

CURRICULUM VITAE

Cornelis W. Kreemer
Research Professor

ADDRESS

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EDUCATION

- 2001 Ph.D., Earth and Space Sciences, State University of New York, Stony Brook
Thesis: "*A global strain rate model*"
Advisor: *W. Holt*
- 1997 M.S., Geophysics, Utrecht University, The Netherlands
Thesis: "*Plate boundary deformation in the Explorer region*"
Advisor: *R. Govers*

RESEARCH INTERESTS

Crustal deformation, Application of space-geodesy in tectonics and geodynamics, Global plate kinematics and dynamics, Lithospheric dynamics, GPS time-series analysis, Earthquake statistics, Reference frames and absolute plate motion, Natural hazards, Seismic cycle

PROFESSIONAL EXPERIENCE

- 2017-Present Research Scientist / Research Professor, *Nevada Bureau of Mines and Geology, and Seismological Laboratory, University of Nevada, Reno*
- 2010-2017 Research Scientist / Research Associate Professor, *Nevada Bureau of Mines and Geology, and Seismological Laboratory, University of Nevada, Reno*
- 2016 Visiting Professor, *Faculty of Earth Sciences, Utrecht University, The Netherlands*
- 2005-2010 Research Scientist / Research Assistant Professor, *Nevada Bureau of Mines and Geology, and Seismological Laboratory, University of Nevada, Reno*
- 2004-2005 Postdoctoral Fellow, *Nevada Bureau of Mines and Geology, University of Nevada, Reno*
- 2002-2004 Postdoctoral Fellow, *Chaire de Géodynamique, Collège de France, Aix en Provence / Paris*
- 2001-2002 Postdoctoral Fellow, *Laboratoire de Géologie, École Normale Supérieure, Paris, France*

1998-2001 Graduate Research Assistant, *Department of Geosciences, SUNY Stony Brook*
 1997-1998 Graduate Teaching Assistant, *Department of Geosciences, SUNY Stony Brook*
 1996 Research Scholar, *Geodynamics Lab, Penn State University, College Park, PA*

AWARDS AND HONORS

2016 *Visiting Professorship, Royal Dutch Academy of Sciences*
 2013-2014 *EarthScope Speaker*
 2011 *Mackay Faculty Achievement Award, University of Nevada, Reno*
 2010 *Geodesy Section Award, American Geophysical Union*
 2008 *Travel Award, 3rd World Stress Map Conference, Potsdam, Germany*
 2005 *Travel Award, UNAVCO-IRIS Joint Workshop, Stevenson, Washington*
 2005 *Travel Award, EarthScope National Meeting, Santa Ana Pueblo, New Mexico*
 1999 *Travel Award, GPS99 meeting, Tsukuba, Japan*
 1998 *Excellence in Teaching Award, SUNY - Stony Brook*

PROFESSIONAL SERVICE

2023 *Convener - Special Session: 'GNSS Monitoring of the Terrestrial Environment: Earthquakes, Volcanoes, and Climate Change', AGU Fall Meeting*
 2023 *Convener - 'Earth and Planetary Structure', Plenary Session GAGE/SAGE Community Science Workshop, Pasadena, CA*
 2018 *Organizer - Session 'Technical and methodological developments, and large networks handling' at the 19th General Assembly of WEGENER, Grenoble, France*
 2018 *Chair - Organizing Committee for 2018 UNAVCO Science Workshop*
 2016 *Convener - Special Sessions: 'Past and Future Seismic Moment Release: Contributions from Statistics and Geodesy', 'Seismicity and Seismic Hazards of the Walker Lane and Western Great Basin', 'Short- and Long-Term Deformation on Active Faults: Integrating Geodetic, Geologic and Seismic Constraints on Slip Rates and Off-fault Deformation in the Walker Lane and Beyond', SSA Annual Meeting*
 2014-2016 *Member - Editorial Board "Lithosphere"*
 2013-2014 *Chair - Geodetic Data Services Advisory Committee, UNAVCO*
 2011-Present *Committee Member - Global Crustal Deformation Working Group, IAG*
 2009-2012 *Committee Member - UNAVCO Facility Advisory Committee*
 2008-2012 *Committee Member - Regional Dense Velocity Fields Working Group, IAG*
 2007-2010 *Committee Member - Plate Boundary Observatory Data Working Group*
 2009-2010 *Co-Chair/Organizer - AGU Fall Meeting Natural Hazards Section*
 2005-2009 *Co-Chair - Task Force VII of the International Lithosphere Program: 'Temporal and Spatial Changes of Stress and Strain'*

- 2006 *Convener* - Special Session: 'Short and long-term strain accumulation and transients', AGU Fall Meeting
- 2004 *Convener* - Special Session: 'Integrated studies of lithosphere-mantle interaction and lithospheric deformation', AGU Fall Meeting
- 2004 *Convener* - Special Session: 'New advances in global plate kinematics and dynamics from space geodesy,' AGU/CGU Joint Assembly
- 2001 *Co-Chair* - Special Session: 'Recent Tectonics, Kinematics and Dynamics of Southeast Asian Margins,' AGU Spring Meeting
- 1998 *Co-Chair* - Special Session: 'The March 25, 1998, Antarctica Earthquake, ($M_w = 8.1$),' AGU Fall Meeting
- 2001-Present *Peer Reviewer* AGU Books; Bulletin de la Société Géologique de France; Deutsche Forschungsgemeinschaft (DFG); Earth and Planetary Science Letters; Earth Planets Space; Geochemistry, Geophysics, Geosystems; Geophysical Journal International; Geophysical Research Letters; International Geology Review; Journal of Asian Earth Sciences, Journal of Geodesy; Journal of Geodynamics; Journal of Geophysical Research; Journal of Seismology; Natural Hazards; Nature Geoscience; New Zealand Journal of Geology and Geophysics; Tectonics; Tectonophysics; Terra Nova; Solid Earth; NASA SENH; NSF-EarthScope; NSF-Geophysics; NSF-Tectonics; NSF-Office of International Science and Engineering, German Council of Science and Humanities

UNIVERSITY SERVICE

- 2024 *Committee Member* – Adhoc NSL Personnel Committee (UNR)
- 2024 *Member* – Search Committee, Associate Dean (UNR)
- 2023 *Member* – Search Committee, Director Great Basin Center for Geothermal Energy (UNR)
- 2022-2023 *Committee Member/Chair* - NBMG Personnel Committee (UNR)
- 2021-present *Committee Member* - NBMG Space Committee
- 2018-2019 *Chair* – College of Science Personnel Committee (UNR)
- 2017-2021 *Committee Member* – College of Science Personnel Committee (UNR)
- 2017-2018 *Committee Member/Chair* - NBMG Personnel Committee (UNR)
- 2014-2015 *Committee Member* - NSL Personnel Committee (UNR)
- 2014-2015 *Committee Member* - Graduate Admissions Committee, Department of Geological Sciences and Engineering, University of Nevada, Reno
- 2012-2015 *Committee Member* - Graduate Council, University of Nevada, Reno
- 2011-2012 *Committee Member* - NBMG Personnel Committee (UNR)
- 2006-2011 *Organizer* - Mackay Seminar Series (UNR)
- 2007 *Committee Member* - NBMG Space Committee

PROFESSIONAL SOCIETIES

American Geophysical Union; Geological Society of America; Southern California Earthquake Center; European Geophysical Union; Seismological Society of America

INVITED LECTURES (excluding talks for which abstracts were published)

- 2024 California Geological Survey (online), University of Southern California (Los Angeles, CA)
- 2023 University of Nevada (Reno, NV),
- 2021 Göttingen University (Germany)
- 2016 Utrecht University (The Netherlands), TNO-Utrecht (The Netherlands)
- 2015 California Institute of Technology (Pasadena, CA), University of Grenoble (France)
- 2014 University of Houston (Houston, TX), West Chester University (West Chester, PA), Northern Arizona University (Flagstaff, AZ), Association of Engineering and Environmental Geologists, Great Basin Chapter (Reno, NV)
- 2013 GFZ (Potsdam, Germany), ITC-Twente University (Enschede, The Netherlands), Strain-Mapping Workshop (Leeds, UK), University of Nevada (Reno, NV), Grand Staircase Escalante National Monument (Kanab, UT), Delft Technical University (The Netherlands), Miami University (Miami, FL)
- 2012 GNS Science (Wellington, New Zealand), EarthScope/Earthcube Workshop (Phoenix, AZ)
- 2011 ETH (Zürich, Switzerland), Nevada Petroleum Society (Reno, NV), Grand Staircase Escalante National Monument (Escalante, UT)
- 2010 U.S. Geological Survey (Golden, CO)
- 2009 University of Luxembourg (Luxembourg); USGS Walker Lane Workshop (Reno, NV); UNAVCO Western United States Velocity Field Workshop (Boulder, CO); EarthScope Velocity Field Workshop (Boise, ID)
- 2008 Université Rennes 1 (Rennes, France), Collège de France (Saint-Maximin La Sainte-Baume, France)
- 2006 University of Nevada (Las Vegas, NV); USGS Seismic Hazard Workshop (Reno, NV)
- 2004 Collège de France, (Paris, France); Shell Philippines Exploration Offices (Alabang, Philippines)
- 2003 University of Montpellier (Montpellier, France); Conseil Scientifique du Groupement de Recherche G2 - Géodésie-Géophysique (Paris, France); Institute of Geophysics, ETH (Zürich, Switzerland); Bullard Laboratories, Cambridge University (Cambridge, U.K.); Collège de France, (Paris, France)
- 2002 Université de Bretagne Occidentale (Brest, France); Géosciences Azur (Villefranche-sur-Mer, France); Laboratoire de Géologie, Ecole normale supérieure (Paris, France)
- 2001 Vening Meinesz School of Geodynamics, Utrecht University (Utrecht, The Netherlands); Institute of Geophysics, ETH (Zürich, Switzerland)
- 1996 Geodynamics Laboratory, Penn State University (State College, PA)

TEACHING AND INSTRUCTION

2024	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2023	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2022	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2021	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2020	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2019	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2018	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2017	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR) <i>Instructor</i> - 'GEOL701h: 'Geodynamics Seminar' (UNR)
2016	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2015	<i>Instructor</i> - 'GPH333: 'Plate Tectonics and Earth Physics' (UNR)
2014	<i>Instructor</i> - 'GEOL701h: 'Geodynamics Seminar' (UNR)
2013	<i>Instructor</i> - 'GEOL701h: 'Geodynamics Seminar' (UNR) <i>Guest Lecturer</i> - 'GPH455/655: Geophysics and Geodynamics' (UNR)
2012	<i>Guest Lecturer</i> - 'GPH455/655: Geophysics and Geodynamics' (UNR)
2009	<i>Guest Lecturer</i> - 'GEOL333: Structure, Tectonics, and Earth Physics II' (UNR)
2008	<i>Instructor</i> - 'Using GPS Data to Study Crustal Deformation, Earthquakes, and Volcanism Workshop' (Las Vegas, NV); and 'EarthScope Basin and Range Interpretive Workshop' (Reno, NV)
2007	<i>Guest Lecturer</i> - 'GEOL332: Structure, Tectonics, and Earth Physics I' (UNR); 'GEOL730: Advanced Geology of Nevada and Basin and Range' (UNR); 'GEOL697: Graduate Seminar' (UNR)
2006	<i>Guest Lecturer</i> – 'GEOG210: Exploring, measuring, and mapping planet earth'; 'GEOL730: Advanced Geology of Nevada and Basin and Range'; 'GEOL697: Graduate Seminar' (UNR)
2005	<i>Guest Lecturer</i> – 'GEOG210: Exploring, measuring, and mapping planet earth' (UNR)
2001	<i>Instructor</i> - 'Seismology Project for Women in Science and Engineering (WISE)' (Stony Brook)
1997-1998	<i>Teaching Assistant</i> - Structural Geology; Geophysics; Natural Hazards (Stony Brook)
1996	<i>Teaching Assistant</i> - 'Algebra II (Complex numbers & Fourier Series/Transforms)' (Utrecht University)

GRADUATE STUDENTS ADVISED

Robert Fuller (M.S., University of Nevada, in progress)

Jordan Krcmaric (M.S. University of Nevada, 2023)

Nina Miller (Ph.D., University of Nevada, in progress)

Zachary Young (Ph.D., University of Nevada, 2022)
Zhangjun Li (Ph.D., Xi'an University, China, 2021)
Meredith Kraner (M.S., University of Nevada, 2017)
Yang Zhang (M.S., University of Nevada, 2015)
Xiaohui Zhou (Ph.D., Wuhan University, China, 2011)

GRADUATE STUDENT COMMITTEE MEMBER (other than for students advised)

A. Janin (Ph.D., Ecole Normale Supérieure, Paris, France, 2022)
J. Overacker (Ph.D., University of Nevada, in progress)
J.A. Bayona-Viveros (Ph.D., University of Potsdam, 2021)
V. Drouin (Ph.D., University of Iceland, 2016)
R. Chacko (M.S., University of Nevada, 2016)
J. Bormann (Ph.D., University of Nevada, 2013)
Sumant Jha (M.S., University of Nevada, 2010)
R. Koehler (Ph.D., University of Nevada, 2009)
J. Legrand (Ph.D., Observatoire de Paris, France, 2007)

POSTDOCTORAL FELLOWS ADVISED

G. Cheng (2024 -)
E. Klein (2010 - 2012)
Sunil P.S. (2011 - 2012)

FIELD EXPERIENCE

2004-Present *Crew Member/Organizer*, GPS field campaigns involving construction and occupation of 350+ site network, Nevada, California, Arizona, and Utah
1996 *Crew Member*, 10-day scientific cruise of seismic data acquisition, offshore Vancouver Island

RESEARCH GRANTS (* as Principal Investigator)

2023-2025 * JPL Global Strain Rate Model; **National Geospatial-Intelligence Agency** [\$111,496.00]
2023-2026 * Global Strain Rate Model; **FM Global** [\$473,278.00]
2024-2025 * What controls the spatial variation in seismicity rates in California and Nevada?; **SCEC** [\$34,546.00]
2022-2025 Improving and Expanding GPS Data Products to Address Key Challenges of Solid Earth Science; **NASA-ESI** [\$817,667]
2021-2022 * Robust Common-Mode Filtering to Best Reduce Uncertainty and Temporal Variability in CGM GPS Velocities; **SCEC** [\$25,000]

2021-2023 * Developing Euler Pole Parameters (EPP) and velocity /strain modeling; **NOAA** [48,000]

2021-2025 **INGENIOUS** — Innovative geothermal exploration through novel investigations of undiscovered systems; **DOE-GTO** [\$76,000 for Geodesy]

2020-2024 * **WHOLESCALE** — Water & Hole Observations Leverage Effective Stress Calculations and Lessen Expenses; **DOE-EERE** [\$149,448]

2020-2021 * Seismicity Rate Forecasts from a Suite of Improved Deformation Models of the Western U.S.; **USGS-NEHRP** [\$80,224]

2019-2023 GPS Imaging of time-variable Earth deformation for multi-disciplinary science; **NASA-ESI** [\$477,585]

2018-2019 Seismic coupling on faults and correlations between geodetic data, seismicity and climatic signals; **SCEC** [\$5,000] with I. Zaliapin (UNR)

2018 * On the Relationship between Seismicity and Geodetic Strain Rates in the Central and Eastern U.S.; **USGS-NEHRP** [\$79,983] with I. Zaliapin (UNR)

2017-2018 Estimating seismic coupling in southern California using aftershock productivity and geodetic constraints; **SCEC** [\$20,000]

2016-2020 GPS Imaging of Solid Earth's Flex and Flow; **NASA-ESI** [\$416,950]

2016-2020 * Collaborative Research: Using GPS to Unravel the Long-Term Kinematics and Dynamics of the American Southwest from an Ever-Changing Deformation Field; **NSF-EarthScope** [\$246,500] with R. Bennett (University of Arizona)

2016-2017 * Effect of Loading-Induced Horizontal Deformation on the Community Geodetic Model; **SCEC** [\$20,140] with A. Borsa (UC San Diego)

2014-2017 * Poroelastic Tomography by Adjoint Inverse Modeling of Data from Seismology, Geodesy, and Hydrology; **DOE Subcontract through the University of Wisconsin-Madison** [\$65,154] part of \$3M total grant

2014-2017 Plug-and-Play GPS for Earth Scientists: Providing Immediate Access to Low-Latency Geodetic Products for Rapid Modeling and Analysis of Natural Hazards; **NASA-ACCESS** [\$164,436] with UNAVCO

2010-2016 * Collaborative Research: Geodetic Constraints on the Kinematics of the Colorado Plateau and its Western and Southern Margin; **NSF-EarthScope** [\$285,505] with R. Bennett (University of Arizona)

2014-2015 * Global Geodetic Strain Rate Model Continuation; **Global Earthquake Model Foundation** [\$15,083]

2013-2014 * Geodetic Constraints on the Deformation and Fault Slip Rates in the Greater Las Vegas Area; **USGS-NEHRP** [\$54,971]

2013-2014 * GPS Support Brady Geothermal Field; **Temple University Subcontract** [\$15,702]

2011-2012 Using GPS to Measure the Slip Rate on the Honey Lake fault, California; **USGS-NEHRP** [\$77,982]

2010-2012 * Global Geodetic Strain Rate Model; **Global Earthquake Model Foundation** [\$144,900]

2010-2012 * Discovery and Delivery of Space Geodetic Data Products from Distributed Archives; **NASA-ACCESS** [\$154,728] with UNAVCO

2009-2013 * Improving the Spatial and Temporal Resolution of Strain Rate Models of Continental Deformation; **NSF-Geophysics** [\$280,580] + REU Supplement [\$7,500]

- 2009-2012 * Collaborative Research: Thermal Contraction, Oceanic Intraplate Deformation, and Plate Circuit Closure; **NSF-Marine Geology & Geophysics** [\$92,041] with R. Gordon (Rice University)
- 2010-2011 * Detecting Transient Deformation Signals in GPS time-series II; **SCEC** [\$19,999]
- 2009-2010 Time-dependent Modeling of Seismic Moment Release in San Andreas Fault – Great Basin System; **SCEC** [\$24,967]
- 2009-2010 * Detecting Transient Deformation Signals in GPS time-series; **SCEC** [\$18,951]
- 2008-2011 Geodetic Imaging of Earth’s Surface Deformation Using Integrated InSAR and GPS Observations; **NASA-EarthScope** [\$362,871]
- 2008-2009 * Geodetic Constraints on the Slip Rate of the Mohawk Valley Fault Zone, California; **USGS-NEHRP** [\$64,222]
- 2008-2009 Modeling of Seismic Moment Release in San Andreas Fault-Great Basin System: Combination of Seismological and Geodetic Approaches; **SCEC** [\$20,000]
- 2007-2009 Integrated Geologic and Geodetic Study of Strain Accumulation and Release in the northern Walker Lane; **NSF-Tectonics/EarthScope** [\$334,853]
- 2007-2009 Development of Real-Time Tsunami Warning Systems Using Continuous GPS; **NASA-ESI** [\$393,920]
- 2006-2009 Quasi-Block Modeling of Walker Lane Belt Tectonic Deformation, Using Geodetic and Geologic Data to Constrain System Complexity and Time-Variable Behavior; **NSF-Tectonics** [\$236,779]
- 2007 Estimating Seismic Hazard in the Basin and Range Province Using Horizontal GPS Data: Collaborative Research between the University of Nevada, Reno and the USGS; **USGS-NEHRP** [\$66,891]
- 2006-2007 System Design for a GPS Component of Real-Time Earthquake Source Determination and Tsunami Warning Systems: Collaborative Research Between UNR and Northwestern University; **USGS-NEHRP** [\$80,484]
- 2005-2006 Targeting of Potential Geothermal Resources in the Great Basin from Regional to Basin-Scale Relationships between Geodetic Strain and Geological Structures; **DOE-Great Basin Center for Geothermal Energy** [\$236,779]
- 2005-2006 Strain State Analysis Through Deep Electrical Anisotropy Mapping: An Alternative Tool for Identifying the Orientation of Critically Stressed Fractures
for EGS Projects; **DOE-Great Basin Center for Geothermal Energy** [\$297,375]
- 2005-2010 Revival of Grass-Roots Geothermal Exploration in the Great Basin – A New Approach to Assessing Geothermal Potential Using a Geographic Information System parts IV and V; **DOE-Great Basin Center for Geothermal Energy** [\$299,932]

CONSULTANCY

- 2013 Lettis Consultancy International, Seismic Hazard Evaluation Palo Verde Nuclear Power Plant, AZ (Twice)
- 2011 Fugro Consultants, Seismic Hazard Evaluation Proposed Blue Mountain Nuclear Power Plant, UT

LANGUAGE

Fluent in Dutch and English; Intermediate in French and German

PUBLICATIONS

(reprints of most can be found at <http://geodesy.unr.edu/cornekreemer/research.htm>)

In Review/Revision

- Young, Z.M., Blewitt, G., and Kreemer, C.
Improved GPS Tropospheric Path Delay Estimation Using Variable Random Walk Process Noise
Journal of Geodesy, iaccepted, 2024

Peer-Reviewed Articles and Book Chapters

2024

- Miller, N.M., Kreemer, C., Hammond, W.C., and Blewitt, G.
Geodetic Evidence for Distributed Shear Below the Brittle Crust of the Walker Lane, Western United States
Journal of Geophysical Research – Solid Earth, 129(9), e2024JB028848, doi:10.1029/2024JB028848
2024
- Kreemer, C., Zaliapin, I., and Kraaijpoel, D.
On the use of GNSS-inferred crustal strain accumulation in evaluating seismic potential
in “GNSS Monitoring of the Terrestrial Environment – Earthquakes, Volcanoes, and Climate Change”
eds. Aoki, Y., and Kreemer, C., Elsevier, 41-63, doi:10.1016/B978-0-323-95507-2.00010-4, 2024
- Stamps, D.S., and Kreemer, C.
Open access GNSS data for studies of the lithosphere
Geochemistry, Geophysics, Geosystems, e2024GC011567, doi:10.1029/2024GC011567, 2024
- Hammond, W.C., Kreemer, C., and Blewitt, G.
Robust imaging of fault slip rates in the Walker Lane and Western Great Basin from GPS data using a multi-block model approach
Journal of Geophysical Research - Solid Earth, 129, e2023JB028044, doi:10.1029/2023JB028044,
2024.

2023

- Jahnke, B., Sone, H. Guo, H., Sherman, C., Warren, I., Kreemer, C. Thurber, C., Feigl, F.L., and the WHOLESCALE Team
Geomechanical analysis of the geothermal reservoir at San Emidio, Nevada
Geothermics, 110, 102683, doi:10.1016/j.geothermics.2023.102683, 2023.
- Yuan, P., Blewitt, G., Kreemer, C., Hammond, W.C., Argus, D., Yin, X., Van Malderen, R., Mayer, M., Jiang, W., Awange, J., and Kutterer, H.
An enhanced integrated water vapour dataset from more than 10,000 global ground-based GPS stations in 2020
Earth System Science Data, 15, 723-743, doi:10.5194/essd-15-723-2023, 2023.
- Young, Z.M., C. Kreemer, W.C. Hammond, and G. Blewitt
Interseismic strain accumulation between the Colorado Plateau and the Eastern California Shear Zone: Implications for the seismic hazard near Las Vegas, Nevada
Bulletin of the Seismological Society of America, 113(2), 856-876, doi:10.1785/0120220136, 2023.

2022

- Kreemer, C., and Young, Z.M.

Crustal strain rates in the Western United States and their relationship with earthquake rates
Seismological Research Letters, 93(6), 2990-3008, doi:10.1785/0220220153 2022.

- Hasterok, D., Halpin, J.A., Collins, A.S., Hand, M., Kreemer, C., Gard, M.G. and Glorie, S.
New maps of global geological provinces and tectonic plates
Earth-Science Reviews, 231, 104069, doi:10.1016/j.earscirev.2022.104069, 2022.
- Overacker, J., Hammond, W.C., Kreemer, C., and Blewitt, G.
Vertical land motion of the High Plains Aquifer region of the United States: effect of aquifer confinement style, climate variability, and anthropogenic activity
Water Resources Research, 58, e2021WR031635, doi:10.1029/2021WR031635, 2022.

2021

- Young, Z.M., Kreemer, C., and Blewitt, G.
GPS constraints on drought-induced groundwater loss around Great Salt Lake, Utah, with implications for seismicity modulation
Journal of Geophysical Research - Solid Earth, 126, e2021JB022020, doi:10.1029/2021JB022020, 2021
- Hammond, W.C., Blewitt, G., Kreemer, C., and Nerem, R.S.
GPS imaging of global vertical land motion for studies of sea level rise
Journal of Geophysical Research - Solid Earth, 126(7), e2020JB022355, doi:10.1029/2021JB022355, 2021
- Broermann, J., Bennett, R.A., Kreemer, C., Blewitt, G., and Pearthree, P.A.
Geodetic extension across the southern Basin and Range and Colorado Plateau
Journal of Geophysical Research - Solid Earth, 126(6), e2020JB021355, doi:10.1029/2021JB021355, 2021
- Argus, D.F., Peltier, W.R., Li, T., Blewitt, G., Kreemer, C., Vacchi, M., and Horton, B.P.
The viscosity of the top 700 km of the lower mantle estimated using GPS, GRACE, and relative sea level measurements of Glacial Isostatic Adjustment
Journal of Geophysical Research - Solid Earth, 126(5), e2020JB021537, doi:10.1029/2021JB021537, 2021
- Li, Z., and Kreemer, C.
Eastward mantle flow field underneath east Asia quantified by combining shear-wave splitting orientations and absolute plate motion observations
Earth and Planetary Science Letters, 566, 116969, doi:10.1016/j.epsl.2021.116969, 2021
- Stamps, D.S., Kreemer, C., Fernandes, R., Rajaonarison, T.A., and Rambolamanana, G.
Redefining East African Rift System kinematics
Geology, v. 49(2), p. 150-155, doi:10.1130/G47985.1, 2021
- Kreemer, C., and Blewitt, G.
Robust estimation of spatially-varying common-mode components in GPS time-series
Journal of Geodesy, 95, doi:10.1007/s00190-020-01466-5, 2021

2020

- Martens, H.R., Argus, D.F., Norberg, C., Blewitt, G., Herring, T.A., Moore, A.W., Hammond, W.C., and Kreemer, C.
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
Journal of Geodesy, doi:10.1007/s00190-020-01445-w, 2020.
- Hammond, W.C., Blewitt, G., Kreemer, C., Koehler, R., and Dee, S.
Geodetic observation of seismic cycles before, during and after the 2020 Monte Cristo Range Earthquake using the MAGNET GPS Network
Seismological Research Letters, <https://doi.org/10.1785/0220200338>, 2020.
- Argus, D.F., Ratliff, B., DeMets, C., Borsa, A.A., Wiese, D.N., Blewitt, G., Crowley, J.W., Martens, H.R., Kreemer, C., and Landerer, F.W.

Rise of Great Lakes surface water, sinking of the upper Midwest of the United States, and viscous collapse of the forebulge of the former Laurentide ice sheet
Journal of Geophysical Research – Solid Earth, doi:10.1029/2020JB019739, 2020

- Kreemer, C., Blewitt, G., and Davis, P.M.
Geodetic evidence for a buoyant mantle plume beneath the Eifel volcanic area, NW Europe
Geophysical Journal International, v. 222(2), p. 1316-1332, doi:10.1093/gji/ggaa227, 2020.
- Reinisch, E., Cardiff, M., Kreemer, C., Akerley, J., and Feigl, K.
Time-series analysis of volume change at Brady Hot Springs, Nevada, USA using geodetic data from 2004-2018
Journal of Geophysical Research – Solid Earth, doi:10.1029/2019JB017816, 2020

2019

- Hammond, W.C., Kreemer, C., Zaliapin, I., and Blewitt, G.
Drought-triggered magmatic inflation, crustal strain and seismicity near the Long Valley Caldera, Central Walker Lane
Journal of Geophysical Research, v. 124, p. 6072-6091, doi:10.1029/2019JB017354, 2019.
- Anderson, J.G., Koehler, R.D., Abercrombie, R., Ahdi, S.K., Angster, S., Bormann, J., Brune, J.N., Dee, S.M., dePolo, C., Dickinson, S.E., Dunn, M., Faulds, J.E., Hammond, W.C., Hatch, R., Kell, A., Kent, G., Kreemer, C., Louie, J., Pierce, I., Ruhl, C.J., Smith, K.D., Taylor, W., Wesnousky, S.G., and Wong, I.
A seismic hazards overview of the urban regions of Nevada: Recent advancements and research directions
Seismological Research Letters, v. 90, p. 1577-1583, doi:10.1785/0220180357, 2019.

2018

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