

## CURRICULUM VITAE

**Cornelis W. Kreemer**  
*Research Professor*

### ADDRESS

Nevada Bureau of Mines and Geology  
University of Nevada, Reno  
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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, <i>Laboratoire de Géologie, École Normale Supérieure, Paris, France</i>
1998-2001	Graduate Research Assistant, <i>Department of Geosciences, SUNY Stony Brook</i>
1997-1998	Graduate Teaching Assistant, <i>Department of Geosciences, SUNY Stony Brook</i>
1996	Research Scholar, <i>Geodynamics Lab, Penn State University, College Park, PA</i>

## AWARDS AND HONORS

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

## PROFESSIONAL SERVICE

2018	<i>Organizer</i> – Session ‘Technical and methodological developments, and large networks handling’ at the 19 <sup>th</sup> General Assembly of WEGENER, Grenoble, France
2018	<i>Chair</i> – Organizing Committee for 2018 UNAVCO Science Workshop
2016	<i>Convener</i> - 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	<i>Member</i> – Editorial Board “Lithosphere”
2013-2014	<i>Chair</i> - Geodetic Data Services Advisory Committee, UNAVCO
2011-Present	<i>Committee Member</i> - Global Crustal Deformation Working Group, IAG
2009-2012	<i>Committee Member</i> - UNAVCO Facility Advisory Committee
2008-2012	<i>Committee Member</i> - Regional Dense Velocity Fields Working Group, IAG
2007-2010	<i>Committee Member</i> - Plate Boundary Observatory Data Working Group
2009-2010	<i>Co-Chair/Organizer</i> - 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; Earth and Planetary Science Letters; Earth Planets Space; Geochemistry, Geophysics, Geosystems; Geophysical Journal International; Geophysical Research Letters; 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

- 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)

- |      |  |
|------|--|
| 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

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

**GRADUATE STUDENTS ADVISED**

Nina Miller (Ph.D., University of Nevada, in progress)  
 Zachary Young (Ph.D., University of Nevada, in progress, expected Spring 2022)  
 Meredith Kraner (M.S., University of Nevada, 2017)  
 Yang Zhang (M.S., University of Nevada, 2015)  
 Xiaohui Zhou (Ph.D., Wuhan University, 2011)

**GRADUATE STUDENT COMMITTEE MEMBER** (other than for students advised)

J. Overacker (Ph.D., University of Nevada, in progress)  
 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**

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)

2020-2023 \* WHOLESACLE — 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]  
 2019-2022 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 Preparation**

- Kreemer, C., and Zaliapin, I.  
**On the uncertainty in the seismic-to-geodetic moment ratio**  
*Bulletin of the Seismological Society of America*, in preparatio

**In Review/Revision**

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**Peer-Reviewed Articles and Book Chapters****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 Rambolamanama, 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

- Husson, L., Bodin, T., Spada, G., Goblet, G., and Kreemer, C.  
**Bayesian surface reconstruction of geodetic uplift rates: Mapping the global fingerprint of Glacial Isostatic Adjustment**  
*Journal of Geodynamics*, v. 122, p. 2-40, doi:10.1016/j.jog.2018.10.002, 2018.
- Blewitt, G., Hammond, W.C., and Kreemer, C.  
**Harnessing the GPS data explosion for interdisciplinary science**  
*Eos*, v. 99, doi:10.1029/2018EO104623, 2018
- Kreemer, C., and Zaliapin, Z.  
**Spatio-temporal correlation between seasonal variations in seismicity and horizontal dilatational strain in California**  
*Geophysical Research Letters*, v. 45, p. 9559-9568, doi:10.1029/2018GL079536, 2018.
- Kreemer, C., Hammond, W.C., and Blewitt, G.  
**A robust estimation of the 3D intraplate deformation of the North American plate from GPS**  
*Journal of Geophysical Research*, v. 123, p. 4388-4412, doi:10.1029/2017JB015257, 2018
- Stamps, D.S., Saria, E., and Kreemer, C.  
**A geodetic strain rate model for the East African Rift System**  
*Scientific Reports*, v. 8, Article number: 732, 2018

## 2017

- Zaliapin, I., and Kreemer, C.  
**Systematic fluctuations in the global seismic moment release**  
*Geophysical Research Letters*, v. 44, p. 4820–4828, doi:10.1002/2017GL073504, 2017.

## 2016

- Hammond, W.C., Blewitt, G., and Kreemer, C.  
**GPS Imaging of vertical land motion in California and Nevada: Implications for Sierra Nevada uplift** *Journal of Geophysical Research - Solid Earth*, v. 121, p. 7681-7703, doi:10.1002/2016JB013458, 2016.
- Bormann, J.M., Hammond, W.C., Kreemer, C., and Blewitt, G.  
**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, 2016.
- Blewitt, G., Kreemer, C., Hammond, W.C., and Gazeaux, J.  
**MIDAS robust trend estimator for accurate GPS station velocities without step detection** *Journal of Geophysical Research - Solid Earth*, v. 121, p. 2054-2068, doi:10.1002/2015JB012552, 2016.

## 2015

- Bird, P., Jackson, D.D., Kagan, Y.Y., Kreemer, C., and Stein, R.S.  
**GEAR1: a Global Earthquake Activity Rate model constructed from geodetic strain rates and smoothed seismicity**  
*Bulletin of the Seismological Society of America*, v. 106, p. 2538-2554, 2015.
- Keiding, M., Kreemer, C., Lindholm, C.D., Gradmann, S., Olesen, O., and Kierulf, H.P.  
**A comparison of strain rates and seismicity for Fennoscandia: Depth dependency of deformation from glacial isostatic adjustment**  
*Geophysical Journal International*, v. 202, p. 1021-1028, doi: 10.1093/gji/ggv207, 2015.
- Bird, P. and Kreemer, C.  
**Revised tectonic forecast of global shallow seismicity based on version 2.1 of the Global Strain Rate Map**  
*Bulletin of the Seismological Society of America*, v. 106, p. 152-166, doi: 10.1785/0120140129, 2015.

## 2014

- Kreemer, C., and Gordon, R.G.  
**Pacific plate deformation from horizontal thermal contraction**  
*Geology*, v. 42(10), p. 847-850, doi:10.1130/G35874.1, 2014
- Kreemer, C., Blewitt, G., and Klein, E.C.  
**A geodetic plate motion and global strain rate model**  
*Geochemistry, Geophysics, Geosystems*, v. 15, p. 3849-3889, doi:10.1002/2014GC005407, 2014
- Zheng, L., Gordon, R.G., and Kreemer, C.  
**Absolute plate velocities from seismic anisotropy: Importance of correlated errors**  
*Journal of Geophysical Research*, v. 119, p. 7336–7352, doi:10.1002/2013JB010902, 2014
- Hammond, W.C., Blewitt, G., and Kreemer, C.  
**Steady contemporary deformation of the central Basin and Range Province, western United States**  
*Journal of Geophysical Research*, v. 119, p. 5235-5253, doi:10.1002/2014JB011145, 2014.
- Collilieux, X., Altamimi, Z., Argus, D.F., Boucher, C., Dermanis, A., Haines, B.J., Herring, T.A., Kreemer, C., Lemoine, F.G., Ma, C., MacMillan, D.S., Makinen, J., Métivier, L., Ries, J.C., Teferle, F.N., and Wu, X.  
**External evaluation of the Terrestrial Reference Frame: report of the task force of the IAG sub-commission 1.2**  
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