Curriculum Vitae September 2023

Junle Jiang

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RESEARCH INTERESTS

My research aims to (i) understand the Earth's crustal processes across multiple scales, including their mechanisms and societal impacts, and (ii) improve effective geo-hazards assessment and mitigation, and sustainable geo-energy exploration. The current focuses are to elucidate the links between microseismicity, large earthquakes, and crustal deformation due to tectonic and human activities through integrating laboratory rock mechanics, theoretical and computational modeling, and seismic and geodetic observations.

EDUCATION

Ph.D., Geophysics, California Institute of Technology, USA 2016

Ph.D. Minor, Computational Science and Engineering, California Institute of Technology, USA 2014

M.Sc., Geophysics, California Institute of Technology, USA 2011

B.Sc., Physics, Peking University, China 2009

APPOINTMENTS

Assistant Professor, University of Oklahoma, USA 2020–present

Postdoctoral Associate, Cornell University, USA 2018–2020

Green Postdoctoral Scholar, University of California, San Diego, USA 2016–2018

Research and Teaching Assistant, California Institute of Technology, USA 2009–2015

PH.D. DISSERTATION

Jiang, J. (2016), Probabilistic Imaging and Dynamic Modeling of Earthquake Source Processes, California Institute of Technology. doi:10.7907/Z9639MQC. (Advisors: Mark Simons & Nadia Lapusta)

HONORS AND AWARDS

Faculty Success Program Scholarship, Center for Faculty Excellence, University of Oklahoma 2023

Green Postdoctoral Fellowship, University of California San Diego 2016–2018

Graduate Student Office Leadership Award, California Institute of Technology 2016

Demetriades-Tsafka-Kokkalis Best Thesis Award in Seismo-Engineering, Prediction, and Protection, California Institute of Technology 2016

Chinese Government Award for Outstanding Self-Financed Students Abroad 2015

Outstanding Student Presentation Award, Tectonophysics Section, American Geophysical Union 2015

Honor for Excellent Graduate, Peking University 2009

Petro China Scholarship, Peking University 2007

Dean's List Award for Academic Excellence, Hong Kong University of Science and Technology 2007

Cannon Scholarship, Peking University 2006

Students' Awards & Scholarship

Segun Bodunde, Aubra Tilley Scholarship, Society of Exploration Geophysics 2023

Ganiyat Shodunke, Aubra Tilley Scholarship, Society of Exploration Geophysics 2023

Segun Bodunde, Charles C. McBurney Memorial Scholarship, Society of Exploration Geophysics 2022

Ganiyat Shodunke, On to the Future Scholarship, Geological Society of America 2021

REFEREED PUBLICATIONS

1. Erickson, B. A., **Jiang, J.**, Lambert, V. R., Abdelmeguid, M., Almquist, M., Ampuero, J., Ando, R., Barbot, S. D., Cattania, C., Chen, A., Dal Zilio, L., Dunham, E. M., Elbanna, A. E., Gabriel, A., Harvey, T., Huang, Y., Kaneko, Y., Kozdon, J. E., Lapusta, N., Li, D., Li, M., Liang, C., Liu, Y., Ozawa, S., Pranger, C., Segall, P., Sun, Y., Thakur, P., Uphoff, C., van Dinther, Y., & Yang, Y., Incorporating Full Elastodynamic Effects and Dipping Fault Geometries in Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS), *Bull. Seismol. Soc. Amer.*, 113, 499–523, doi:10.1785/0120220066.
2. Materna, K., Barbour, A., **Jiang, J.**, and Eneva, M. (2022) Detection of aseismic slip and poroelastic reservoir deformation at the North Brawley Geothermal Field from 2009 to 2019, *J. Geophys. Res. Solid Earth*, 127, e2021JB023335, doi:10.1029/2021JB023335.
3. **Jiang, J.**, Erickson, B., Lambert, V., Ampuero, J.-P., Ando, R., Barbot, S., Cattania, C., Dal Zilio, L., Duan, B., Dunham, E., Gabriel, A-A., Lapusta, N., Li, D., Li, M., Liu, D., Liu, D., Liu, Y., Ozawa, S., Pranger, C., van Dinther, Y. (2022). Community-driven code comparisons for three-dimensional dynamic modeling of sequences of earthquakes and aseismic slip (SEAS), *J. Geophys. Res. Solid Earth*, 127, e2021JB023519, doi:10.1029/2021JB023519. News: EOS Research Spotlight.
4. **Jiang, J.**, Bock, Y., and Klein, E. (2021). Coevolving early afterslip and aftershock signatures of a San Andreas fault rupture, *Science Advances*, 7, doi:10.1126/sciadv.abc1606. News: OU News.
5. **Jiang, J.**, and Lohman, R. B. (2020). Coherence-guided InSAR deformation analysis in the presence of ongoing land surface changes in the Imperial Valley, California. *Remote Sens. Environ.*, 112160, doi:10.1016/j.rse.2020.112160.
6. Erickson, B.[*], **Jiang, J.**[*], Barall, M., Lapusta, N., Dunham, E. M., Harris, R., Abrahams, L., Allison, K., Ampuero, J.-P., Barbot, S., Cattania, C., Elbanna, A., Fialko, Y., Idini, B., Kozdon, J., Lambert, V., Liu, Y., Luo, Y., Ma, X., Segall, P., Shi, P., and Wei, M. (2020). The community code verification exercise for simulating sequences of earthquakes and aseismic slip (SEAS), *Seismo. Res. Lett.*, 91(2A), 874–890, doi:10/10.1785/0220190248. ([*]equal contributions)
7. Tymofyeyeva, E., Fialko, Y., **Jiang, J.**, Xu, X., Sandwell, D., Bilham, R., Rockwell, T. K., Blanton, C., Burkett, F., Gontz, A., and Moafipoor, S. (2019). Slow slip event on the southern San Andreas fault triggered by the 2017 Mw8.2 Chiapas (Mexico) earthquake. *J. Geophys. Res. Solid Earth*, 124, doi:10.1029/2018JB016765. News: EOS Research Spotlight.
8. Gombert, B., Duputel, Z., Jolivet, R., Simons, M., **Jiang, J.**, Liang, C., Fielding, E. J., and Rivera, L. (2018). Strain budget of the Ecuador–Colombia subduction zone: A stochastic view, *Earth Planet. Sci. Lett.*, 498, 288–299, doi:10.1016/j.epsl.2018.06.046.
9. Xu, X., Ward, L., **Jiang, J.**, Smith-Konter, B., Tymofyeyeva, E., Lindsey, E., Sylvester, A. G., and Sandwell, D. T. (2018). Surface creep rate of the Southern San Andreas Fault modulated by stress perturbations from nearby large events, *Geophys. Res. Lett.*, 45, 10259–10268, doi:10.1029/2018GL080137.
10. Michel, S., Avouac, J.-P., Lapusta, N., and **Jiang, J.** (2017). Pulse-like partial ruptures and high-frequency radiation at creeping-locked transition during megathrust earthquakes, *Geophys. Res. Lett.*, 44, 8345–8351, doi:10.1002/2017GL074725.
11. **Jiang, J.** and Lapusta, N. (2017). Connecting depth limits of interseismic locking, microseismicity, and large earthquakes in models of long-term fault slip, *J. Geophys. Res. Solid Earth*, 122, 6491–6523, doi:10.1002/2017JB014030.
12. Fan, W., Bassett, D., **Jiang, J.**, Shearer, P. M., and Ji, C. (2017). Rupture evolution of the 2006 Java tsunami earthquake

and the possible role of splay faults, *Tectonophysics*, 721, 143–150, doi:10.1016/j.tecto.2017.10.003.

13. Yue, H., Simons, M., Duputel, Z., **Jiang, J.**, Fielding, E., Liang, C., Owen, S., Moore, A., Riel, B., Ampuero, J. P., and Samsonov, S. V. (2016). Depth varying rupture properties during the 2015 Mw 7.8 Gorkha (Nepal) earthquake, *Tectonophysics*, 714–715, 44-54, doi:10.1016/j.tecto.2016.07.005.
14. **Jiang, J.** and Simons, M. (2016). Probabilistic imaging of tsunamigenic seafloor deformation during the 2011 Tohoku-oki Earthquake, *J. Geophys. Res. Solid Earth*, 121, 9050–9076, doi:10.1002/2016JB013760. News: EOS Research Spotlight.
15. **Jiang, J.** and Fialko, Y. (2016). Reconciling seismicity and geodetic locking depths on the Anza section of the San Jacinto fault, *Geophys. Res. Lett.*, 43, 10663–10671, doi:10.1002/2016GL071113.
16. **Jiang, J.** and Lapusta, N. (2016). Deeper penetration of large earthquakes on seismically quiescent faults, *Science*, 352(6291), 1293–1297, doi:10.1126/science.aaf1496. News: New Yorker, Phys.org.
17. Bletery, Q., Sladen, A., **Jiang, J.**, and Simons, M. (2016). A Bayesian source model for the 2004 great Sumatra-Andaman earthquake, *J. Geophys. Res. Solid Earth*, 121, 5116–5135, doi:10.1002/2016JB012911.
18. Duputel, Z., **Jiang, J.**, Jolivet, R., Simons, M., Rivera, L., Ampuero, J.-P., Riel, B., Owen, S. E., Moore, A. W., Samsonov, S. V., Culaciati, F. O., and Minson, S. E. (2015). The Iquique earthquake sequence of April 2014: Bayesian modeling accounting for prediction uncertainty, *Geophys. Res. Lett.*, 42, 7949–7957, doi:10.1002/2015GL065402.
19. Bletery, Q., Sladen, A., Delouis, B., Vallée, M., Nocquet, J.-M., Rolland, L., and **Jiang, J.** (2014). A detailed source model for the M_w 9.0 Tohoku-Oki earthquake reconciling geodesy, seismology, and tsunami records, *J. Geophys. Res. Solid Earth*, 119, 7636–7653, doi:10.1002/2014JB011261.
20. Minson, S. E., Simons, M., Beck, J. L., Ortega, F., **Jiang, J.**, Owen, S. E., Moore, A. W., Inbal, A., and Sladen, A.(2014). Bayesian inversion for finite fault earthquake source models - II: the 2011 great Tohoku-oki, Japan earthquake, *Geophys. J. Int.*, 198(2), 922–940. doi:10.1093/gji/ggu170.
21. Wei, S., Graves, R., Helmberger, D. V., Avouac, J.-P., and **Jiang, J.** (2012). Sources of shaking and flooding during the Tohoku-Oki earthquake: A mixture of rupture styles, *Earth Planet. Sci. Lett.*, 333-334(C), 91–100, doi:10.1016/j.epsl.2012.04.006.
22. Simons, M., Minson, S. E., Sladen, A., Ortega, F., **Jiang, J.**, Owen, S. E., Meng, L., Ampuero, J. P., Wei, S., Chu, R., Helmberger, D. V., Kanamori, H., Hetland, E., Moore, A. W., and Webb, F. H. (2011). The 2011 magnitude 9.0 Tohoku-oki earthquake: Mosaicking the megathrust from seconds to centuries, *Science*, 332(6036), 1421–1425, doi:10.1126/science.1206731.

DATASETS

1. **Jiang, J.**, Erickson, B., et al. (2021). Simulation Data for "Community-Driven Code Comparisons for Three-Dimensional Dynamic Modeling of Sequences of Earthquakes and Aseismic Slip (SEAS)" [Data set]. In *Journal of Geophysical Research*. Zenodo. doi:10.5281/zenodo.6299674.
2. Materna, K., Barbour, A., **Jiang, J.**, and Eneva (2022), Geodetic displacement data near North Brawley Geothermal Field, 2009-2019. Zenodo. doi:10.5281/zenodo.5949377.
3. **Jiang, J.**, Bock, Y., and Klein, E. (2021). Data and Models for "Coevolving early afterslip and aftershock signatures of a San Andreas fault rupture" [Data set]. In *Science Advances*. Zenodo. doi:10.5281/zenodo.4278477.
4. **Jiang, J.**, and Lohman, R. (2020). Data for "Coherence-guided InSAR deformation analysis in the presence of ongoing land surface change in the Imperial Valley, California" [Data set]. In *Remote Sensing of Environment*. Zenodo. doi:10.5281/zenodo.3911193.
5. **Jiang, J.** and Simons, M. (2016). Data and Models for "Probabilistic imaging of tsunamigenic seafloor deformation during the 2011 Tohoku-oki Earthquake" [Data set]. In *J. Geophys. Res. Solid Earth*. Zenodo. doi:10.5281/zenodo.6896262.

OTHER PUBLICATIONS

Lapusta, N., et al. (inc. **J. Jiang**), 2019. Modeling Earthquake Source Processes: from Tectonics to Dynamic Rupture, Report to the National Science Foundation. [Weblink].

PUBLICATIONS IN PROGRESS

**Advised Students are underlined*

1. Caballero, E., Duputel, Z., Twardzik, C., Rivera, L., Klein, E., **Jiang, J.**, Liang, C., Zhu, L., Jolivet, R., Fielding, E., Simons, M., Revisiting the 2015 Mw=8.3 Illapel earthquake: Unveiling complex fault slip properties using Bayesian inversion, in revision., *Geophys. J. Int.*
2. **Jiang, J.**, Ragon, T., Liang, C., and Simons, M., Bayesian inference of megathrust faulting during and after the 2010 Maule earthquake: 1. Quantifying uncertainty, resolution, and information content in multi-dataset inversions, in prep. for *J. Geophys. Res.*
3. **Jiang, J.**, Ragon, T., Liang, C., and Simons, M., Bayesian inference of megathrust faulting during and after the 2010 Maule earthquake: 2. Characterizing source processes in three-dimensional subduction zone structures, in prep. for *J. Geophys. Res.*
4. Bodunde, S. and **Jiang, J.**, Characterizing spatial and temporal scales of early postseismic deformation of megathrust earthquakes, in prep.
5. Shodunke, G. O., **Jiang, J.**, and Bodunde, S., Hydromechanical controls on ground deformation and pore pressure evolution in heterogeneous geothermal reservoirs, in prep.

INVITED TALKS

Hewett Club Lecture Series, University of California Riverside, CA	2023/01
AGU Fall Meeting, Chicago, IL	2022/12
Center for Earthquake Research and Information, University of Memphis, TN	2022/11
School of Earth Sciences Summer School, Zhejiang University, China (Online)	2022/08
SAGE/GAGE Community Science Workshop, Pittsburgh, PA	2022/06
Department of Geosciences Seminar, University of Montana, MT (Online)	2022/01
Earthquake Physics Seminar, University of Southern California, CA (Online)	2021/11
Berkeley Seismology Laboratory Seminar, University of California, Berkeley, CA (Online)	2021/10
GeoSeminar, Department of Geosciences, University of Tulsa, OK (Online)	2021/09
Earthquake Science Center Seminar, United States Geological Survey, CA (Online)	2021/07
Shell Colloquium, School of Geosciences, University of Oklahoma, OK	2020/03
Andes Seminar, Department of Earth and Atmospheric Sciences, Cornell University, NY	2019/09
SCEC Workshop about Physics-Based Earthquake Simulators, Menlo Park, CA	2019/06
Department of Earth, Atmospheric & Planetary Sciences, MIT, Cambridge, MA	2019/03
Keynote Talk, Southern California Earthquake Center Annual Meeting, Palm Springs, CA	2018/09
Department of Geology & Geophysics, Woods Hole Oceanographic Institution, Falmouth, MA	2018/03
SSA Fall Meeting, Denver, CO	2017/04
Department of Earth, Planetary, and Space Sciences, University of California Los Angeles, CA	2017/03
Scripps Institution of Oceanography, University of California San Diego, CA	2016/03
School of Earth & Space Sciences, University of Science & Technology of China, Hefei, China	2016/01

AGU Fall Meeting, San Francisco, CA 2013/12

State Key Laboratory of Earthquake Dynamics, China Earthquake Administration, Beijing, China 2012/07

RESEARCH GRANTS & WORKSHOPS

NSF: National Science Foundation; **USGS**: United States Geological Survey; **SCEC**: Southern California Earthquake Center (funded by **NSF** & **USGS**); **NASA**: National Aeronautics and Space Administration

Total Awards: ~$1,040K; PI Awards: ~$560K

Current Research Grants

NSF Geophysics, PI, Constraining Rupture and Relaxation Dynamics of Crustal Fault Roots with Geodetic and Microseismic Observations, $306,000 2022/08–2025/07

NASA Earth Surface & Interior, Co-PI (35% credit allocation; PI: N. Regmi), Monitoring Hillslope Dynamics Using SAR Time Series And Machine Learning, $279,991 2022/09–2025/08

NSF-USGS/SCEC, PI (w/ B. Erickson & V. Lambert), Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS), $27,968 (Jiang)/$111,000 (Total) 2022/02–2024/01

Past Research Grants

NSF-USGS/SCEC, PI, Geodetic Imaging of Earthquakes, Fault Creep, Deformation, and Coastal Changes at the Southern Salton Sea Over Two Decades, $26,000 2022/02–2023/04

NSF-USGS/SCEC, PI, Distinguishing Between Tectonic and Anthropogenic Processes in the Salton Sea Geothermal Field, $27,000 2020/02–2022/01

NSF-USGS/SCEC, PI (w/ B. Erickson), Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS), $80,700 (Jiang)/$207,000 (Total) 2018/02–2022/01

NSF-USGS/SCEC, Co-PI (PI: Y. Fialko), Mechanisms of Unsteady Shallow Creep on Major Crustal Faults, $28,000 2018/02–2019/01

NSF-USGS/SCEC, Co-PI (PI: Y. Fialko), Microseismicity, Geodetic Coupling, and Earthquake Variability on Heterogeneous Faults: A Case Study of the San Jacinto Fault, $28,000 2017/02–2018/01

Extreme Science and Engineering Discovery Environment (XSEDE), PI, Integrated Simulation of Dynamic Earthquakes and Crustal Deformation, 120K computing units 2017/09–2021/06

NSF-USGS/SCEC, Co-PI (PI: Y. Fialko), Reconciling Seismic and Geodetic Locking Depths on the Anza Segment of the San Jacinto Fault, $28,000 2016/02–2017/01

Pending Research Grants

USGS Earthquake Hazards Program, PI (w/ T. Taira), Probing Early Postseismic Fault Rheology and Heterogeneity Using Repeating Earthquakes and Deformation Data: Collaborative Research with the University of Oklahoma and University of California Berkeley, $64,898 (OU) 2024/01–2024/12

NSF Geophysics / Marine Geology & Geophysics, PI, CAREER: Bridging Multiscale Observations and Models of Megathrust Faulting and Subduction Zone Hazards, $689,486 (OU) 2024/07–2029/06

OU Faculty Investment Fund, PI, Space-Based High-Rate Monitoring of Crustal and Environmental Processes in Oklahoma, $15,000 2024/01–2024/12

Workshop Grants

NSF-USGS/SCEC, PI (w/ B. Erickson, V. Lambert). Workshop for Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS). [Website] 2022

NSF-USGS/SCEC, PI (w/ B. Erickson, V. Lambert). Workshop for Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS) — Fluids, 3D Modeling, and Future Directions. [Website] 2021

NSF-USGS/SCEC, PI (w/ B. Erickson). Workshop for Advancing Simulations of Sequences of Earthquakes and Aseismic

Slip (SEAS) — Free-Surface Effects in 2D/3D Models. [Website] 2020

NSF-USGS/SCEC, PI (w/ B. Erickson). Workshop for Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS) — Full Dynamics and 3D Effects. [Website] 2020

NSF-USGS/SCEC, PI (w/ B. Erickson). Workshop for Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS) — Exploring Complexity and Resolution. [Website] 2018

NSF-USGS/SCEC, PI (w/ R. Harris, B. Erickson). A Joint Workshop: Rupture Dynamics Code Validation and Comparing Simulations of Earthquake Sequences and Aseismic Slip. [Website] 2018

TEACHING EXPERIENCE

UG: Undergraduates; G: Graduate Students; I: Instructor; CH: Credit Hour. Newly developed courses in **boldface**.

Sole Instructor, University of Oklahoma

GEOL1114 Physical Geology for Scientists and Engineers [UG; 4 CH] 2020F, 2022S

GPHY3013 Data Analysis in Geosciences [UG; 3 CH] 2023S

GPHY4553 Introduction to Seismology [UG/G; 3 CH] 2022S

GPHY5413 Global Geophysics [UG/G; 3 CH] 2022F, 2023F

GPHY5970 Remote Sensing & Space Geodesy [UG/G; 3 CH] 2021F, 2023F

GPHY5920 Computational Geophysics [G; 3 CH] 2021S, 2023S

GPHY3440 Mentored Research Experience [UG; 3 CH] 2021S, 2022Su, 2023F

GPHY5970 Geophysical Journal Seminar [G; 1 CH] 2021F, 2022S, 2022F, 2023F

Co-Instructor, University of Oklahoma

GPHY2013 Frontiers of Geophysics [UG; 3 CH] (w/ S. Saneiyan, H. Bedle, J. Walter) 2023S

GPHY6970 Machine Learning in Geosciences Seminar [G; 1 CH] (w/ H. Bedle & M. Pranter) 2021F

Guest Lecturer, University of Oklahoma

GEOL5001 Topics in Geosciences Seminar for First-Year Students [G; 1CH] 2022F, 2023F

Guest Lecturer, Cornell University

EAS2550 Satellite-Based Remote Sensing [UG] 2019S, 2020S

EAS7800 Earthquake Record Reading [G] 2019S

Teaching & Learning in the Diverse Classroom Course 2020S

Guest Lecturer, Scripps Institution of Oceanography

SIOG237 Space Geodesy [G] 2017S, 2018S

Graduate Teaching Assistant, California Institute of Technology

Ge11d/102 Introduction to Geophysics [UG] 2014S

Ge263 Computational Geophysics [G] 2012F

Ge161 Plate Tectonics [G] 2011F

ME/Ge266 Dynamic Fracture and Frictional Faulting [G] 2011S

STUDENT ADVISING & MENTORING

Thesis/Dissertation/Research Advisor (OU)

Jose A. Viteri Lopez (MS) 2023–present

Manoj Thapa (PhD, co-advised w/ N. Regmi & S. Saneiyan) 2023–present

Segun Steven Bodunde (PhD) 2021–present
Ganiyat Shodunke (PhD) 2021–present
Alex Vera Arroyo (PhD, co-advised w/ H. Bedle) 2022–present
Haoyu Li (MS) 2021–2023

Thesis/Dissertation Committee Member (OU)

Danial Mansourian (PhD, advised by S. Saneiyan) 2022–present
Zhuobo Wang (PhD, advised by X. Chen & M. Behm) 2022–2023
Rachel Neher (PhD, advised by J. Pigott) 2022–2023
Raymond Ng (PhD, advised by J. Walter & X. Chen) 2022–2023
Deepankar Dangwal (PhD, advised by X. Chen & M. Behm) 2022–2023
Jiewen Zhang (PhD, advised by X. Chen) 2020–2021

Undergraduate Research Mentor

Dawoud Al Hashemi (OU; BS, Geophysics): Seismic hazard and loss assessment 2023 Fall
Zhenyu Kang (Peking University; BS, Geophysics): Modeling InSAR slow slip signals 2023 Summer
Maurine Oyugi (EarthScope Intern; BS, Geomatics & Geodesy): Oklahoma GNSS analysis 2023 Summer
Calvin Rutkauskas (OU; BS, Geography & Geology): SAR analysis of earthquake damage 2022 Summer
Gillian Quiros (UCSD; BS, Mathematics): Modeling nonlinear spring-slider dynamics 2017–2018
Xander Zheng (Caltech; BS, Computing & Math. Sciences): InSAR analysis of LA aquifers 2012 Summer
Patrick Ferchaud (École Polytechnique; BS/MS, Geophysics): BEM modeling 2011 Summer

FIELD EXPERIENCE

Campaign GPS survey for the San Jacinto fault, Anza, CA, PI: Y. Fialko, UCSD/SIO 2016–2018/09
Sample collection and structure mapping of rock islands, Palau, PI: J. Kirschvink, Caltech 2017/03
Seismic deployment at Anza, California, PI: F. Vernon, UCSD/SIO 2016/04
Campaign GPS survey across central Taiwan, PI: S.-B. Yu, Academia Sinica 2011/12
Seismic survey, Salton Seismic Imaging Project (SSIP), PI: J. Stock, Caltech 2011/03

PROFESSIONAL & COMMUNITY SERVICE

University of Oklahoma (OU), College of Earth & Energy (MCEE), School of Geosciences (SOG)

Faculty Liaison, AGU Bridge Program 2022–present
Institutional Representative, Southern California Earthquake Center (SCEC) 2022–present
Institutional Representative, Computational Infrastructure for Geodynamics (CIG) 2022–present
Institutional Representative, UNAVCO WInSAR 2021–present
Member, SOG Energy Transition Geophysics Search Committee 2023–present
Member, MCEE Diversity, Equity, & Inclusion Council 2021–present
Member, OU Data Institute for Societal Challenges (DISC) 2021–present
Member, SOG Honors and Awards Committee 2021–present
Member, SOG Graduate Affairs Committee 2020–present
Member, SOG Computer Lab Committee 2020–present
Institutional Representative (Secondary), EarthScope Consortium 2022–2023

Member, Strategic Faculty Hire in Energy Geosciences Search Committee 2022–2023

Member, OU Reflection Seismology Centennial Planning Committee 2021–2023

Organizer, SOG Virtual Open House for Prospective Graduate Students 2021–2022

Member, SOG Teaching Evaluation Committee 2021–2022

Member and DEI Advocate, SOG Environmental Geophysics Search Committee 2020–2021

Member, SOG Petroleum Geosciences Vision Committee 2020F

Co-Editor, SOG Application to AGU Bridge Program Partnership 2020F

Cornell University, Department of Earth and Atmospheric Sciences

Member, Inclusion, Diversity, and Equity in Earth and Atmospheric Sciences (IDEEAS) 2019–2020

Awardee, Postdoctoral Leadership Program of the Cornell University 2018–2019

Other Professional and Synergistic Activities

Proposal Reviewer:

National Science Foundation (NSF) GRFP & GEO Ad hoc: 2020, 2022, 2023; Panel: 2021, 2022

National Aeronautics and Space Administration (NASA) Earth Science Panel: 2021, 2023

United States Geological Survey (USGS) Earthquake Hazards Program Panel: 2019, 2020, 2023

American Chemical Society Petroleum Research Fund (ACS PRF) Ad hoc: 2023

Dutch Research Council (NWO) Ad hoc: 2022

German Research Foundation (DFG) Ad hoc: 2019

Paper Reviewer:

Science (1); Science Advances (1); Journal of Geophysical Research: Solid Earth (18); Geophysical Journal International (8); Geophysical Research Letters (5); Earth and Planetary Science Letters (1); Geochemistry, Geophysics, Geosystems (2); Scientific Reports (1); Bulletin of the Seismological Society of America (3); Seismological Research Letters (6); Earth Planets and Space (2); Tectonophysics (4); Earth and Space Science (1); Pure and Applied Geophysics (8); Remote Sensing of Environment (2); Remote Sensing (22); Lithosphere (1); Geosciences (2); Energies (8); Sensors (3); Earthquake Science (1); Applied Sciences (5); Science China Earth Sciences (1), etc.

Co-Leader, Community Code Verification Initiative for Numerical Simulations of SEAS (Sequences of Earthquakes and Aseismic Slip), Southern California Earthquake Center (SCEC) 2017–2023

Mentor, Asian Americans & Pacific Islanders in Geosciences (AAPIiG) Mentoring Pod Program 2022–2023

Liaison/Judge, Outstanding Student Paper Award (OSPA) of AGU Annual Meeting 2017–2022

Panel Organizer/Moderator, Southern California Earthquake Center Annual Meeting 2022/09

Chair, "State-of-the-Art Observations and Modeling of Earthquake Source Processes" Oral Sessions at 2021 AGU Annual Fall Meeting, New Orleans, LO 2021

Chair, "Earthquake Rupture Revealed by Kinematic Source Imaging.", Oral Sessions at 2017 AGU Annual Fall Meeting, New Orleans, LO 2017

Organizer, Geophysics Seminar, IGPP, SIO, University of California San Diego 2016–2018

Event Organizer and Speaker, International Student Programs & Center for Diversity, Caltech 2011–2015

Member, Board of Directors, Graduate Student Council, Caltech 2011–2014

Option Representative for Geophysics (2011–2013); Under-Represented Student Advocate (2011–2013); Treasurer (2012–2013); Director at Large (2013–2014)

Organizer, Dix Seismological Laboratory Seminar, Caltech 2011–2012

Executive Committee, Chinese Students and Scholars Association, Caltech 2010–2012

Director for Sports and Outdoor Activities (2010–2011); President (2011–2012)

EDUCATION & OUTREACH

Geoscience Day, University of Oklahoma, Norman, OK	2022, 2023
Seminar speaker, Birch Aquarium, Scripps Institution of Oceanography, UCSD, CA	2016–2017
Tour leader for K-12 students, Tectonic Observatory & Seismological Laboratory, Caltech, CA	2010–2015
Invited class speaker, Huntington Middle School, San Marino, CA	2011–2012
Teaching assistant and speaker, Blair High School, Pasadena, CA	2010–2011
Class speaker, Suzhou Foreign Language School, Suzhou, Jiangsu, China	2013/11

PROFESSIONAL SOCIETY & COMMUNITY MEMBERSHIP

Southern California Earthquake Center (SCEC)	2009–present
American Geophysical Union (AGU)	2009–present
Seismological Society of America (SSA)	2012–present
American Association for the Advancement of Science (AAAS)	2012–present
Society of Exploration Geophysics (SEG)	2020–present
Geothermal Research Council (GRC)	2020–present
National Association of Geoscience Teachers (NAGT)	2020–present
Asian Americans and Pacific Islanders in Geosciences (AAPIiG)	2020–present
National Organization of Gay and Lesbian Scientists and Technical Professionals (NOGLSTP)	2021–present

SELECTED CONFERENCE PRESENTATIONS

Only oral, students', or post-2020 presentations are listed here. Advised students are underlined.

1. Chen, X., **Jiang, J.**, Influences of Intrinsic Fault Characteristics and External Processes on Swarm Migration and Duration, AGU Fall Meeting, San Francisco, CA, December 2023.
2. Bodunde, S., **Jiang, J.**, Three-Dimensional Numerical Modeling of Stress and Deformation Variability in the Aftermath of Large Subduction Earthquakes, AGU Fall Meeting, San Francisco, CA, December 2023.
3. Lambert, V., Erickson, B., **Jiang, J.**, Dunham, E. M., Abdelmeguid, M., Agajanian, M., Almquist, M., Ampuero, J.-P., Ando, R. Barbot, S., Bodunde, S., Cattania, C., Chen, A., Dal Zilio, L., Duan, B., Elbanna, A. E., Gabriel, A.-A., Harvey, T., Huang, Y., Kaneko, Y., Kim, T., Kozdon, J. E., Lapusta, N., Li, D., Li, M., Liang, C., Liu, D., Liu, Y., Marcum, J., Mia, M., Ozawa, S., Pranger, C., Romanet, P., Segall, P., Sun, Y., Thakur, P., Uphoff, C., van Dinther, Y., Verwijs, R., Yang, Y., Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): Effects from Dipping Faults and Full Elastodynamics to Fluids and Fault Friction Evolution, AGU Fall Meeting, San Francisco, CA, December 2023
4. **Jiang, J.**, Bodunde, S., Oyugi, M., Walter, J., and Carpenter, B., Steady and Transient Crustal Signals from GNSS and Seismicity Analyses in Oklahoma, ES-SSA Annual Meeting, Dallas, TX, October 2023
5. Bodunde, S., **Jiang, J.**, Deciphering Time-Dependent Deformation and Stress Fields of Intraplate Seismicity: Effects of Poroelasticity, Viscoelasticity, Fault Slip and Fault Orientation, ES-SSA Annual Meeting, Dallas, TX, October 2023
6. **Jiang., J.**, Geodetic and Microseismic Signatures of Crustal Faulting Following Large Earthquakes, AGU Fall Meeting, Chicago, IL, December 2022. (*Invited Oral Presentation*)
7. Bodunde, S., **Jiang, J.**, Characterizing Spatial Patterns and Timescales of Early Postseismic Deformation of Megathrust Earthquakes, AGU Fall Meeting, Chicago, IL, December 2022. (*Poster Presentation*)

8. Li, H., **Jiang, J.**, Comparing Ambient-Noise-Based Seismic Velocity Variations with Dynamic and Static Strain Changes Associated with Major Earthquake Rupture at Parkfield, AGU Fall Meeting, Chicago, IL, Dec. 2022. (*Poster Presentation*)
9. Shodunke, G. O., **Jiang, J.**, and Bodunde, S., Investigating the Effects of Permeability and Porosity on Reservoir Deformation and Pore Pressure Evolution at Geothermal Fields, AGU Fall Meeting, Chicago, IL, December 2022. (*Poster Presentation*)
10. Lambert, V., **Jiang, J.**, Erickson, B., Abdelmeguid, M., Almquist, M., Ampuero, J.-P., Ando, R. Barbot, S., Bodunde, S., Cattania, C., Chen, A., Dal Zilio, L., Duan, B., Dunham, E. M., Elbanna, A. E., Gabriel, A.-A., Harvey, T., Huang, Y., Kaneko, Y., Kim, T., Kozdon, J. E., Lapusta, N., Li, D., Li, M., Liang, C., Liu, D., Liu, Y., Ozawa, S., Pranger, C., Segall, P., Sun, Y., Thakur, P., Uphoff, C., van Dinther, Y., Yang, Y., Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): From 3D, Full Elastodynamics and Dipping Faults to Fluids and Fault Friction Evolution, AGU Fall Meeting, Chicago, IL, December 2022. (*Poster Presentation*)
11. **Jiang., J.**, Geodetic Pursuit Of Aseismic Forces For Micro-earthquake Processes, SAGE/GAGE Community Science Workshop, Pittsburgh, PA., June 2022. (*Invited Oral Presentation*)
12. **Jiang., J.**, Bock, Y., and E. Klein, Imaging multiscale fault zone dynamics following the 2004 Parkfield rupture, AGU Fall Meeting, New Orleans, LO, December 2021. (*Oral Presentation*)
13. **Jiang, J.**, Erickson, B., Lambert, V., Abdelmeguid, M., Almquist, M., Ampuero, J.-P., Ando, R. Barbot, S., Cattania, C., Chen, A., Dal Zilio, L., Duan, B., Dunham, E. M., Elbanna, A. E., Gabriel, A.-A., Harvey, T., Huang, Y., Kaneko, Y., Kozdon, J. E., Lapusta, N., Li, D., Li, M., Liang, C., Liu, D., Liu, Y., Ozawa, S., Pranger, C., Segall, P., Sun, Y., Thakur, P., Uphoff, C., van Dinther, Y., Yang, Y. Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS): 3D Effects, Fully Dynamic Ruptures, and Dipping Fault Geometries. AGU Fall Meeting, New Orleans, LO, December 2021. (*Poster Presentation*)
14. **Jiang., J.**, and Lohman, R. B., Characterizing tectonic and anthropogenic ground deformation history in the Imperial Valley, California, using Sentinel-1 InSAR time series, AGU Fall Meeting, San Francisco, CA, December 2019. (*Oral Presentation*)
15. **Jiang., J.** (2019), Perspectives from the SCEC Sequences of Earthquakes and Aseismic Slip (SEAS) Project, SCEC workshop on "How Physics-Based Earthquake Simulators Might Help Improve Earthquake Forecasts," June 18, 2019. (*Invited Oral Presentation*)
16. **Jiang., J.**, Bock, Y., and E. Klein, Imaging slip evolution on the San Andreas fault due to the 2004 Parkfield earthquake, AGU Fall Meeting, Washington D.C., December 2018. (*Oral Presentation*)
17. **Jiang., J.**, and Erickson, B. A. Advancing Simulations of Sequences of Earthquakes and Aseismic Slip (SEAS). SCEC Annual Meeting, September 2018. (*Invited Oral Presentation*)
18. **Jiang., J.** and Fialko, Y., Mechanisms of unsteady shallow creep on major crustal faults, AGU Fall Meeting, New Orleans, LA, December 2017. (*Oral Presentation*)
19. **Jiang., J.** and Simons, M., Multiscale probabilistic imaging of tsunamigenic seafloor deformation during the 2011 Tohoku-oki earthquake, SSA Fall Meeting, Denver, CO, April 2017. (*Invited Oral Presentation*)
20. **Jiang., J.** and Lapusta, N., Variability of earthquake slip and arresting depths in fault models, 20th International Congress of Theoretical and Applied Mechanics (ICTAM), Montreal, Canada, August 2016. (*Oral Presentation*)
21. **Jiang., J.** and Simons, M., Bayesian exploration of coseismic seafloor deformation process during 2011 Tohoku-Oki earthquake using near-field tsunami records, AGU Fall Meeting, San Francisco, CA, December 2014. (*Oral Presentation*)
22. Kirschvink, J. and **Jiang, J.**, Potential Seismic and Tsunami Hazard from the Palau Trench, as viewed from molluscan grazing notches in uplifted coral atolls, GSA Annual Meeting, October 2014. (*Oral Presentation*)
23. **Jiang., J.**, Lapusta, N. and Noda, H., Re-evaluating the seismogenic potential of creeping fault regions: implications from models with rate-and-state friction and enhanced coseismic weakening, AGU Fall Meeting, San Francisco, CA, USA, December 2013. (*Invited Oral Presentation*)

24. **Jiang., J.**, and Lapusta, N., Depth Extent of Large Earthquake Rupture and Patterns of Microseismicity: Effect of Dynamic Weakening below the Seismogenic Depth, International Summer School on Earthquake Science (iSSEs), Earthquake Research Institute (ERI), University of Tokyo, September 2013. (*Oral Presentation*)
25. **Jiang., J.**, and Lapusta, N., Do Large Earthquakes Penetrate below the Seismogenic Zone? Potential Clues from Microseismicity, AGU Fall Meeting, San Francisco, CA, USA, December 2012. (*Oral Presentation*)
26. **Jiang., J.**, and Lapusta, N., Interaction of Dynamic Rupture and Heterogeneous Fault Strength over Multiple Earthquake Cycles. 3rd James K. Knowles Lectures & Caltech Solid Mechanics Symposium, January 2012. (*Oral Presentation*)