Stanford



Simon Klemperer

Professor of Geophysics and, by courtesy, of Earth and Planetary Sciences

Curriculum Vitae available Online

Bio

BIO

I lead the "Crustal" research group within the Department of Geophysics. We study structure, tectonics, deformation, growth and composition of the continental lithosphere, largely using active and passive seismology. Our emphasis is the creative combination of the full range of geologic and geophysical data, existing or of our own collection, analyzed often using relatively standard techniques, rather than striving to create entirely new methodologies - though in the last few years we have significantly improved the VDSS (SsPmp) method, and have created the Sn/Lg method to test whether continental earthquakes are have hypocenters aboove or below the Moho. For 30 years I have studied Tibet and the Himalaya, including the INDEPTH reflection/refraction transect across the Plateau, analysis of broadband campaign data from India, Nepal and China, and most recently geochemical and isotopic studies of geothermal fluids to tackle the questions that seismology can’t reach. I helped institute, and have continued to be faculty director of, the SE3 Summer Undergraduate Research program that places and mentors >20 Stanford frosh/sophomores in SE3 research opportunities each year, and until recently was Director of Undergraduate Studies in Geophysics.

ACADEMIC APPOINTMENTS

- Professor, Geophysics
- Professor (By courtesy), Earth & Planetary Sciences

ADMINISTRATIVE APPOINTMENTS

- Technical Assistant, Rutherford Laboratory, Chilton, Oxfordshire, (1976-1977)
- Research Associate, BIRPS, Cambridge University, (1985-1987)
- Royal Society University Research Fellow, BIRPS, Cambridge University, (1987-1990)
- Visiting Scientist, U.S. Geological Survey, (1985-1985)
- Associate Professor, Stanford University, (1990-2005)
- Associate Professor (by courtesy) Geological and Environmental Sciences, Stanford University, (1995-2005)
- Visiting Professor in Geology, Royal Holloway, University of London, (1999-2004)
- Professor (by courtesy) Geological and Environmental Sciences, Stanford University, (2005- present)
- Professor of Geophysics, Stanford University, (2005- present)

HONORS AND AWARDS

- Exceptional Reviewer, Geological Society of America (2023)
- Union Fellow, American Geophysical Union (2018)
- Cox Medallist, Allan V. Cox Medal for faculty excellence fostering undergraduate research (2008)

- Fellow, Geological Society of America (1995)
- President's Award, Geological Society of London (1988)
- Fellow, Royal Society University Research Fellowship (1987 - 1990)
- Milton Dobrin Scholar, Society of Exploration Geophysicists (1982 - 1984)
- Distinguished Lecturer, NSF-MARGINS program (2008-2010)
- School of Earth Sciences Excellence in Teaching Award, Stanford University (2010)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Department of Geophyics Fellowship Committee, Chair, Stanford University (2012 - present)
- NASA Review Panel, Earth Surface and Interior (2012 - 2012)
- Career Advisory Board, Career Development Center, Stanford University (2011 - present)
- Editorial Advisory Board, Himalayan Geology (2011 - present)
- Department of Geophysics Graduate Admissions Committee, Stanford University (2011 - 2018)
- Invited Speaker, International Symposium on Deep exploration of the Lithopshere, Beijing (2011 - 2011)
- Scientific Advisor, Sinoprobe, China's national program to explore the deep structure of China (2010 - present)
- SES Computational Earth Sciences Committee, Stanford University (2010 - 2018)
- Co-convener, 25th Himalaya-Karakoram-Tibet International Workshop, San Francisco, June (2010 - 2010)
- Lead Convener, NSF Workshop on "Future directions for NSF-sponsored geoscience research in the Himalaya/Tibet" (2010 - 2010)
- Chair, Geophysics Undergraduate Curriculum Committee, Stanford University (2009 - 2010)
- Aurora Forum public lecture and KQED radio broadcast, Tibet, where continents and cultures collide (2009 - 2009)
- Invited speaker, Gravity & Magnetics Luncheon, Society of Exploration Geophysicists (2009 - 2009)
- Committee on Review of Undergraduate Majors (C-RUM) of the Academic Council, Stanford University (2008 - 2011)
- NSF-MARGINS Distinguished Lecture tour, Lamont, U of Arizona, UC Riverside, SF State, SMU, MSU, Chapman, UC Ft.Collins, PGS (2008 - 2010)
- Planning committee, NSF-MARGINS program, Second Decade (2008 - 2008)
- Chair, Thompson Postdoctoral Fellow search, Stanford University (2007 - present)
- Co-Director, School of Earth Sciences (Summer) Undergraduate Research program, Stanford University (2007 - present)
- Freshman Advisor, Stanford University (2007 - 2010)
- Secretary, U.S. Commission on Controlled-Source Seismology (2007 - 2010)
- Director, Geophysics (Summer) Undergraduate Research Program, Stanford University (2006 - 2006)
- Director of Undergraduate Studies, Department of Geophysics, Stanford University (2005 - 2018)
- GES Undergraduate Curriculum Committee, Stanford University (2005 - 2006)
- SES Diversity Committee, Stanford University (2005 - 2006)
- Convenor, Earthscope Workshop, 3D seismic reflection at the SAFOD site (2005 - 2005)
- Convenor, US-Africa Workshop, Anatomy of Continental Rifts, Addis Ababa (2004 - 2004)
- Keynote speaker, Channel Flow in Continental Collision Zones, Geological Society, London (2004 - 2004)
- University EHS Earthquake Building Assessment Team, Stanford University (2003 - present)
- Geophysics Faculty Safety Representative, Stanford University (2002 - present)
- ILP Project III-8 Committee Member, Processes and Geodynamics in the Formation and Exhumation of Ultrahigh-Pressure Metamorphic Terrain (2002 - 2005)
- Organizer, Stanford presence, AGU Academic Showcase (Fall) Meeting (2002 - 2005)

- Convenor, NSF-IFREE-MARGINS workshop, Izu-Bonin-Mariana Subduction Factory (2002 - 2002)
- Convenor, The George Thompson Symposium: The Lithosphere of Western North America and its Geophysical Characterization, Stanford University (2001 - 2001)
- Department Admissions Chair, Stanford University (2000 - 2005)
- Invited speaker, universities of Cambridge, Durham, London, Leicester (1999 - 1999)
- Member, NSF EAR Continental Dynamics Review Panel (1998 - 2004)
- Earth Sciences Library Committee, Stanford University (1997 - present)
- Member, NSF EAR-OCE MARGINS Science Committee (1997 - 2002)
- Member, ILP Project Team, Ocean-Continent Lithosphere Boundary (1997 - 1999)
- Earth Sciences Ocean Margins Initiative Committee, Stanford University (1995 - 1998)
- Director, School of Earth Sciences Geographic Information Systems Lab, Stanford University (1994 - 1999)
- Sophomore Advisor, Stanford, Stanford University (1992 - 2005)
- Ex Officio member, IRIS Standing Committee, Program for Array Seismic Studies of the Continental lithosphere (1992 - 1999)
- Freshman Advisor, Stanford University (1991 - 2005)
- Stanford Rhodes-Marshall Panel, Stanford University (1991 - 2005)
- Director, IRIS-PASSCAL Instrument Center (1991 - 1998)
- Faculty Advisor, Masters in Exploration and Development Program, Stanford University (1990 - 1998)

PROGRAM AFFILIATIONS

- Center for East Asian Studies

PROFESSIONAL EDUCATION

- Ph.D., Cornell University , Geophysics (1985)
- M.A., Cambridge University (1984)
- B.A., Cambridge University , Mineralogy and Petrology (1980)

LINKS

- Google Scholar Profile: http://scholar.google.co.uk/citations?user=lkUWQmQAAAAJ&hl=e
- Research Group: Crustal Geophysics: https://crustal.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Biographical Information

I attended Cambridge University as an undergraduate; took my PhD at Cornell University within the Consortium for Continental Reflection profiling (COCORP) then returned to Cambridge to work with the British Institutions Reflection Profiling Syndicate (BIRPS), latterly as a Royal Society Research Fellow. In 1990 I joined Stanford University, where I continue research into crustal structure and evolution.

Research

I study the growth, tectonic evolution, and deformation of the continents (see my Google Scholar profile). My research group undertakes field experiments in exemplary areas such as, currently, the Tibet plateau (formed by collision between Indian and Asia - we're working on the northern, Kunlun, and the southern, Himalayan, boundaries of the Plateau); the actively extending Basin-&-Range province of western North America (we are working on the Ruby Range Metamorphic Core Complex in Nevada, and the leaky transform beneath the Salton Trough in southernmost California);

and in recent years the Ethiopian rift valley (where the African continent is being pulled apart) and the Mariana island chain (where new crust is forming beneath active volcanoes). We create controlled seismic sources—explosions—to drive sound waves into the Earth, and from our recordings of reflected waves at distant receivers, we form images of the deep structure and measure the physical properties of the continents. We also use the transmitted sound waves from distant earthquakes, the temporal fluctuations of natural electrical fields in the Earth, and small spatial variations of Earth's gravitational and magnetic fields for the same purposes. We maintain an ultra-low frequency electromagnetic (ULFEM) network of stations on the San Andreas fault system in the San Francisco Bay Area in an attempt to learn whether or not ULFEM earthquake precursors exist.

Teaching

I direct the geophysics undergraduate program, which we have recently re-invigorated with the development of a new course sequence. I co-lead the School of Earth Sciences Undergraduate Research Program that now involves 25 undergraduates each summer, drawn from across the university to all four Departments of the School of Earth Sciences. Over the last decade I have personally mentored 14 undergraduates (7 women) in research projects that have led to 4 undergraduate-authored peer-reviewed publications. I am recipient of the 2008 Allan V. Cox Medal for fostering undergraduate research. I teach graduate classes in seismic reflection methodology (3-quarter sequence), an upper-level undergraduate class in global tectonics and a complementary multi-day tectonics field trip to view large-scale structure of the western USA. I include undergraduates in my research teams in our field experiments, both in the western USA and internationally, and invite applications from Stanford students. My former graduate students are now professors in universities in the USA and abroad, research scientists at the U.S. Geological Survey, and exploration geophysicists in a range of oil companies and their service industries.

Professional Activities

I am an Advisor to SINOPROBE, China's national program to explore the deep structure of their lithosphere. I was an NSF-MARGINS Distinguished Lecturer, 2008-2010, and served on the 2008 NSF-MARGINS planning committee for the "Second Decade of MARGINS". Convenor, 25th Himalaya-Karakoram-Tibet Workshop, (2010); NSF Workshop, "Future directions for NSF-sponsored geoscience research in the Himalaya/Tibet" (2010); Earthscope Workshop, "3D seismic reflection at the SAFOD site" (2005); U.S.-Africa Workshop, "Anatomy of Continental Rifts", Addis Ababa (2004); NSF-IFREE-MARGINS workshop, "Izu-Bonin-Mariana Subduction Factory" (2002); "The George Thompson Symposium: The Lithosphere of Western North America and its Geophysical Characterization", Stanford University (2001). Member, NSF EAR Continental Dynamics Review Panel (1998-2004).

PROJECTS

- SINOPROBE in western Tibet: the Karakoram Fault - Stanford and SINOPROBE
- NAMASTE - Nepal Aftershock Monitoring Applied to Seismicity, Tectonics, Earthquakes - Stanford; Department of Mines & Geology, Nepal; UTEP; OSU
- HIMPROBE (a lithospheric geotransect across the Indian NW Himalaya) - Stanford and NGRI
- INDEPTH (International Deep Profiling of Tibet and the Himalaya) - Stanford and Chinese Academy of Geological Sciences
- Santa Catalina Island Terraces/Tectonics Low Energy Survey (SCITTLES)
- Broadband Salton Seismic Imaging Project (bb-SSIP) - Stanford
- Passive Seismic Imaging of Ruby Mountains Core Complex - Stanford
- Ultra-low frequency electromagnetic monitoring of the San Andreas Fault - Stanford and U.S. Geological Survey
- EAGLE (Ethiopia-Afar Geoscientific Lithospheric Experiment)

Teaching

COURSES

2026-27

- Geophysics Department Seminar: GEOPHYS 300 (Win, Spr)
- Tectonics: GEOPHYS 385E (Aut, Win, Spr)
- Tectonics Field Trip: EPS 189, EPS 289, GEOPHYS 108, GEOPHYS 214 (Spr)

2025-26

- Geophysics Department Seminar: GEOPHYS 300 (Aut, Win, Spr)
- Introduction to the Foundations of Contemporary Geophysics: EARTHSYS 110, GEOPHYS 110 (Win)
- Tectonics: GEOPHYS 385E (Aut, Win, Spr)
- Tectonics Field Trip: EPS 189, EPS 289, GEOPHYS 108, GEOPHYS 214 (Spr)

2024-25

- Geophysics Department Seminar: GEOPHYS 300 (Aut, Win, Spr)
- Senior Seminar: Issues in Geophysics: GEOPHYS 199 (Win)
- Tectonics: GEOPHYS 385E (Aut, Win, Spr, Sum)
- Tectonics Field Trip: EPS 189, EPS 289, GEOPHYS 108, GEOPHYS 214 (Spr)

2023-24

- Geophysics Department Seminar: GEOPHYS 300 (Aut, Win)
- Introduction to the Foundations of Contemporary Geophysics: EARTHSYS 110, GEOPHYS 110, GEOPHYS 215 (Win)
- Senior Seminar: Issues in Earth Sciences: EPS 150, GEOPHYS 199 (Aut)
- Tectonics: GEOPHYS 385E (Aut, Win, Sum)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Trey Knudson

Doctoral Dissertation Advisor (AC)

Junyi Gong

Publications

PUBLICATIONS

- **Nonuniform Mantle Suture Beneath Northern Tibet Revealed by Helium Isotopes and Attention-Based Machine Learning: Implications for Crustal Rheology and Growth of the Tibetan Plateau** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wang, Y., Li, X., Liao, S., Wang, Y., Klemperer, S., Zhang, J., Hao, Y., Tian, J., Zhao, Y., Zhou, X., Liao, D., Zuo, Y., Kong, et al
  2026; 131 (9)
- **A southern Tibetan sub-Moho Mw=4.2 earthquake breaking the brittle thermal limit** *TECTONOPHYSICS*
  Song, X., Klemperer, S. L., Shi, D., Liang, X., Li, J., Subedi, S., Adhikari, L.
  2026; 934
- **Himalayan sub-Moho earthquakes suggest crustal faults trigger eclogitized-drip tectonics.** *Scientific reports*
  Song, X., Klemperer, S. L.
  2026
- **Venting the roof of the world: Active faults circulate meteoric fluids through upper-crustal geothermal systems of the Himalaya-Tibet orogen** *GEOLOGY*
  Craig, J. W., Klemperer, S. L., Crossey, L. J., Karlstrom, K. E., Winn, C.
  2026

- **Continental mantle earthquakes of the world.** *Science (New York, N.Y.)*
  Wang, S., Klemperer, S. L.
  2026; 391 (6785): 611-615
- **Are Himalayan sub-Moho earthquakes in the petrological mantle?** *TECTONOPHYSICS*
  Song, X., Klemperer, S. L., Liang, X.
  2025; 917
- **Indian cratonic mantle beneath northern Qiangtang in eastern Tibet ca. 11 Ma** *GEOLOGY*
  Klemperer, S.
  2025; 53 (11): e588
- **The Indian Plate subducting below the Tibet Plateau is tearing apart** *COMMUNICATIONS EARTH & ENVIRONMENT*
  Liu, L., Shi, D., Klemperer, S. L.
  2025; 6 (1)
- **Numerical and Observational Study of Sn-To-Lg Conversion Due To Crustal-Thickening: Implications for Identification of Continental Mantle Earthquakes** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wang, S., Klemperer, S. L.
  2025; 130 (2)
- **Identification of Continental Mantle Earthquakes Using Regional Waves Propagating Into a Thinned Continental Crust** *GEOPHYSICAL RESEARCH LETTERS*
  Wang, S., Klemperer, S. L.
  2024; 51 (21)
- **Numerous Tibetan lower-crustal and upper-mantle earthquakes, detected by Sn/Lg ratios, suggest crustal delamination or drip tectonics** *EARTH AND PLANETARY SCIENCE LETTERS*
  Song, X., Klemperer, S. L.
  2024; 626
- **Strong Variability in the Thermal Structure of Tibetan Lithosphere** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Xia, B., Artemieva, I. M., Thybo, H., Klemperer, S. L.
  2023; 128 (3)
- **Assessment of a claimed ultra-low frequency electromagnetic (ULFEM) earthquake precursor** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Wang, C., Christman, L. E., Klemperer, S. L., Glen, J. M., McPhee, D. K., Chen, B.
  2022; 229 (3): 2081-2095
- **Limited underthrusting of India below Tibet: 3He/4He analysis of thermal springs locates the mantle suture in continental collision.** *Proceedings of the National Academy of Sciences of the United States of America*
  Klemperer, S. L., Zhao, P., Whyte, C. J., Darrah, T. H., Crossey, L. J., Karlstrom, K. E., Liu, T., Winn, C., Hilton, D. R., Ding, L.
  2022; 119 (12): e2113877119
- **Tomographic Image of Shear Wave Structure of NE India Based on Analysis of Rayleigh Wave Data** *FRONTIERS IN EARTH SCIENCE*
  Kumar, A., Kumar, N., Mukhopadhyay, S., Klemperer, S. L.
  2021; 9
- **Love-wave normal modes discriminate between upper-mantle and crustal earthquakes: Simulation and demonstration in Tibet** *EARTH AND PLANETARY SCIENCE LETTERS*
  Wang, S., Klemperer, S. L.
  2021; 571
- **Electromagnetic Field Generated by an Earthquake Source Due to Motional Induction in 3D Stratified Media, and Application to 2008 M-w 6.1 Qingchuan Earthquake** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Zhao, J., Gao, Y., Tang, J., Klemperer, S. L., Wen, J., Chen, C., Chong, J.
  2021; 126 (10)
- **Western Gondwana imaged by S receiver-functions (SRF): New results on Moho, MLD (mid-lithospheric discontinuity) and LAB (lithosphere-asthenosphere boundary)** *GONDWANA RESEARCH*
  Liu, L., Klemperer, S. L., Blanchette, A. R.

2021; 96: 206-218

- **Uplifted marine terraces on Santa Catalina Island, California, USA** *GEOLOGY*
  Castillo, C. M., Klemperer, S. L.
  2021; 49 (7): E529
- **Crustal-scale wedge tectonics at the narrow boundary between the Tibetan Plateau and Ordos block** *EARTH AND PLANETARY SCIENCE LETTERS*
  Tian, X., Bai, Z., Klemperer, S. L., Liang, X., Liu, Z., Wang, X., Yang, X., Wei, Y., Zhu, G.
  2021; 554
- **Post-critical SsPmp and its applications to virtual deep seismic sounding (VDSS)-3: back-projection imaging of the crust-mantle boundary in a heterogeneous lithosphere, theory and application** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Liu, T., Klemperer, S. L., Yu, C., Ning, J.
  2020; 223 (3): 2166–87
- **Coseismic electric and magnetic signals observed during 2017 Jiuzhaigou M-w 6.5 earthquake and explained by electrokinetics and magnetometer rotation** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Gao, Y., Zhao, G., Chong, J., Klemperer, S. L., Han, B., Jiang, F., Wen, J., Chen, X., Zhan, Y., Tang, J., Xiao, Q., Wang, L.
  2020; 223 (2): 1130–43
- **Localized foundering of Indian lower crust in the India-Tibet collision zone.** *Proceedings of the National Academy of Sciences of the United States of America*
  Shi, D., Klemperer, S. L., Shi, J., Wu, Z., Zhao, W.
  2020
- **A Rapid Response Network to Record Aftershocks of the 2015 M 7.8 Gorkha Earthquake in Nepal** *SEISMOLOGICAL RESEARCH LETTERS*
  Karplus, M. S., Pant, M., Sapkota, S., Nabelek, J., Velasco, A. A., Adhikari, L., Ghosh, A., Klemperer, S. L., Kuna, V., Mendoza, M. M., Braunmiller, J.
  2020; 91 (4): 2399–2408
- **Duplex in the Main Himalayan Thrust illuminated by aftershocks of the 2015 M-w 7.8 Gorkha earthquake** *NATURE GEOSCIENCE*
  Mendoza, M. M., Ghosh, A., Karplus, M. S., Klemperer, S. L., Sapkota, S. N., Adhikari, L. B., Velasco, A.
  2019; 12 (12): 1018-+
- **Post-critical SsPmp and its applications to Virtual Deep Seismic Sounding (VDSS)-2: 1-D imaging of the crust/mantle and joint constraints with receiver functions** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Liu, T., Klemperer, S. L., Ferragut, G., Yu, C.
  2019; 219 (2): 1334–47
- **Receiver-function imaging of the lithosphere at the Kunlun-Qaidam boundary, Northeast Tibet** *TECTONOPHYSICS*
  Karplus, M. S., Klemperer, S. L., Zhao, W., Kind, R., Wu, Z., Mechie, J., Shi, D., Brown, L. D., Chen, C., Su, H., Xue, G., Sandvol, E., Ni, et al
  2019; 759: 30–43
- **Deep#seated lithospheric geometry in revealing collapse of the Tibetan Plateau**
  Guo, X., Gao, R., Zhao, J., Xu, X., Lu, Z., Klemperer, S., Liu, H.
  2019: 66
- **Late Quaternary subsidence of Santa Catalina Island, California Continental Borderland, demonstrated by seismic-reflection data and fossil assemblages from submerged marine terraces** *GEOLOGICAL SOCIETY OF AMERICA BULLETIN*
  Castillo, C. M., Klemperer, S. L., Ingle, J. C., Powell, C. L., Legg, M. R., Francis, R. D.
  2019; 131 (1-2): 21–42
- **Lateral variation of the Main Himalayan Thrust controls the rupture length of the 2015 Gorkha earthquake in Nepal.** *Science advances*
  Bai, L. n., Klemperer, S. L., Mori, J. n., Karplus, M. S., Ding, L. n., Liu, H. n., Li, G. n., Song, B. n., Dhakal, S. n.
  2019; 5 (6): eaav0723
- **Multi-stage evolution of the Ordos lithosphere from stochastic inversion of elevation, geoid, surface heat flow, Rayleigh wave dispersion data and magnetotelluric data** *Acta Geologica Sinica*
  Jones, A. G., Dong, H., Afonso, J. C., Wei, W., Klemperer, S. L., Liu, T.
  2019; 93 (5)

- **Detection of a widespread mantle component of 3He in thermal springs of Lhasa Block and Tethyan Himalaya, eastern Tibet: evidence for roll-back of the Indian-Asian mantle suture south of the Yarlung suture zone, and asthenospheric upwelling beneath the Lhasa block** *Acta Geologica Sinica*
  Klemperer, S., Zhao, P., Shi, D., Crossey, L. J., Karlstrom, K. E., Winn, C. L., Liu, T., Xiong, Z., Guo, X., Zeng, D., Wang, S., Darrah, T. H., Hilton, et al
  2019; 93 (5): 56-57
- **Mantle#earthquake geothermometry of rejuvenated Proterozoic lithosphere, western Saudi Arabia** *Acta Geologica Sinica*
  Blanchette, A. R., Klemperer, S. L., Mooney, W. D., Zahran, H. M.
  2019; 93 (5): 102-103
- **Deep#seated lithospheric geometry in revealing collapse of the Tibetan Plateau** *Acta Geologica Sinica#English Edition*
  Guo, X., Gao, R., Zhao, J., Xu, X., Lu, Z., Klemperer, S., Liu, H.
  2019; 93 (5): 66
- **Post-critical SsPmp and its applications to Virtual Deep Seismic Sounding (VDSS)-1: sensitivity to lithospheric 1-D and 2-D structure** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Liu, T., Klemperer, S. L., Yu, C., Ning, J.
  2018; 215 (2): 880–94
- **Deep-seated lithospheric geometry in revealing collapse of the Tibetan Plateau** *EARTH-SCIENCE REVIEWS*
  Guo, X., Gao, R., Zhao, J., Xu, X., Lu, Z., Klemperer, S. L., Liu, H.
  2018; 185: 751–62
- **Two-stage Red Sea rifting inferred from mantle earthquakes in Neoproterozoic lithosphere** *EARTH AND PLANETARY SCIENCE LETTERS*
  Blanchette, A. R., Klemperer, S. L., Mooney, W. D., Zahran, H. M.
  2018; 497: 92–101
- **Cross-validation of independent ultra-low-frequency magnetic recording systems for active fault studies** *EARTH PLANETS AND SPACE*
  Wang, C., Bin, C., Christman, L. E., Glen, J. M. G., Klemperer, S. L., McPhee, D. K., Kappler, K. N., Bleier, T. E., Dunson, J.
  2018; 70
- **Cross-validation of independent ultra-low-frequency magnetic recording systems for active fault studies.** *Earth, planets, and space : EPS*
  Wang, C., Bin, C., Christman, L. E., Glen, J. M., Klemperer, S. L., McPhee, D. K., Kappler, K. N., Bleier, T. E., Dunson, J. C.
  2018; 70 (1): 57
- **Sycamore Knoll: A wave-planed pop-up structure in a sinistral-oblique thrust system, Southern California Continental Borderland** *DEEP-SEA RESEARCH PART II-TOPICAL STUDIES IN OCEANOGRAPHY*
  Williams, E. F., Castillo, C. M., Klemperer, S. L., Raineault, N. A., Gee, L.
  2018; 150: 132–45
- **Seismostratigraphy of a submerged coastal transition zone: Precise determination of paleocoastal environments during the last glacial maximum from high-resolution 3D multichannel seismic** *SEG Technical Program Expanded Abstracts*
  Castillo, C. M., Klemperer, S.
  Society of Exploration Geophysicists..2018: 1599–1602
- **Nonuniform subduction of the Indian crust beneath the Himalayas** *SCIENTIFIC REPORTS*
  Guo, X., Li, W., Gao, R., Xu, X., Li, H., Huang, X., Ye, Z., Lu, Z., Klemperer, S. L.
  2017; 7: 12497
- **Crustal structure of the Ruby Mountains metamorphic core complex, Nevada, from passive seismic imaging** *GEOSPHERE*
  Litherland, M. M., Klemperer, S. L.
  2017; 13 (5): 1506–23
- **New Frontiers in Ocean Exploration The E/V Nautilus, NOAA Ship Okeanos Explorer, and R/V Falkor 2016 Field Season** *OCEANOGRAPHY*
  Bell, K. L., Mowitt, W., Zykov, V., Delgado, J. P., Tartt, M., Stout, M., Wagner, K., Marquis, S., Bell, K. L., Phillips, B., Becker, K., Licht, S., Ou, et al
  2017; 30 (1): 1-?
- **West-east transition from underplating to steep subduction in the India-Tibet collision zone revealed by receiver-function profiles** *EARTH AND PLANETARY SCIENCE LETTERS*
  Shi, D., Zhao, W., Klemperer, S. L., Wu, Z., Mechie, J., Shi, J., Xue, G., Su, H.

2016; 452: 171-177

- **Crustal-scale duplexing beneath the Yarlung Zangbo suture in the western Himalaya** *NATURE GEOSCIENCE*
  Gao, R., Lu, Z., Klemperer, S. L., Wang, H., Dong, S., Li, W., Li, H.
  2016; 9 (7): 555-?
- **Rapid variation in upper-mantle rheology across the San Andreas fault system and Salton Trough, southernmost California, USA** *GEOLOGY*
  Barak, S., Klemperer, S. L.
  2016; 44 (7): 575-578
- **3D imaging of subducting and fragmenting Indian continental lithosphere beneath southern and central Tibet using body-wave finite-frequency tomography** *EARTH AND PLANETARY SCIENCE LETTERS*
  Liang, X., Chen, Y., Tian, X., Chen, Y. J., Ni, J., Gallegos, A., Klemperer, S. L., Wang, M., Xu, T., Sung, C., Si, S., Lan, H., Teng, et al
  2016; 443: 162-175
- **Nautilus Samples Program** *OCEANOGRAPHY*
  Raineault, N. A., Bradt, L., Lubetkin, M., Carey, S., Kelley, K., Fisher, C. R., Castillo, C., Klemperer, S., Reiswig, H.
  2016; 29 (1): 14–17
- **Hidden intrabasin extension: Evidence for dike-fault interaction from magnetic, gravity, and seismic reflection data in Surprise Valley, northeastern California** *GEOSPHERE*
  Athens, N. D., Glen, J. M., Klemperer, S. L., Egger, A. E., Fontiveros, V. C.
  2016; 12 (1): 15-25
- **Weakly coupled lithospheric extension in southern Tibet** *EARTH AND PLANETARY SCIENCE LETTERS*
  Tian, X., Chen, Y., Tseng, T., Klemperer, S. L., Thybo, H., Liu, Z., Xu, T., Liang, X., Bai, Z., Zhang, X., Si, S., Sun, C., Lan, et al
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