, and G Blewitt, 2013, Contemporary vertical uplift and modulation of seismicity due to groundwater removal in the southern San Joaquin Valley of California, Fall AGU, G43A-0955, San Francisco, CA, Dec 9-13, 2013.
- Zhang, Y., C. Kreemer, W.C. Hammond, G. Blewitt, 2013, Evidence for viscoelastic relaxation following the 2011 Mw 9.0 Tohoku Earthquake using GPS, Fall AGU, G31C-07, San Francisco, CA, Dec 9-13, 2013.
- Hammond, W.C. J. Bormann, G. Blewitt, C. Kreemer, 2013, Walker Lane and western Basin and Range transtension and rotation rates from GPS observations, continuum and block models, GSA Annual Meeting Session No. 85 T205, Denver CO, Oct. 27-30, 2013 [INVITED].
- Johnson, K., W.C. Hammond, R. J. Weldon, G. Blewitt, R. Burgette, Modeling to reconcile geodetic estimates of shortening rates and vertical motion in the Western Transverse Ranges, SCEC Annual Meeting, Palm Springs, CA, September 8-11, 2013.
- Hammond, W.C. and J. Bell, Structural controls on geothermal reservoir deformation at Stillwater, Nevada from InSAR and GPS Data, Geothermal Resources Council Annual Meeting, Las Vegas, NV, Sept. 30-Oct. 2, 2013.
- Blewitt, G., W.C. Hammond, S. Nerem, Geodetic observations of California coastline subsidence, NRC Sea level workshop, Irvine, CA, June 20-21, 2013, [INVITED].
- Hammond, W.C., C. Kreemer, G. Blewitt, Seismic hazard in the eastern Nevada and western Utah Basin and Range from GPS measurements, SSA Annual Meeting, Salt Lake City, Utah, April 17-19, 2013.
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- Kreemer, C., G. Blewitt, W.C. Hammond, J. Bormann, R.A. Bennett, Improved seismic hazard assessment for the Colorado Plateau region from new geodetic data, SSA Annual Meeting, Salt Lake City, Utah, April 17-19, 2013.
- Blewitt G., H.-P. Plag, Y. Bar-Sever, C. Kreemer, W.C. Hammond, J. Goldfarb, GPS time series in ITRF and derivative frames: Trade-offs between precision, frequency, and latency, EGU General Assembly, Vienna, Austria, April 7-12, *Geophysical Research Abstracts*, v. 15, 2013.

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- Dickinson, H., A. Freed, W.C. Hammond, Insights into the rheology of the upper mantle in Western Nevada from a combined postseismic and lake unloading study, AGU Fall Meeting, MR23C-2420, San Francisco, CA, Dec 3-7, 2012.
- Cronin, V., B. Pratt-Sitaula, P. Resor, S. Olds, N. West, W.C. Hammond, C. Kreemer, 2012, Developing a curricular module for introductory geophysics or structural geology courses to quantify crustal strain using PBO GPS velocities, AGU Fall Meeting, ED41B-0681, San Francisco, CA, Dec 3-7, 2012.
- Resor, P. V. Cronin, W.C. Hammond, C. Kreemer, S. Olds, B. Pratt-Sitaula, N. West, 2012, Using EarthScope Plate Boundary Observatory GPS velocities to introduce strain to undergraduate structural geology students, GSA Annual Meeting, Session T60, Charlotte, NC, November 4-7, 2012.
- Hammond, W.C., G. Blewitt, C. Kreemer, Using GPS geodesy to assess very low strain rates in the North American continent, USGS Mid-continent Geodesy Workshop, Oct. 31-Nov.1 Evanston, IL [INVITED].
- Kreemer, C., G. Blewitt, W.C. Hammond, GPS data and its use in large-scale crustal deformation models, EarthCube End-User Domain Workshop for EarthScope, Oct. 29-30, Arizona State University, Tempe Arizona, [INVITED].
- Hammond, W.C., C. Kreemer, G. Blewitt, 2012, Potential contributions of geodesy to monitoring volcanic unrest in the southwest United States, USGS Workshop on Volcanism in the American Southwest, Flagstaff, AZ October 18-20, 2012 [INVITED].
- Hammond, W.C., C. Kreemer, G. Blewitt, J. Bormann, 2012, GPS Measurement of active crustal deformation of the Lake Tahoe Basin and vicinity, *Friends of the Pleistocene Pacific Cell Field Trip*, Lake Tahoe, CA/NV, September 14-16, 2012
- Bormann, J., W.C. Hammond, C. Kreemer, G. Blewitt, 2012, Using GPS measurements of active crustal deformation to estimate slip rates on the Honey Lake/Warm Springs and Mohawk Valley fault systems, Northern Walker Lane, *Friends of the Pleistocene Pacific Cell Field Trip*, Lake Tahoe, CA/NV, September 14-16, 2012.
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- Hammond, W.C., Kreemer, C., Blewitt, G., Bormann, J., Wesnousky, S., 2012, What geodesy tells us about earthquake hazard in the Basin and Range Province: Fault-scale to province-scale studies, Annual meeting of the Association of Environmental and Engineering Geologists, Salt Lake City, UT, Sept. 19-21, 2012 [INVITED].
- Blewitt, G., C. Kreemer, J. Goldfarb, H.-P. Plag, W.C. Hammond, Global Spatial Filtering (GSF) of GNSS coordinates to capture small transient signals, 2012, *Geophysical Research Abstracts* Vol. 14, EGU General Assembly, Abstract EGU2012-6887, Vienna, Austria April 22-27, 2012.
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- Plag, H.-P., G. Blewitt, Y. Bar-Sever, W.C. Hammond and C. Kreemer, GPS-determined surface displacements and tsunami early warning: Potential, obstacles, and current capabilities, Community Workshop on Real-Time GPS Position Data Products and Formats, UNAVCO, Inc., Boulder, CO, March 26-28, 2012.
- Hammond, W.C., J. Bormann, C. Kreemer, G. Blewitt, Measuring long-term motion of the Sierra Nevada/Great Valley Microplate with GPS: Effect of earthquake cycle transients, UNAVCO Science Workshop, Meeting, Feb. 28-March 1, 2012.
- Plag, H.-P., W.C. Hammond, G. Blewitt, A community geodesy workbench for the integrated modeling and analysis of geodetic observations, UNAVCO Science Workshop, Meeting, Feb. 28-March 1, 2012.
- Goldfarb, J., W.C. Hammond, G. Blewitt, H.-P. Plag, Automated transient identification and characterization in GNSS time series, UNAVCO Science Workshop, Meeting, Feb. 28-March 1, 2012.
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- Plag, H.-P., W.C. Hammond, G. Blewitt, 2011, Facilitating joint analysis of data from several systems using geophysical models, Abstract G52A-06, presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec, [INVITED].
- Plag, H.-P., C. Kreemer, G. Blewitt, W.C. Hammond, 2011, Using empirical orthogonal functions to quantify and predict global and regional common modes of the global geodetic reference frame, Abstract G31B-0965, presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.
- Goldfarb, J., W.C. Hammond, G. Blewitt, H.-P. Plag, 2011, Discontinuity detection and characterization in GNSS time series, Abstract G31B-0968, presented at 2010 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.
- Blewitt, G., C. Kreemer, J. Goldfarb, H.-P. Plag, W.C. Hammond, 2011, Chasing small signals using Global Spatial Filtering (GSF) of GNSS coordinates, Abstract G31B-0967, presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec.
- Wesnousky, S., C. Kreemer, W.C. Hammond, J. Bormann, J.N. Brune, 2011, Neotectonics, geodesy and seismic hazard in the Northern Walker Lane, Abstract S12A-02, presented at 2011 Fall Meeting, AGU, San Francisco, CA, 5-9 Dec. [INVITED].
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- Hammond, W. C., G. Blewitt, Z. Li, C. Kreemer, H.-P. Plag, 2011, Geodetic imaging, seismic hazard and mountain building across the Sierra Nevada/Great Basin transition using InSAR and GPS, ESA FRINGE Workshop, Frascati Italy, Sept 19-23, 2011.
- Li, Z., W.C. Hammond, G. Blewitt, C. Kreemer, H.-P. Plag, Y. Wen, C. Xu, 2011, InSAR Time series with atmospheric estimation model (InSAR TS + AEM) for regional deformation mapping, ESA FRINGE Workshop, Frascati Italy, Sept 19-23, 2011.
- Thatcher, W., P. Bird, J. Bormann, T. Dawson, E. Field, W.C. Hammond, E. Hearn, K. Johnson, R. McCaffrey, D. Sandwell, Y. Zeng, Incorporating GPS velocities into UCERF3, SCEC Annual meeting, 2011.
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STUDENTS ADVISED

Degrees Completed

- Ian Pierce, Ph.D., Committee member, “Active faulting in the Central Walker Lane”, completed November, 2019.
- Steve Angster, Ph.D., Committee member, “Late Quaternary slip rates and styles of faulting associated with the Walker Lane Shear Zone and the transition to southern Cascadia”, completed May, 2018.
- Meredith Kraner, M.S., Committee member, “Evaluating seasonal deformation in the vicinity of active fault structures in central California using GPS data”, completed May, 2017.
- Brian Anderson, M.S., (DRI), Committee member, “Analysis of fault rupture potential resulting from large-scale groundwater withdrawal: application to Spring Valley, Nevada”, completed August, 2016.
- Kevin McBean, MS Geophysics, Committee member, “Statistics of ground motions in a foam rubber model of a strike-slip fault”, completed March, 2015.
- Yang Zhang, M.S., Committee member, “Coseismic and postseismic deformation of the 2011 MW 9.0 Tohoku Earthquake - A nonlinear inversion of GPS data”, completed January, 2015.
- Jay Goldfarb, Ph.D., Primary advisor, “Anatomy of geodetic time series and their application to the measurement of vertical motion in the Sierra Nevada/Great Basin”, advanced to candidacy, deceased prior to completion.
- Russell Di Fiori, M.S., Committee member, “Focused geologic mapping and structural analysis of the southern Eureka mining district; assessing structural controls and spatial patterns of mineralization”, completed 2014.
- Annie Kell, Ph.D., Committee member, “The application of active-source seismic imaging techniques to transtensional problems in the Salton Trough and Walker Lane”, completed April, 2014.

Jayne Bormann, Ph.D., Primary advisor, “Constraints on shear strain accommodation in the Northern Walker Lane and the geometry of normal fault ruptures through geodetic and geologic observation”, completed August, 2013, now faculty at California State University, Long Beach.
Sumant Jha, M.S., Geophysics, Primary advisor, “Block kinematics and slip rates in the southern Walker Lane estimated From GPS data”, University of Nevada, Reno, completed August, 2010.

Degrees In Progress

Aren Crandall-Bear, Ph.D., Committee chair
Justine Overacker, Ph.D., Advanced to Candidacy, Committee chair
Zachary Young, Ph.D., Advanced to Candidacy, Committee member
Dylan Morlang, MS, Committee member
Nina Miller, Ph.D., Committee member