Curriculum Vitae

Kaj M. Johnson
Judson Mead Professor of Geological Sciences

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EDUCATION

Ph.D.	Geophysics, Stanford University	2004
M.S.	Structural Geology, Purdue University	2000
B.S.	Mathematics, Purdue University	1996

EMPLOYMENT

July 2020 – present	Judson Mead Professor, Department of Earth and Atmospheric Sciences, Indiana University
July 2012 – June 2020	Judson Mead Associate Professor, Department of Earth and Atmospheric Sciences, Indiana University
Aug. 2006 – June 2012	Judson Mead Assistant Professor, Department of Geological Sciences, Indiana University
Aug. 2005 – July 2006	Research Scientist, Department of Geological Sciences, Indiana University
April 2006 – May 2006	Visiting Scientist, Earthquake Research Institute, Tokyo, Japan
Oct. 2004 – July 2005	Postdoctoral researcher, Department of Earth and Planetary Science, University of California Berkeley
Sept. 2000 – Sept. 2004	Research and teaching assistant, Geophysics Department, Stanford University
Aug. 1999 – July 2000	Research assistant, Earth and Atmospheric Sciences, Purdue University
Aug. 1996 – July 1999	Teaching assistant, Mathematics Department, Purdue University

RESEARCH COMMUNITY RECOGNITION

2011-2019, Southern California Earthquake Center Planning Committee (SDOT leader)
2011-present, Working Group on California Earthquake Probabilities (GPS subgroup)
2010-2011, Earthscope Speaker Series (5 invited talks)
2009, AGU Tectonophysics Section Early Career Scientist Award (Jason Morgan Award)
2009-2011, Southern California Earthquake Center Planning Committee (Crustal Deformation co-leader)

REFEREED PUBLICATIONS

*Denotes student author, **Denotes post-doc author

Published:

[72] Fang, J., Wright, T. J., **Johnson, K. M.**, Ou, Q., Styron, R., Craig, T. J., . . . Zheng, G. (2024). Strain Partitioning in the Southeastern Tibetan Plateau From Kinematic Modeling of High-Resolution Sentinel-1 InSAR and GNSS. *GEOPHYSICAL RESEARCH LETTERS*, *51*(19), 12 pages. doi:10.1029/2024GL111199

[72] *Sherrill, E. M., **Johnson, K. M.**, & Jackson, N. M. (2024). Locating Boundaries Between Locked and Creeping Regions at Nankai and Cascadia Subduction Zones. *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*, *129*(10), 21 pages. doi:10.1029/2024JB029346

[71] Gerstenberger, M. C., Van Dissen, R., Rollins, C., DiCaprio, C., Thingbaijim, K. K. S., Bora, S., . . . Villamor, P. (2024). The Seismicity Rate Model for the 2022 Aotearoa New Zealand National Seismic Hazard Model. *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*, *114*(1), 182-216. doi:10.1785/0120230165

[70 Gerstenberger, M. C., Bora, S., Bradley, B. A., Dicaprio, C., Kaiser, A., Manea, E. F., . . . Wotherspoon, L. M. (2024). The 2022 Aotearoa New Zealand National Seismic Hazard Model: Process, Overview, and Results. *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*, *114*(1), 7-36. doi:10.1785/0120230182

[69] Field, E. H., Milner, K. R., Hatem, A. E., Powers, P. M., Pollitz, F. F., Llenos, A. L., . . . Herrick, J. A. (2024). The USGS 2023 Conterminous US Time Forecast. *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*, *114*(1), 523-571. doi:10.1785/0120230120

[68] **Johnson, K.M.** (2024), Disagreements in geodetically inferred strain rates in the Western US with stress orientations and geologic moment rates, *Journal of Geophysical Research: Solid Earth, 129(4), 29 pages. doi:10.1029/2023JB027472*

[67] **Johnson, K.M.**, Maurer J, Wallace, L. M., Hamling, I., Williams, C. A., Rollins, C., Gerstenberger, M, Van Dissen, R. (2024) Inverting geodetic strain rates for slip deficit rate in complex deforming zones: An application to the New Zealand plate boundary, *Journal of Geophysical Research: Solid Earth, 129(3), 21 pages. doi:10.1029/2023JB027565*

[66] **Johnson, K.M.**, Hammond, W. C., Weldon, R. J. (2024), Review of Geodetic and Geologic Deformation Models for 2023 U.S. National Seismic Hazard Model. *Bulletin of the Seismological Society of America*, doi: https://doi-org.proxyiub.uits.iu.edu/10.1785/0120230137

[65] Maurer J, **Johnson, K.M.**, Laura M. Wallace, Ian Hamling, Charles A. Williams, Chris Rollins, Matt Gerstenberger, Russ Van Dissen (2024), Geodetic Strain Rates for the 2022 Update of the New Zealand National Seismic Hazard Model. *Bulletin of the Seismological Society of America*, , *114*(1), 57-77. doi:10.1785/0120230145

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[62] **Johnson KM**, Wallace LM, Maurer J, Hamling IJ, Williams CA, Rollins C, Gerstenberger MC, Van Dissen RJ. 2022. Geodetic deformation model for the 2022 update of the New Zealand National Seismic Hazard Model. Lower Hutt (NZ): GNS Science. 62 p. (GNS Science report; 2021/37). doi:10.21420/P93X-8293.

[61] Johnson, K. M., Murray, J. R., & Wespestad, C. (2022). Creep Rate Models for the 2023 US National Seismic Hazard Model: Physically Constrained Inversions for the Distribution of Creep on California Faults. *Seismological Society of America*, *93*(6), 3151-3169.

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[56] Yang, Y. R., & **Johnson, K. M.** (2020). Crustal Stress State in Taiwan: Moderately Strong Crust Supporting Gravitational and Flexural Loading. *Journal of Geophysical Research: Solid Earth*, *125*(11), e2020JB019530.
[55] **Johnson, K.M.**, Hammond, W.C., Burgette, R.J., Marshall, S.T., Sorlien, C.C., (2020). Present-day and Long-term Uplift Across the Western Transverse Ranges of Southern California. J. Geophys. Res. Solid Earth n/a, e2020JB019672. https://doi.org/10.1029/2020JB019672
[54] *Maurer, J., **Johnson, K**., & Segall, P. (2018). Bounding the Moment Deficit Rate on Crustal Faults using Geodetic Data: Application to Southern California. *Journal of Geophysical Research: Solid Earth*.
[53] **Johnson, K. M.**, & Tebo, D. (2018). Capturing 50 Years of Postseismic Mantle Flow at Nankai Subduction Zone. *Journal of Geophysical Research: Solid Earth*, *123*(11), 10-091.
[52] *Carlson, G., **Johnson, K**., Chuang, R., & Rupp, J. (2018). Spatially Varying Stress State in the Central US From Bayesian Inversion of Focal Mechanism and In Situ Maximum Horizontal Stress Orientation Data. *Journal of Geophysical Research: Solid Earth*, *123*(5), 3871-3890.
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[41] Field, E. H., G. P. Biasi, P. Bird, T. E. Dawson, K. R. Felzer, D. D. Jackson, **K. M. Johnson**, T. H. Jordan, C. Madden, A. J. Michael, K. R. Milner, M. T. Page, T. Parsons, P. M. Powers, B. E. Shaw, W. R. Thatcher, R. J. Weldon, and Y. Zeng (2013), Uniform California Earthquake Rupture Forecast, Version 3 (UCERF3)—The time-independent model, *USGS Open-File Report***,** v. 2013–1165**,** *CGS Special Report***,** v. 228**,** *and Southern California Earthquake Center Publication***,** v. 1792, 114 pp., http://pubs.usgs.gov/of/2013/1165/
[40] Field, E. H., Arrowsmith, R. J., Biasi, G. P., Bird, P., Dawson, T. E., Felzer, K. R., Jackson, D.D., **Johnson, K.M**., Jordan, T.H., Madden, C., Michael, A.J., Milner, K.R., Page, M.T., Parsons, T., Powers, P.M., Show, B.E., Thatcher, W.R., Weldon, R.J., and Zeng, Y. (2014). Uniform California Earthquake Rupture Forecast, Version 3

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[37] *Maurer, J., & **Johnson, K.** (2014). Fault coupling and potential for earthquakes on the creeping section of the central San Andreas Fault. *Journal of Geophysical Research: Solid Earth*, *119*(5), 4414-4428.

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[33]*Chuang, R. Y., **Johnson, K. M.**, Wu, Y. M., Ching, K. E., & Kuo, L. C. (2013). A midcrustal ramp-fault structure beneath the Taiwan tectonic wedge illuminated by the 2013 Nantou earthquake series. *Geophysical Research Letters*, *40*(19), 5080-5084.

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[31]*Yang, Y. R., **Johnson, K. M.**, & Chuang, R. Y. (2013). Inversion for absolute deviatoric crustal stress using focal mechanisms and coseismic stress changes: The 2011 M9 Tohoku-oki, Japan, earthquake. *Journal of Geophysical Research: Solid Earth*, *118*(10), 5516-5529.

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[23]*Chuang, R. and **K. M. Johnson** (2011), Reconciling geologic and geodetic fault-slip-rate discrepancies in southern California: consideration of non-steady mantle flow and lower crustal fault creep, *Geology*, doi: 10.1130/G32120.1

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FUNDING RECEIVED

Title	Agency	Investigator	Start/End Dates	$ Total
New Zealand National Seismic Hazard (NSHM) model (contract)	GNS Sciences	Prinicipal	7/23-6/24	$27,503
Collaborative Research: Toward an integrated modeling framework for physics-based estimates of megathrust rupture potential	NSF	Co	8/21-7/24	$249,312
Collaborative Research: The vertical signature of lithospheric deformation in the western US	NSF	Principal	1/21-12/23	$190,038
Collaborative Research: GEMT: Bridging Multiple Time Scales of Erosion and Rock Uplift in Taiwan	NSF	Principal	1/22-12/24	$449,290
Inferring Fault Rheology from Observations and Simulations of Transient Creep on the Central San Andreas Fault Andreas Fault	USGS, NEHRP	Principal	6/20-5/21	$56,274
Bridging the Gap between Locking and ETS in Cascadia using Geodetic Data and Viscoelastic Models: Collaborative Research with Indiana University, and University of California – Berkeley	USGS, NEHRP	Principal	1/21-12/21	$19,357
New Zealand National Seismic Hazard (NSHM) model (contract)	GNS Sciences	Prinicipal	9/20-8/22	$60,000
USGS Earthquake Science Center (contract)	USGS	Principal	8/20-7/22	$12,178
Computing 3-D Viscoelastic Green's Functions Using SCEC Community Models and Large-Scale, High-Fidelity Finite Element Methods	Southern California Earthquake Center	Co Thorsthen Becker, UT Austin	2/19-1/20	$17,500
Distribution of Fault Slip and Off-fault Deformation with Focus on Cajon Pass	Southern California Earthquake Center	Principal	2/19-1/20	$30,000
Collaborative Research: Probing the frictional behavior of the Tohoku megathrust using GPS, seismicity, and physics-based models	NSF, EAR 1620507	Co Paul Segall, Stanford	8/16-7/19	$161,455
Beyond elastic rebound: extracting permanent strain from interseismic deformation	NSF, EAR 1520266	Principal	7/15-6/17	$128,894
Beyond Elasticity: Deformation Models Incorporating Off-fault Plasticity	Southern California Earthquake Center	Principal	2/14-1/15	$23,000
Does consideration of faulty interaction improve the predictability of repeating earthquake sequences at Parkfield?: Collaborative Research: Indiana University & University California Berkley	USGS	Co Roland Burgmann, Bob Nadeau, UC Berkeley	12/14-11/15	$18,849

Deformation and fault slip rates in the western transverse ranges	Southern California Earthquake Center	Principal	2/13-1/14	$18,000
Collaborative Research: Geodetic Constraints on Moment Deficit and Physics-based Earthquake Cycle Models in the Source Region of the M9 Tohoku, Japan Earthquake	NSF, EAR 1141832	Co Paul Segall, Stanford	6/12-6/14	$136,516
Subduction Zone Coupling and Strain Partitioning in the Philippine Plate Boundary Zone	NSF, EAR 1215658	Co Michael Hamburger, Indiana	7/12-7/14	$99,872
How much stress is accumulating on the creeping section of the San Andreas Fault?	Southern California Earthquake Center	Principal	2/12-1/13	$30,000
Incorporating Geodetic Surface Data into UCERF3: Estimating Slip Rates and Locking Depths	Southern California Earthquake Center	Principal	2/11-1/12	19,000
Kinematic and Dynamic Models of Actively Deforming Lithosphere of the Western US	NSF, EAR 0952280	Principal	6/10-5/13	171,089
Estimating Moment Accumulation Rate Distribution in Southern California	Southern California Earthquake Center	Principal	2/10-1/11	19,000
Incorporating Geodetic Surface Deformation Data into UCERF3	Southern California Earthquake Center	Principal	2/10-1/11	12,000
Fault Creep Dynamics, Earthquake Cycles and Earthquake Potential on the Hayward Fault: Collaborative Research with University of California, Berkeley and Indiana University	USGS, G09AP00097	Co Roland Burgmann, UC Berkeley	7/09-6/10	31,090
Development of a Deformation Transient Detection Algorithm for Southern California	Southern California Earthquake Center	Co Paul Segall, Stanford	2/09-1/10	21,130
Estimating Fault Slip Rates, Locking Distribution, and Lithosphere Viscosity Structure in Southern California	Southern California Earthquake Center	Principal	2/09-1/10	21,541
Estimating Frictional Properties of Faults from Geodetic Data	NSF, EAR 0911467	Principal	6/08-5/11	120,976
Reconciling Geologic and Geodetic Estimates of Slip Rates in Southern California	Southern California Earthquake Center	Principal	2/08-1/09	21,474
Collaborative Research: Utilizing GPS Measurements of postseismic deformation to infer spatial distribution of frictional properties on faults	NSF EAR-0635741	Principal	1/07 – 12/08	$ 92,096
Toward Dynamic Models of contemporary plate boundary deformation with application to Taiwan	NSF EAR-0609620	Principal	8/06 – 7/08	100,699
REU Supplement for NSF grant: Toward Dynamic Models of contemporary plate boundary deformation with application to Taiwan	REU Supplement 0733483	Principal	5/07 – 4/08	4,844
Inferring Rate- and state-dependent frictional parameters at Parkfield, CA,	USGS, 7HQR004	Principal	6/07 - 5/08	53,599

using numerical models and geodetic data				
Refining estimates of lithosphere rheology and earthquake parameters along the San Andreas fault	USGS, 06HQGR0034	Principal	3/06-2/07	55,000
Refining estimates of fault slip rates and earthquake recurrence times in the San Francisco Bay Area using 3D viscoelastic cycle models and GPS data	USGS, 05HQGR0127	Principal	8/05-7/06	45,991

INVITED MEETING TALKS

2021, GYPSUM online seminar series
2019, Northern California Earthquake Hazards Workshop, Menlo Park, CA
2018, 10th ACES International Workshop, Awaji Island, Japan
2018, International Joint Workshop on Slow Earthquakes, Fukuoka city, Japan.
2017, Earthscope National Meeting, Anchorage, Alaska, Earthquake Cycle and Vertical Motions
2016, Geological Society of America, Denvero, CO, Growth of fault-cored anticlines by flexural-slip folding
2016, USGS Workshop on Incorporating Geodetic Data into National Seismic Hazard Maps
2016, Southern California Earthquake Center, Ventura Special Fault Study Area Workshop, Palm Springs, CA
2013, Southern California Earthquake Center, Ventura SFA Workshop, Ventura, CA
2013, Seismological Society of America Annual Meeting, Salt Lake City, Utah, Fault Frictional Parameters Inferred from Geodetic Records of Remotely-Triggered Transient Creep Events
2012, Southern California Earthquake Center, Geodesy Workshop, Geodetically-derived Deformation Models for UCERF3
2012 June, CIG Summer Workshop in Crustal Deformation Modeling, Golden, Co., Scientific Issues Raised by Using GPS data (given by Wayne Thatcher with major contributions from me)
2012 Keynote Speaker, Northern California Earthquake Hazards Workshop, USGS Menlo Park, CA
2011, American Geophysical Union (AGU) Annual Meeting, Present-day mountain building in Taiwan: whole-crustal thickening
2011, AGU Annual Meeting, The Role of Mantle Flow in Interseismic Deformation
2010, Chuang, R. Y., K.M. Johnson, and Y.M. Wu, 3D Crustal Stress Inversion using a Mixed Linear-nonlinear Bayesian Inversion, SSA Annual Meeting, Memphis
2010, Johnson, K.M., K. Ching, R.Y. Chuang and R. Rau (2010), Models of Active Mountain Building in Taiwan Constrained by GPS, Leveling, Geologic and Stress Observations, *Eos Trans. AGU, 91*(26), West. Pac. Geophys. Meet. Suppl., Abstract T32A-01
2010, Johnson, K.M., K. Ching, and R. Rau (2010), Models of Active Mountain Building in Taiwan Constrained by GPS, Leveling, Geologic and Stress Observations, Abstract G44A-07 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
2010, Johnson, K.M., J. Fukuda, and J. Sun (2010), Joint coseismic and postseismic kinematic slip inversions in a Bayesian framework , Abstract G12A-01 presented at 2010 Fall Meeting, AGU, San Francisco, Calif., 13-17 Dec.
2009, AGU Annual Meeting, Development of a deformation transient detection algorithm using a particle-based online filter (*Invited*). *J. Fukuda; P. Segall; K. M. Johnson*
2009, AGU Annual Meeting, Moment accumulation rate on faults in California inferred from viscoelastic earthquake cycle models (*Invited*). *K. M. Johnson*

2009, AGU Annual Meeting, Denali Fault Earthquake Postseismic Deformation Models (*Invited*). *J. T. Freymueller; A. M. Freed; K. M. Johnson; R. Burgmann; E. Calais; F. F. Pollitz; J. Biggs*
2009, June, Numerical Modeling of Crustal Deformation Workshop (CIG), Boulder, CO
2008, Oct., Invited participant and speaker, 7th U.S./Japan Natural Resource Panel for Earthquake Research, Seattle Washington
2008, Sep., Southern California Earthquake Center Annual Meeting, Slip Rate Debate Plenary session, invited presenter and debate participant
2008, March, UNAVCO Science Workshop, Boulder, CO, invited Plenary Session speaker

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INVITED DEPARTMENTAL COLLOQUIA

2024, Purdue University
2022, University of Kansas, Department Colloquium
2022 Michigan State University, Department Colloquium
2022 New Mexico State University, Department Colloquium
2021, University of Missouri Science and Technology, Department Colloquium
2020, New Mexico State, cancelled due to Covid
2017, University of Missouri
2014, October, Stanford University
2014, October, USGS
2013, February, University California at Santa Cruz
2012, March, University Washington, Seattle
2011, Feb, Earthscope talk, New Mexico Tech
2011, March, Earthscope talk, University of Georgia
2011, April, Earthscope talk, University of Wisconsin at Milwaukee
2011, April, Earthscope talk, University of the Pacific
2011, April, USGS, Menlo Park, Earthquake Colloquium
2009, May, Chinese Petroleum Company, Taipei, Taiwan
2009, May, National Central University, Taiwan, Civil Engineering Department
2008, Aug., University of Illinois Colloquium speaker
2008, July, Caltech, Tectonics Observatory seminar speaker
2008, March, University of Michigan Colloquium speaker
2007, October, Indiana University-Purdue University at Indianapolis
2006, May, National Chung Cheng University, Chia-yi, Taiwan
2006, May, National Cheng Kung University, Tainan, Taiwan
2006, April, Earthquake Research Insititute, Tokyo
2004, November, Virginia Tech
2004, July, USGS, Menlo Park
2004, April, Indiana University
2004, March, Penn State University
2004, January, UC Santa Barbara
2003, October, Academia Sinica, Taipei, Taiwan
2003, February, University of Wisconsin, Madison
2001, April, Academia Sinica, Taipei, Taiwan
2001, April, National Taiwan University, Taipei, Taiwan

STUDENT/POST-DOCTORAL SCHOLAR ADVISING

Graduate students

Primary advisor:
Nicolas Castro Perdomo (Ph.D.), expected 2026
Evan (Ping-Chen) Chiang (Ph.D.), expected 2026
Durga Acharya (Ph.D.), expected 2027
Elizabeth Sherril (Ph.D), graduated 2024
Eric Burton (M.S.), graduated 2022
Jacob Dorsett (M.S.), 2020
Elizabeth Sherril (M.S.), 2020
Carrie Burke (M.S.), graduated 2018
Douglas Tebo (M.S.), graduated 2018
James Lee, (M.S.), graduate 2017
Molly Williams, (M.S.), graduated 2016
Pete Bordovalos, (M.S.), graduated 2016
Yun-Ruei (Ray) Chuang, (Ph.D.), graduated 2014
Jeremy Mauer, (M.S.), graduated 2013
Ying-Feng Cheng, (M.S.), graduated 2013
Austin Hodge, (M.S.), graduated 2013
Chinaemerem Kanu, (M.S.), graduated 2010
Mehmet Kokum, (M.S.) graduated 2012
Abbie Enneking, (M.S.), graduated 2012
Shibaji Chatterjee, (M.S.), graduated 2012

Visiting Ph.D. students:
Yi-Rong Yang, 2010-2011, National Taiwan University
Kuo-En Ching, 2007-2008, National Cheng Chung University, Taiwan

Undergraduate students

2024-present, Thomas Mishler, Computer Code Development
2021-2022, Natalie Mattner, GPS time series analysis
2020-2021, Thomas Mishler, Strain Rate Calculations
2017-2018, Eric Burton, Northern Japan Creep
2015 – 2016, Grace Carlson, Midcontinent stress state
2014 – 2016, Ryan Yohler, Analysis of Ventura Avenue Anticline (Honors B.S. Thesis)
2015, De'Angelo Roberts, Strain and strain-rate inversions in California
2011, Philip Martin, physics undergraduate, Block model selection algorithms
2007-2008, Autumn Kaylor, Senior Thesis research, Analysis of actively growing Hukuo Anticline in northwestern Taiwan
2007-2008, Abbie Enneking, Senior Thesis Research, Inversion of focal mechanisms for stress state at depth in central Taiwan

Postdocs and Research Scientists

6/2024-5/2024, Jacob Dorsett, (M.S., Indiana University)
6/2024-12/2024, Elizabeth Sherrill, (Ph.D., Indiana University)
10/2013-2018, Yi-Rong Yang, (Ph.D., National Taiwan University)
8/2009-7/2010, Kuo-En Ching, (now Asst. Prof., National Cheng Kung University, Taiwan)
6/2006 – 6/2009, Jun'ichi Fukuda (now Asst. Prof., Earthquake Research Institute, Tokyo, Japan)
8/2006 – 3/2008, Wen-Jeng Huang (now Asst. Prof., National Central University, Taiwan)

COURSES TAUGHT

E226 Earth processes, Spring 2018, 2019, Fall 2020, 2021, 2022, 2023, 2024
E314, Data Analysis for Earth Science, Fall 2018, 2019, 2020, 2021, 2022, 2023
G454/554 Plate Tectonics, Spring 2016
G111, Physical Geology, Spring 2015
G103 Earth Materials and Processes, Spring 2013, 2017
G612 Inverse Problems, Spring 2011, Fall 2012, Spring 2015, Spring 2017, Spring 2019, Spring 2021
G690 Crustal Deformation, Spring 2009, Spring 2013, Spring 2021
G520 Mechanics for Earth Sciences, graduate course, Fall 2006, 2008, 2009,2010,2012,2014,2016,2018, 2022, 2024
G323 Structural Geology, undergraduate majors course, Spring 2007, 2008, 2009, 2010, 2011, 2014, 2016, 2018
G423 Applied Geophysics, undergraduate majors course, Spring 2007 (team taught with Gary Pavlis)
G633, G637 Tectonics and Geophysics Seminars, 2007-2020(with Hamburger and Pavlis and others)

PROFESSIONAL SERVICE

National and International Professional Organizations:
2024-present, Board of Directors, Statewide California Earthquake Center (SCEC)
2020-present, New Zealand National Seismic Hazard Model, Geodetic Modeling Team
2018-2023, Associate Editor, *G-cubed*
2011-2019, Planning Committee, Stress and Deformation over Time (SDOT) Interdisciplinary Group leader, SCEC (Southern California Earthquake Center)
2009-present, SCEC/UCERF3 GPS sub-group for implementing GPS data in UCERF3
UCERF is the Unified California Earthquake Rupture Forecast, a probabilistic earthquake forecast model for the entire state of California
2009-2015, Associate Editor, *Journal of Geophysical Research - Solid Earth*
2009, Session Chair, AGU Annual Meeting, Tectonophysics Section, Earthquake Cycle Deformation: Moving Beyond Elastic Half Space Models
2009-2011, Planning Committee, Crustal Deformation Modeling Group, SCEC (Southern California Earthquake Center)
2008, NSF panel for reviewing East Asia and Pacific Summer Institutes (EAPSI) applications
2005, Session Chair, AGU Annual Meeting, Geodesy Section, Reconciling the Discrepancy Between Geodetic and Geologic Strain Rates on Faults
2004, Session Chair, AGU Annual Meeting, Geodesy Section, Integrating Geodetic and Geologic Data With Models of Plate Boundary Deformation

Department (chair or lead appointments):
2024-2025, Acting Chair, Department of Earth and Atmospheric Sciences
2016-2019, Director of Undergraduate Studies
2014-2016, Curriculum Revision Committee Co-chair
2013-2015, Graduate Admissions Director
2009-2011 IU Department of Geological Sciences, Policy Committee
2008-2011, IU Department of Geological Sciences, Graduate Committee
2011-present, IU Department of Geological Sciences, Undergraduate Committee