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APPOINTMENTS

2016-present	Associate Dept. Head for Graduate Programs & Research, Dept. of Geosciences
2015-2016	Visiting Senior Research Fellow, Univ. Texas Institute for Geophysics
2012-present	Professor, Dept. Geosciences, Penn. State University
2007-2012	Associate Professor, Dept. Geosciences, Penn. State University
2005-2007	Assistant Professor, Dept. Geosciences, Penn. State University
2001-2004	Assistant Professor, Geology & Geophysics, University of Wyoming
1999-2001	NRC Research Associate, U.S.G.S., Menlo Park, California
1999-2001	Research Fellow, IGPP, University of California Santa Cruz

EDUCATION

1999	PhD., Earth Sciences	University of California, Santa Cruz
1995	B.A., Geology, *summa cum laude*	Williams College

HONORS AND AWARDS

2017/18	Co-chief scientist, IODP Expedition 375: Hikurangi Subduction Margin
2016	Co-chief scientist, IODP Expedition 365
2014	Paul F. Robertson Award for Penn State EMS Breakthrough of the Year
2013	Co-chief scientist, IODP Expedition 348
2011	The Island Arc Award (best paper award, Wiley Blackwell)
2011	Research Accomplishment Award, Penn State Energy Institute
2010	Consortium for Ocean Leadership Distinguished Lecturer (2010-2011)
2010-2011	Science plan writing committee, Integrated Ocean Drilling Program renewal (*invited*)
2009	Friedrich Wilhelm Bessel Research Award, Alexander von Humboldt Foundation
2009	Co-chief scientist, IODP Expedition #319 (*first riser drilling in IODP*)
2006	Kavli Fellow; invited participant in 12th annual National Academy of Sciences – Alexander von Humboldt Foundation "Frontiers of Science" symposium.
2006	Fellow, Geological Society of America
2005	Donath Medalist (Geological Society of America's young scientist award)
2004	Invited, Joint DFG-NSF Conference for outstanding young researchers, Wash., DC
1999-2001	National Research Council Post-doctoral Associateship
1998-1999	Teaching Assistant of the Year, Campus-wide award, U.C. Santa Cruz
1998-1999	Teaching Assistant of the Year, Earth Sciences Board, U.C. Santa Cruz
1995	National Science Foundation Graduate Fellowship
1995	David N. Major Prize in Geology, Williams College
1995	Geological Society of America, Outstanding Student Presentation

RESEARCH INTERESTS

Subseafloor instrumentation
Role of fluids in fault and earthquake mechanics
Coupled deformation and fluid flow
Regional scale fluid, solute, and heat transport

COURSES TAUGHT

The Pennsylvania State University:

GEOSC 440:	Marine Geology (upper level Undergraduate course)
GEOSC 452:	Hydrogeology (upper level Undergraduate course)
GEOSC 542:	Groundwater Modeling (Graduate lecture course)

GEOSC 597:	Techniques in Experimental Rock Mechanics (Graduate course; co-taught)
GEOSC 598:	Geofluids / Subduction Zones Seminar (Graduate seminar)
EARTH 111/111-U:	Water: Science and Society (General education; co-taught)

University of Wyoming:

GEOL 5200:	Crustal Geomechanics: Faults, Fracture, and Fluids (Graduate course)
GEOL 4200:	Fluids in Geologic Processes (Graduate course)
GEOL 4444/5444:	Geohydrology (Undergraduate course)
GEOL 1070:	The Earth: Its Physical Environment (Gen-ed course for education students)

PUBLICATIONS AND PAPERS IN PRESS

[1] *Primary advisor for student or post-doctoral first author*
[2] *Co-advisor for student or post-doctoral first author's work*
[*] *Student author*

118) [1]Kitajima , H., **D.M. Saffer**, H. Sone, H. Tobin, T. Hirose, In-situ stress and pore pressure in the deep interior of the Nankai accretionary prism, IODP Site C0002, in press, Geophys. Res. Lett.

117) Araki, E., **D.M. Saffer**, A.J. Kopf, L.M. Wallace, T. Kimura, Y. Machida, S. Ide (2017), Recurring and triggered slow-slip events near the trench at the Nankai Trough subduction megathrust, *Science*, 356, 1157-1160, doi: 10.1126/science.aan3120, (*corresponding author*).

116) **Saffer, D.M.** (2017), Mapping fluids to subduction megathrust locking and slip behavior, *Geophys. Res. Lett.*, 44, doi:10.1002/2017GL075381.

115) Brodsky, E.E., **D. Saffer**, P. Fulton, F. Chester, M. Conin, K. Huffman, J.C. Moore, and H.-Y. Wu (2017), The postearthquake stress state on the Tohoku megathrust as constrained by reanalysis of the JFAST breakout data, *Geophys. Res. Lett.,* 44, doi:10.1002/2017GL074027.

114) Bécel, A., Shillington, D. J., Delescluse, M., Nedimović, M.R., Abers, G.A., **Saffer, D.M.**, Kuehn, H. (2017), Tsunamigenic structures in a creeping section of the Alaska subduction zone, *Nature Geoscience*, 10, 609-613, doi:10.1038/ngeo2990.

113) [1]Lauer R.M., **D.M. Saffer**, and R.N. Harris (2017), Links between clay transformation and earthquakes along the Costa Rican subduction margin, *Geophys. Res. Lett.*, 44, 7725–7732, doi:10.1002/2017GL073744.

112) [*]Li, X., [*]Z. Feng, G. Han, D. Elsworth, C. Marone, **D. Saffer**, D-S Cheon (2017) Permeability Evolution of Propped Artificial Fractures in Green River Shale, Rock Mechanics and Rock Engineering, 50, 1473–1485, doi:10.1007/s00603-017-1186-2.

111) [1]Hüpers, A., **D.M. Saffer**, A.J. Kopf (2017), Lithostratigraphic controls on dewatering and fluid pressure in the western Nankai subduction zone: Implications for drainage behavior and consolidation state of the underthrust sequence, *Geol. Soc. Am. Special Paper*, *in press*.

110) [1]H. Kitajima, M. Takahashi, M. Otsubo, **D.M. Saffer**, G. Kimura (2017), Strength of the Shimanto accretionary complex across the Nobeoka thrust, *The Island Arc*, 26, doi:10.1111/iar.12192.

109) Brown, K.M., D. Peoppe, M. Josh, J. Sample, E.Even, H. Tobin, **D. Saffer**, T. Hirose, T. Kulongoski, S. Toczko, L. Maeda, et al. (2017), The action of water films at Å-scales in the Earth: Implications for the Nankai subduction system, *Earth Planet. Sci. Lett*., 463, 266-276, doi:10.1016/j.epsl.2016.12.042.

108) **Saffer, D.M.**, and A.J. Kopf (2016), Boron desorption and fractionation in Subduction Zone Fore Arcs: Implications for the sources and transport of deep fluids, *Geochem. Geophys. Geosyst*., 17, doi:10.1002/ 2016GC006635 (*AGU Research Spotlight in EOS; editor's highlight*).

107) Wojatschke, J., [*]M.M. Scuderi, L.N. Warr, B.M. Carpenter, **D. Saffer**, and C. Marone (2016), Experimental constraints on the relationship between clay abundance, clay fabric, and frictional

behavior for the Central Deforming Zone of the San Andreas Fault, *Geochem. Geophys. Geosyst*., 17, doi:10.1002/2016GC006500.

106) Wallace, L.M., E. Araki, **Saffer, D.M.**, X. Wang, A. Roesner, A. Kopf, et al. (2016), Near-field observations of an offshore M_W 6.0 earthquake from an integrated seafloor and subseafloor monitoring network at the Nankai Trough, southwest Japan, *J. Geophys. Res. Solid Earth*, 121, doi:10.1002/2016JB013417.

105) [1]Huffman, K.A., **Saffer, D.M.** & Dugan, B. (2016), In situ stress magnitude and rock strength in the Nankai accretionary complex: a novel approach using paired constraints from downhole data in two wells, *Earth Planets Space*, 68. doi:10.1186/s40623-016-0491-4.

104) [1]Leeman, J. R., [*]R.D. Valdez, R.B. Alley, S. Anandakrishnan, and **D.M. Saffer** (2016), Mechanical and hydrologic properties of Whillans Ice Stream till: Implications for basal strength and stick-slip failure, *J. Geophys. Res. Earth Surf.*, 120, doi:10.1002/2016JF003863.

103) [2]Leeman, J.R., **Saffer, D.M**., [*]Scuderi, M.M., and Marone, C. (2016), Laboratory Observations of Slow Earthquakes and the Spectrum of Tectonic Fault Slip Modes, *Nature Communications,* 7:11104 | DOI: 10.1038/ncomms11104.

102) [1]Huffman, K.A., and **D.M. Saffer** (2016), In situ stress magnitudes at the toe of the Nankai Trough Accretionary Prism, offshore Shikoku Island, Japan. *J. Geophys. Res.*, 120, doi: 10.1002/2015JB012415.

101) [*]Li, X., [*]Z. Feng, G. Han, D. Elsworth, C. Marone, **D. Saffer**, D-S. Cheon (2016), Breakdown Pressure and Fracture Surface Morphology of Hydraulic Fracturing in Shale with H_2O, CO_2 and N_2 *Geomechanics and Geophysics for Geo-Energy and Geo-Resources,* 2, 63-76, doi:10.1007/s40948-016-0022-6.

100) **Saffer, D.M.** (2015), The Permeability of Active Subduction Plate Boundary Faults*, Geofluids, 15*, 193-215, doi: 10.1111/gfl.12103.

99) **Saffer, D.M**., and Wallace, L.M. (2015), The frictional, hydrologic, metamorphic and thermal habitat of shallow slow earthquakes, *Nature Geoscience,* 8, 594–600, doi:10.1038/ngeo2490.

98) [1]Lauer, R.M., and **D.M. Saffer** (2015), The impact of splay faults on fluid flow, solute transport, and pore pressure distribution in subduction zones: A case study offshore the Nicoya Peninsula, Costa Rica, *Geochem. Geophys. Geosyst*., 16, 1089–1104, doi:10.1002/2014GC005638.

97) [2]Carpenter, B.M., **D.M. Saffer**, and C. Marone (2015), Frictional properties of the active San Andreas Fault at SAFOD: Implications for fault strength and slip behavior, *J. Geophys. Res*., 120, 5273–5289, doi:10.1002/2015JB011963.

96) [2]Ikari, M.J., Kameda, J., **Saffer, D.M.**, Kopf A.J. (2015), Strength characteristics of Japan Trench borehole samples in the high-slip region of the 2011 Tohoku-Oki earthquake, *Earth Planet. Sci. Lett., 412*, 35-41, doi:10.1016/j.epsl.2014.12.014.

95) [2]Leeman, J.R., [*]Scuderi, M.M., Marone, C., and **Saffer, D.M.** (2015), Stiffness evolution of granular layers and the origin of repetitive, slow, stick-slip frictional sliding, *Granular Matter*, 17:447–457, doi 10.1007/s10035-015-0565-1.

94) [2]Scuderi, M.M., H. Kitajima, B.M. Carpenter, **D.M. Saffer**, and C. Marone (2015), Evolution of permeability across the transition from brittle failure to cataclastic flow in porous siltstone, *Geochem. Geophys. Geosyst*., 16, 2980–2993, doi:10.1002/2015GC005932.

93) [1]Valdez, R.D., [*]Lauer, R.M., Ikari, M.J., Kitajima, H, and **Saffer, D.M.** (2015), Data report: Permeability and Consolidation behavior of sediments from the N. Japan Trench subduction zone, IODP Site C0019*,* in F.M. Chester et al. (eds.), *Proc. IODP,* 343/343T.

92) Marone, C., and **Saffer, D.M.** (2015), The Mechanics of Frictional Healing and Slip Instability During the Seismic Cycle, *in*: Kanamori, H., et al. (Eds.), *Treatise on Geophysics, 2nd Edition,* Elsevier, Oxford, UK.

91) Hornbach, M.J., M. Manga, M. Genecov, R. Valdez, P. Miller, **D. Saffer**, E. Adelstein, S. Lafuerza, T. Adachi, C. Breitkreuz, et al. (2015), Permeability and pressure measurements in Lesser Antilles submarine slides: Evidence for pressure-driven slow-slip failure, *J. Geophys. Res.*, 120, 7986–8011, doi:10.1002/2015JB012061.

90) [*]Li, J., D.J. Shillington, A. Bécel, M.R. Nedimović, S.C. Webb, **D.M. Saffer**, K.M. Keranen, and H. Kuehn (2015), Downdip variations in seismic reflection character: Implications for fault struc- ture and seismogenic behavior in the Alaska subduction zone, *J. Geophys. Res*., 120, doi:10.1002/ 2015JB012338.

89) Lin, W., T.B. Byrne, M. Kinoshita, L.C. McNeill, C. Chang, J.C. Lewis, Y. Yamamoto, **D.M. Saffer**, et al. (2015), Distribution of stress state in the Nankai subduction zone, southwest Japan and a comparison with Japan Trench, *Tectonophys*., http://dx.doi.org/10.1016/j.tecto.2015.05.008.

88) Ellis, S., A.Fagereng, S. Henrys, D. Barker, **D. Saffer**, L. Wallace, C.Williams, and S. Buiter (2015), Fluid budgets along the northern Hikurangi subduction margin, New Zealand: the effect of a subducting seamount on fluid pressure, *Geophys. J. Int*., *202*, 277-297, doi: 10.1093/gji/ggv127.

87) [2]Haines, S.H., Marone, C., **Saffer, D.M.** (2014), Frictional properties of low-angle normal fault gouges and implication for low-angle normal fault slip, *Earth Planet. Sci. Lett., 408*, 57-65, http://dx.doi.org/10.1016/j.epsl.2014.09.034

86) [1]Kitajima, H., and **D.M. Saffer** (2014), Consolidation state of incoming sediments to the Nankai Trough subduction zone: Implications for sediment deformation and properties, *Geochem. Geophys. Geosyst., 15*, 2821–2839, doi:10.1002/2014GC005360.

85) [2]den Hartog, S.A., **Saffer, D.M**., Spiers, C.J. (2014), The roles of quartz and water in controlling unstable slip in phyllosilicate-rich megathrust fault gouges, *Earth, Planets, Space (Frontier Article),* 66:78, doi:10.1186/1880-5981-66-78,

84) [2]Leeman, John R., [*]Scuderi, M.M., Marone, C., **Saffer, D.M.**, and Shinbrot, T. (2014), On the Origin and Evolution of Electrical Signals During Frictional Stick Slip in Sheared Granular Material, *J. Geophys. Res., 119*, 4253–4268, doi:10.1002/2013JB010793.

83) [1]Carpenter, B.M., Kitajima, H., and **Saffer, D.M.** (2014), Hydraulic and acoustic properties of the active Alpine Fault, New Zealand: Laboratory measurements on DFDP-1 drill core, *Earth Planet. Sci. Lett., 390,* 45-51, doi:10.1016/j.epsl.2013.12.023

82) [2]Ikari, M.J., Marone, C., **Saffer, D.M**., and Kopf, A.J. (2013), Slip Weakening as a mechanism for slow earthquakes, *Nature Geoscience,* doi: 10.1038/NGEO1818.

81) **Saffer, D.M.**, et al. (2013), In situ stress and pore pressure in the Kumano forearc basin, offshore SW Honshu from down-hole measurements during riser drilling, *Geochem., Geophys., Geosyst.,* doi:10.1002/ggge.20051.

80) [1]Sacks, A.F., **Saffer, D.M.**, and Fisher, D.M. (2013), Analysis of Normal Fault Populations in the Kumano Forearc Basin, Nankai Trough, Japan: 2. Principal Axes of Stress and Strain from Inversion of Fault Orientations, *Geochem., Geophys., Geosyst., 14*, doi:10.1002/ggge.20118.

79) [2]M.J. Ikari, A. Niemeijer, C. Spiers, A.J. Kopf, **D.M. Saffer** (2013), Experimental evidence linking slip instability with seafloor lithology and topography at the Costa Rica convergent margin, *Geology,* doi:10.1130/G33956.1.

78) G.F. Moore, B. Boston, A.F. Sacks, **D.M. Saffer** (2013), Analysis of Normal Fault Populations in the Kumano Forearc Basin,Nankai Trough, Japan: 1 Multiple Orientations and Generations ofFaults from 3-D Coherency Mapping, *Geochem., Geophys., Geosyst.,* 14, doi:10.1002/ggge.20119.

77) [1]Song, I., Rathbun, A.P., and **Saffer, D.M**. (2013), Uncertainty analysis for the determination of permeability and specific storage from the pulse- transient technique, *Int. Jour. Rock Mech. Mining Sci., 64*, doi: 10.1016/j.ijrmms.2013.08.032.

76) T. Ito, A. Funato, W. Lin, M-L. Doan, D.F. Boutt, Y. Kano, H. Ito, **D.M. Saffer**, L.C. McNeill, T. Byrne, and K-T. Moe (2013), Determination of stress state in deep subsea formation by combination

of hydraulic fracturing in situ test and core analysis: A case study in the IODP Expedition 319, *J. Geophys. Res.,* doi: 10.1002/jgrb.50086.

75) W-L. Lin, and 37 others (**including Saffer**) (2013), Stress State in the Largest Displacement Area of the 2011 Tohoku-Oki Earthquake, *Science*, 339, doi: 10.1126/science.1229379.

74) [2]Haines, S.H, [*]Kaproth, B., Marone, C., **Saffer, D.M.**, and van der Pluijm, B. (2013), Shear zones in clay-rich fault gouge: A laboratory study of fabric development and evolution, *J. Struct. Geol., 51,* http://dx.doi.org/10.1016/j.jsg.2013.01.002

73) [*]Guo, J., Underwood, M.B., Likos, W., and **Saffer, D.M.** (2013), Apparent overconsolidation of mudstones in the Kumano Basin of southwest Japan: Implications for fluid pressure and fluid flow within a forearc setting, *Geochem., Geophys., Geosyst.,* doi:10.1029/2012GC004204.

72) [1]Kitajima, H., and **Saffer, D.M.** (2012), Elevated pore pressure and anomalously low stress in regions of low frequency earthquakes along the Nankai Trough subduction megathrust, *Geophys. Res. Lett.*, *39*, L23301, doi:10.1029/2012GL053793 (*AGU Research Spotlight in EOS; GRL editor's highlight*).

71) **Saffer, D. M**., D. A. Lockner, and [*]A. McKiernan (2012), Effects of smectite to illite transformation on the frictional strength and sliding stability of intact marine mudstones, *Geophys. Res. Lett.*, *39*, L11304, doi:10.1029/2012GL051761.

70) [1]Lauer, R. M. and **D. M. Saffer** (2012), Fluid budgets of subduction zone forearcs: The contribution of splay faults, *Geophys. Res. Lett.*, *39*, L13604, doi:10.1029/2012GL052182.

69) Boutt, D.F., **Saffer, D.M**., Doan, M-L., Lin, W., Ito, T., Kano, Y., Flemings, P., McNeill, L.C., Byrne, T., Hayman, N.W., and Moe, K-T (2012), Scale dependence of *in-situ* permeability measurements in the Nankai accretionary prism: The role of fractures, *Geophys. Res. Lett.*, *39*, L07302, doi:10.1029/2012GL051216.

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67) [2]Ikari, M.J., [*]Knuth, M., Marone, C., and **Saffer, D.M.** (2012), Data Report: Frictional Healing and Compressibility of Sheared Sediment from Fault Zones, Sites C0004 and C0007, *Proc. IODP,* 314/315/316, Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.219.2012

66) Moe, K.T., Ito, T., Lin, W-L., Doan, M-L, Boutt, D., Kawamura, Y., Khong, C-K., McNeill, L.C., Byrne, T., **Saffer, D**., Araki, E., Eguchi, N., Sawada, I., Flemings, P., Kano, Y., Moore, C., Kinoshita, M., & Tobin, H. (2012), Operational Review of the First Wireline *In Situ* Stress Test in Scientific Ocean Drilling, *Scientific Drilling*, doi: 10.2204/iodp.sd.13.06.2011

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61) [2]Song, I., **Saffer, D.M.,** and Flemings, P.B. (2011), Mechanical characterization of slope sediments: Constraints on in situ stress and pore pressure near the tip of the megasplay fault in the Nankai accretionary complex, *Geochem., Geophys., Geosystems,* Q0AD17, doi:10.1029/2011GC003556.

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59) [2]Carpenter, B.M., Marone, C., and **Saffer, D.M.** (2011), Weakness of the San Andreas Fault revealed by samples from the active fault zone, *Nature Geoscience,* 4, doi:10.1038/NGEO1089

58) [1]Popek, M.A., and **Saffer, D.M.** (2011), Heat advection by groundwater flow through a heterogeneous permeability crust: A potential cause of scatter in surface heat flow near Parkfield, California, *J. Geophys. Res.,* doi:10.1029/2010JB008081.

57) [2]Ikari, M., and **Saffer, D.M.** (2011), Comparison of frictional strength and velocity dependence between fault zones in the Nankai accretionary complex, *Geochem., Geophys., Geosystems*, doi:10.1029/2010GC003442.

56) Moore, G.F., **D. Saffer**, M. Studer, and P. C. Pisani (2011), Structural restoration of thrusts at the toe of the Nankai Trough accretionary prism off Shikoku Island, Japan: Implications for dewatering processes, *Geochem. Geophys. Geosyst.,* doi:10.1029/2010GC003453

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54) [*]Guo, J., Likos, W.J., Underwood, M.B., [*]Skarbek, R.M., [*]Adamson, N., and **Saffer, D**. (2011), Data report: consolidation characteristics of sediments from Sites C0002, C0006, and C0007, IODP Expeditions 315 and 316, NanTroSEIZE Stage 1, *in* Kinoshita, M., Tobin, H., Ashi, J., Kimura, G., Lallemant, S., Screaton, E.J., Curewitz, D., Masago, H., Moe, K.T., and the Expedition 314/315/316 Scientists, *Proc. IODP*, 314/315/316: Washington, DC (Integrated Ocean Drilling Program Management International, Inc.). doi:10.2204/iodp.proc.314315316.213.2011.

53) Doan, M.-L., M. Conin, P. Henry, T. Wiersberg, D. Boutt, D. Buchs, **D. Saffer**, L. C. McNeill, D. Cukur, and W. Lin (2011), Quantification of free gas in the Kumano fore-arc basin detected from borehole physical properties: IODP NanTroSEIZE drilling Site C0009, *Geochemistry, Geophysics, Geosystems*, 12, Q0AD06, doi:10.1029/2010GC003284

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50) McNeill, L., **Saffer, D.M**., Byrne, T.B., Araki, E., et al. (2010), IODP Expedition 319, NanTroSEIZE Stage 2: First IODP Riser Drilling Operations and Observatory Installation Towards Understanding Subduction Zone Seismogenesis, *Scientific Drilling*, doi: 10.2204/iodp.sd.10.01.2010

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24) **Saffer, D**., Kopf, A., Toczko, S., and the Expedition 365 Scientists (2017), *NanTroSEIZE Stage 3: Shallow Megasplay Long-Term Borehole Monitoring System*. Proceedings of the International Ocean Discovery Program, 365: College Station, TX (International Ocean Discovery Program). https://doi.org/ 10.14379/ iodp.proc.365.2017, 99 pp.

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RECENT ABSTRACTS AND PRESENTATIONS: 2016-17 ONLY; SELECTED (>200 in total)

[1] denotes that Saffer was the primary advisor for the work
[2] denotes that Saffer was a co-advisor for the work
[*] denotes student author
Boldface type denotes that Saffer was the presenting author

Saffer, D.M., E. Araki, A.J. Kopf, et al., 2016, Repeating and triggered slow slip events in the near-trench region of the Nankai Trough detected by borehole observatories, AGU Fall Meeting, T11F-01.

Saffer, D.M., et al., 2016 (*invited*), Physical properties and fluids along the Aleutian Megathrust: Insights from the integration of laboratory experiments and regional geophysical surveys, AGU Fall Meeting, T14C-01.

[1]Kinoshita, C., D.M. Saffer, A.J. Kopf, et al., 2016, Changes in physical properties of the Nankai Trough megasplay fault induced by earthquakes, detected by continuous pressure monitoring, AGU Fall Meeting, NH21A-1837.

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[1]Kenigsberg, A., D.M. Saffer, J. Riviere, [*]K. Ryan, C. Marone, 2016, The Relationship between Elastic Properties and Shear Fabric in Clay-Rich Fault Gouge, AGU Fall Meeting, T21D-2841.

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Wallace, L.M., and D.M. Saffer (*invited*), 2016, Characteristics and habitat of deep vs. shallow slow slip events, AGU Fall Meeting, T11F-03.

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FUNDING HISTORY

2017-2019: Penn State OPP/Environmental Health & Safety: Controls on the Transport, Storage, and Fate of PFOA and PFOS at the Penn State Fire Training Site, $110,000, *Lead PI, with K. Freeman, T. Russo, L. Kump.*

2017-2018: National Science Foundation, SBIR: SBIR Phase I: Development and testing of a dry fracture technique to reduce water use and increase life cycle yield in oil and gas extraction, $300,000 ($75,000 Penn State Budget), *co-I with C. Marone, D. Elsworth*.

2016-2020: National Science Foundation, Integrated Earth Systems: Collaborative Research: Controls on along-strike variations in locked and creeping megathrust behavior at the Hikurangi convergent margin, $369,723, *Sole PI at Penn State.*

2016-2019: National Science Foundation, GeoPRISMS: GeoPRISMS Office Support, $1,280,000, *Sole PI*.

2016-2017: US Science Support Program: Analysis of formation pressure data to investigate slow slip events in the Nankai Trough, $15,000, *Sole PI*.

2016-2017: US Science Support Program: Expedition 365 Chief Scientist Support, $145,495, *Sole PI.*

2015-2020: National Science Foundation, OCE-MGG: Collaborative Research: Unlocking the secrets of slow slip by drilling at the northern Hikurangi subduction margin, New Zealand: CORK observatory development and installation, PSU budget $72,168, *Sole PI at Penn State.*

2014-2015: National Science Foundation, GeoPRISMS: Collaborative Research: The Aleutian megathrust from trench to base of the seismogenic zone; integration and synthesis of laboratory, geophysical and geological data, PSU budget $193,388, *Lead PI.*

2014-2015: National Science Foundation, GeoPRISMS: GeoPRISMS Post-Doctoral Fellowship Research: Runaway slip: understanding nucleation of subduction megathrust earthquakes and slow slip precursors, $110,000 *(proposal written by S. den Hartog, advised by Saffer & Marone)*.

2014-2015: Saudi Aramco, Aramco Services Company: Permeability evolution of fluid driven and propped fractures in shale, $94,684, *Co-I with D. Elsworth and C. Marone.*

2014-2015: Consortium for Ocean Leadership: New insights into the mechanical and hydraulic properties of the deep interior of the Nankai accretionary prism, $15,000, *Sole PI.*

2014-2015: Consortium for Ocean Leadership, Triaxial Strength and Deformation Experiments on Core samples from the Inner Wedge, Expedition #348, $15,000, *Sole PI.*

2013-2015: National Science Foundation, International Programs: US-Italy Collaboration: Determination of Boron Isotope Ratios in Subducted Sediments, $30,538, *Co-I with M. Feineman.*

2013-2014: National Science Foundation, OCE-Ocean Drilling: Subseafloor Observatory Science in the Nankai Trough: Analysis of Earthquakes and Hydraulic Transients, and Installation of a Community Borehole Facility, $83,368, *Sole PI*.

2013-2014: Consortium for Ocean Leadership: Expedition 348 Chief Scientist Support, $108,508, *Sole PI.*

2013-2015: Consortium for Ocean Leadership: High stress consolidation, ultrasonic, and permeability measurements: Constraints on physical properties and in situ stress along the Costa Rica Plate Interface, Expedition 344 post-cruise research, $14,500, *Sole PI.*

2013-2015: Consortium for Ocean Leadership: Laboratory measurements of rock mechanical properties on core from Sites C0002 and C0022, Expedition 338 post-cruise research, $15,000, *Sole PI.*

2013-2015: Consortium for Ocean Leadership: Expedition 338 support for Katelyn Olcott, $6,417, *Sole PI.*

2012-2015: National Science Foundation, EAR-Geophysics: Collaborative Research: Physical properties of the Alpine Fault, New Zealand: Mechanical and hydrological processes in the brittle fault core and surrounding damage zone, PSU budget $316,000, *Lead PI at Penn State.*

2011-2012: National Science Foundation, MARGINS: MARGINS Post-Doctoral Fellowship Research: Evolution of Sediment Physical Properties in the Nankai Subduction Zone and Implications for the Updip Limit of Seismogenesis, PSU budget $165,864, *Lead PI (proposal written by H. Kitajima, advised by Saffer & Marone)*.

2011-2014: Consortium for Ocean Leadership: Pore pressure analysis to estimate hydraulic parameters and evaluate the role of aseismic pressure transients in the seismic cycle: IODP Expedition 332, $14,650, *Sole PI*

2011-2014: Consortium for Ocean Leadership: Analysis of Observatory Data from IODP Sites C0010 and C0002: IODP Expedition 332, $15,000, *Sole PI.*

2011-2012: National Science Foundation, Integrated Ocean Drilling Program: Collaborative Research: Development of a long-term hydrologic observatory above the seismogenic zone offshore the Kii peninsula, $47,322 (supplement to existing award), *Lead PI.*

2011-2012: ExxonMobil Upstream Research Company: Controls on Shale Ductility: Application to Tight Gas Shale Development, $54,000 (supplement to existing award), *Lead PI.*

2010-2011: Consortium for Ocean Leadership: Expedition 332 support for Rachel Lauer, $6,834, *Sole PI.*

2010-2011: Consortium for Ocean Leadership: Expedition 332 salary support, $17,994, *Sole PI.*

2010-2012: National Science Foundation, EarthScope: Laboratory Study Of Phase III SAFOD Core: Physical Properties And Mechanical Behavior Of The Active San Andreas Fault Zone, $275,535, *Co-PI with C. Marone.*

2010-2013: ExxonMobil Upstream Research Company: Controls on Shale Ductility: Application to Tight Gas Shale Development, $106,795, *Lead PI.*

2010-2011: Woods Hole Oceanographic Institution (subcontract): Ocean Drilling Renewal Leadership Team, $84,858, *Sole PI.*

2010-2012: GDL Foundation: Effects of Stress States and Cementation on physical properties of mudstones in the Nankai subduction zone: Fellowship support for Hiroko Kitajima, $9000, *Sole PI.*

2009-2012: Consortium for Ocean Leadership: Frictional and permeability measurements on core samples of subduction input material: IODP Expedition 322, $15,000, *Sole PI.*

2009-2012: Consortium for Ocean Leadership: Experimental measurements of permeability and Vp & Vs in Core Samples: IODP Expedition 319, $15,000, *Sole PI.*

2009-2012: Consortium for Ocean Leadership: Expedition 319 Chief Scientist Support, $88,134, *Sole PI.*

2009-2010: Consortium for Ocean Leadership: Expedition 322 support for Matt Ikari, $5,608, *Sole PI.*

2009-2010: National Science Foundation, EAR-IF: Acquisition of a High-Pressure High-Temperature Load and Flow-Through System for Research and Teaching, $207,226, *Co-PI with D. Elsworth (EME Department).*

2009-2010: National Science Foundation, Tectonics: Mechanics and Seismogenic Potential of Low Angle Normal Faults: A Field and Laboratory Investigation, $186,048, *Lead PI.*

2008-2009: National Science Foundation, EarthScope: Collaborative Research: Laboratory Study of the Mechanics and Physical Properties of the active San Andreas Fault zone from Phase III SAFOD cores, $29,087 (supplement to existing award), *Lead PI.*

2008-2009: National Science Foundation, Integrated Ocean Drilling Program (IODP): Collaborative Research: Laboratory Investigations of Fault-Zone Mechanical Behavior and Fluid Overpressure (EOR for IODP NanTroSEIZE Expeditions 314, 315, and 316), $99,080 Penn State Budget, *Lead PI.*

2008-2009: Integrated Ocean Drilling Program Management International (IODP-MI): Specialty Coordinator for IODP NanTroSEIZE Complex Drilling Project, $47,605, *Sole PI.*

2008-2010: National Science Foundation, EarthScope: Collaborative Research: Laboratory Study of the Mechanics and Physical Properties of the active San Andreas Fault zone from Phase III SAFOD cores, $255,183 Penn State Budget, *Lead PI.*

2007-2008: Integrated Ocean Drilling Program, Management International (IODP-MI): Specialty Coordinator for IODP NanTroSEIZE Complex Drilling Project, $35,995, *Sole PI.*

2007-2010: National Science Foundation, Marine Geology & Geophysics (MGG): The Upper Transition From Seismic to Aseismic Faulting on Subduction Megathrusts, $390,000, *Co-PI with C. Marone*.

2007-2009: American Chemical Society (Petroleum Research Fund): Fault zones in mudstone as petroleum seals and fluid conduits: A laboratory study, $90,000, *Lead PI.*

2006-2009: National Science Foundation, Integrated Ocean Drilling Program (IODP): Collaborative Research: Development of a long-term hydrologic observatory above the seismogenic zone offshore the Kii peninsula, $465,136 Penn State Budget, *Lead PI.*

2006-2008: Shell International Exploration and Production Inc.: Prediction of Pressure and Stress in Thrust Belts, $170,000 ($85,000 in year one with $85,000 year two renewal option), *Co-lead PI with Flemings*.

2006-2007: JOI/USSAC: Salary support for participation in Chikyu Shakedown Cruise, $11,895, *Sole PI.*

2006-2007: National Science Foundation, EarthScope: Collaborative Research: Laboratory Study of the Mechanics and Physical Properties of the San Andreas Fault and 3D SAFOD Volume, $219,327, *Co-PI with C. Marone.*

2005-2010: National Science Foundation, IODP: Collaborative Research: A 3-D seismic investigation of the Nankai Trough Plate Boundary System in the Kumano Basin, PSU budget $156,572, *Co-PI; Sole PI at Penn State*.

2005-2007: U.S. Department of Energy: 2004, Produced water and beneficial use in the Powder River Basin,WY, $120,974, *subcontract through Colorado School of Mines, Sole PI.*

2003-2006: National Science Foundation, MARGINS: Collaborative Research: Seismic Velocity, Compaction, and Pore Pressure in Underthrust Sediments, Nankai Subduction Zone, $391,060 ($124,833 to PSU), *Lead PI.*

2003-2004: JOI/USSAC Post Cruise Research Grant: Saffer, D.M., Fluid production from underthrust sediments, Costa Rica, ODP Leg 205: $22,475, *Sole PI.*

2002-2006: National Science Foundation, Tectonics Division: A critical evaluation of hypotheses for fluid overpressure along the San Andreas Fault, California: Implications for the "Stress-heat flow paradox, $109,846, *Lead PI.*

2002-2005: National Science Foundation, Geophysics Division: Frictional constitutive behavior of natural fault gouge materials: Effects of composition, $83,435, *Lead PI.*

2002-2003: USSSP Ocean Drilling Program: Leg 205 Shipboard Scientist Support, $26,563, *Sole PI.*

2002-2004: Western Resources Project: Hydrologic effects of coal-bed methane development on shallow and deep aquifer systems in the Powder River Basin, $68,906, *Sole PI.*

2001-2003: Petroleum Research Fund, Type G grant: In situ pore pressure and consolidation: A critical evaluation of field and laboratory approaches, $25,000, *Sole PI.*

2000-2002: JOI/USSAC Post Cruise Research Grant: Hydrologic and mechanical laboratory tests of samples from the Nankai Trough, ODP Leg 190, $20,998, *Sole PI.*

STUDENTS, POST-DOCTORAL SCHOLARS, & RESEARCH ASSOCIATES SUPERVISED

Current advisees:

Dr. Anais Ferot	Research Associate (*GeoPRISMS Science Coordinator*), 2016-present
Kalle Jahn	PhD student, anticipated 2019
Abby Kenigsberg	PhD candidate, anticipated 2019
Peter Miller	PhD candidate, anticipated 2018
Alex Santos	PhD student, anticipated 2021
Dr. Tian Sun	Postdoctoral Scholar, 2017-present
Robert Valdez	PhD candidate, anticipated 2017

Previous students (11 PhD; 10 MS; 13 Undergraduate) and post-doctoral scholars (5) (listed in reverse chronological order by end date):

John Leeman	PhD conferred, 2017 (co-advised with C. Marone)
Yang Xu	MS conferred, 2017 (co-advised with E. Hajek)
Chihiro Kinoshita	Visiting doctoral advisee, Univ. Kyoto, 2016-17
Jacob Hagedorn	MS conferred, 2016 (co-advised with M. Arthur)
Dr. Sabine den Hartog	Postdoctoral scholar, , 2013-2015 (co-advised with C. Marone)
Peter Miller	MS conferred, 2015 (co-advised with C. Marone)
Katelyn Huffman	PhD conferred, 2015
Amelia Winner	Undergraduate Researcher, 2014-2015
Mat Schon	BS senior thesis student, 2013-2014
Brandi Niles	BS senior thesis student, 2013 (co-advised with M. Arthur)
Yipeng Zhang	PhD student, 2012-2014
Rachel Lauer	PhD conferred, 2013
Dr. Hiroko Kitajima	Post-doctoral scholar, 2010-2012
Hannah Bovenizer	Undergraduate Researcher, 2012 (co-advised with M. Feineman)
Brett Carpenter	PhD conferred, 2012 (co-advised with C. Marone)
Matthew Fry	PhD student, 2011-2012 (co-advised with C. Marone)
Alison Sacks	MS conferred, 2011 (co-advised with D. Fisher)
Dr. Samuel Haines	Post-doctoral scholar, 2008-2010 (co-advised with C. Marone)
Dr. Insun Song	Research Associate / Postdoctoral Scholar, 2006-2010
Dustin Lipik	BS Senior Thesis student, 2011
John Coleman	Undergraduate independent study, 2011 (co-advised with M. Arthur)
Khairul Amri Bukhari	BS Senior Thesis student, 2011-2012
Matthew Ikari	PhD conferred, 2010 (co-advised with C. Marone)
Andrew Rathbun	PhD conferred, 2010 (co-advised with C. Marone)
Enrique Perez	MS conferred, 2010
Teo Korkmaz	Undergraduate research, 2009-2010
Marie Gildow	BS Honors Thesis student, 2009-2010
Margaret Popek	MS conferred, 2009
Nick Adamson	BS Thesis student, 2008-2009
Patrick Fulton	PhD conferred, 2008
Robert Skarbek	MS conferred, 2008
Alexander McKiernan	MS conferred, 2005
Shaun Sagan	BA Independent Study, 2005
Aaron Payne	MS conferred, 2004
Dr. Glenn Spinelli	Post-doctoral scholar, 2003-2004 (co-advised with M. Underwood)
Melanie Williams	BS Independent Study, Univ. of Wyoming, 2003
Joyce Harris	BS Independent Study, Univ. of Wyoming, 2003
Brenda Rencher-Casey	MS candidate at Univ. of Wyoming
Karl G. Taboga	PhD candidate at Univ. of Wyoming

Graduate Thesis committees (not as primary or co-advisor; at Penn State unless otherwise noted):

Srisharan Shreedharan, PhD in progress; Chas Bolton, PhD in progress; Ben Madara, PhD in progress; Kerry Ryan, PhD in progress; Thomas Battenhouse, PhD in progress; Kelvin Nder Abaa (EME dept.), PhD in progress; Baiyuan Gao (Univ. TX), PhD in progress.

Seyi Ajayi, MS conferred 2016; Tramond Baisden, MS conferred 2015; Tom Johnston, MS conferred 2015; Marco Scuderi, PhD conferred 2014; Bryan Kaproth, PhD conferred 2013; Dennis Arun Alexis, PhD conferred 2013 (EME); Sabine den Hartog, PhD conferred 2013 (Univ. Utrecht); Christopher Landry, PhD conferred 2013 (EME); Marianne Conin (CNRS, France), PhD conferred, 2011, Brian LeVay, PhD conferred, 2010; Jon Samuelson, PhD conferred, 2009; Igor Faoro (EME Dept.), PhD conferred, 2009; Joshua Taron (EME Dept.), PhD conferred, 2009; Sultan Al Enezi (EME Dept.), PhD conferred, 2009; Denis Pone (EME), PhD conferred, 2009; Daniel Wheaton, MS conferred, 2009; Basar Busbug (EME Dept.), PhD conferred, 2008; Matthew Reilly, MS conferred, 2008; Tapan Kumar Biswas (EME Dept.), MS conferred, 2008; Geoffrey Moret, PhD conferred, 2007; Hui Long, PhD conferred, 2007; Sean Culkin, MS conferred, 2007; Audrey Hucks, MS conferred, 2007; Julia Schneider, MS conferred, 2007; Garth Llewelyn, MS conferred, 2005; Jon Samuelson, MS conferred, 2005; Jeremy Shaha (Univ. WY), MS conferred, 2004; Matthew Hornbach (Univ. WY), PhD conferred 2004; Paula Cutillo (UC Boulder), PhD conferred, 2003; Brian Zurek (Univ. WY), MS conferred, 2003; Benjamin Pearson (Univ. WY), MS conferred, 2002; Michael Marshall (Univ. WY), MS conferred, 2002.

SIGNIFICANT RECENT RESEARCH ACTIVITIES (SELECTED)

2016	Co-chief Scientist: IODP Expedition 365, *NanTroSEIZE Observatories*
2013	Co-chief Scientist: IODP Expedition 348, *NanTroSEIZE Plate Boundary Deep Riser 3*
2013	Co-Proponent: IODP proposal, *Tracking Tsunamigenic Slips Across and Along the Japan Trench (JTRACK): Investigating a new paradigm in tsunamigenic megathrust slip with very deep water drilling using the D/V Chikyu*.
2013-present	Co-lead Proponent: IODP proposal, Unlocking the secrets of slow slip by drilling at the northern Hikurangi subduction margin, New Zealand: Riser drilling to intersect the plate interface.
2011-present	Lead Proponent: IODP proposal, *Riserless Drilling to unlock the secrets of slow slip;* drilling at the N. Hikurangi subduction margin.
2006-present	Specialty Coordinator, Rock Physical Properties, NanTroSEIZE drilling project.
2006-present	Member, Project Management Team, NanTroSEIZE complex drilling project.
2006-present	Lead observatory scientist, IODP "Kumano Basin Observatory"
2011-2012	Project Management Team: *Japan Trench Fast Earthquake Drilling Project (J-FAST*): IODP proposal for rapid response drilling of March 2011 Tohoku Mw 9 Earthquake.
2011	Proponent, lead writing team: *Japan Trench Fast Earthquake Drilling Project (J-FAST)*: IODP proposal for rapid response drilling of March 2011 Tohoku Mw 9 Earthquake.
2010-2011	Science plan writing committee, Integrated Ocean Drilling Program renewal (*invited*)
2010	Writing committee, MARGINS Successor Program Science Plan
2010	Proponent, IODP CDP umbrella proposal: Drilling at the northern Hikurangi subduction margin, New Zealand: The key to unlock the secrets of slow slip events
2009-2013	Guest editor, Theme issue of *Geochemistry, Geophysics, Geosystems*: "Mechanics, Deformation, and Hydrologic Processes at Subduction Complexes, With Emphasis on the Nankai Trough Seismogenic Zone Experiment (NanTroSEIZE) Drilling Transect"
2008-2011	Co-coordinator, inter-lab calibration of rock mechanics and friction studies for the SAFOD project (with C. Marone and D. Lockner).
2006	12th German-American Frontiers of Science Symposium (*invited*), Potsdam, Germany.
2003	Lead U.S. proponent, IODP proposal 603-B (NanTroSEIZE Phase 2 Drilling: Mega-Splay Faults).
2003	Proponent, IODP NanTroSEIZE proposals 603-CDP (NanTroSEIZE umbrella proposal), 603-A (subduction inputs), 603-C (riser drilling), and 603-D (reference sites monitoring).

MAJOR WORKSHOPS, MEETINGS, AND SESSIONS CONVENED

2017 Co-convener and coordinator (ex officio – as GeoPRISMS Office Chair), GeoPRISMS Rifting Initiation and Evolution Theoretical & Experimental Institute, Albuquerque NM, Feb. 7-10 2017, ~130 attendees.
2015 Co-convener, IODP Expedition 348 post-expedition meeting, Friday Harbor, WA.
2012-2013 Co-convener, NSF GeoPRISMS implementation workshop, New Zealand focus site
2011 Co-convener, NSF GeoPRISMS Subduction Cycles and Dynamics implementation workshop, Austin TX, ~140 attendees.
2011 Co-convener, Consortium for Ocean Leadership workshop "Engaging Early Career Scientists in Future Scientific Ocean Drilling", College Station TX, ~35 attendees.
2010 Co-convener, NSF MARGINS Successor Program planning workshop, San Antonio TX, >200 attendees.
2010 Convener, "New frontiers and discoveries from scientific ocean drilling", Union Session, AGU Fall meeting.
2008 Co-convener, "Fluids at Convergent Margins: Synthesis of Observations, Experiments and Models", Union Session, AGU Fall meeting.
2008 Co-convener, MARGINS Seismogenic Zone Workshop, Portland OR, Sept. 22-26, ~100 participants.
2008 Co-convener (with E. Brodsky, J. Mori, and K-F. Ma), Rapid Response Drilling: Past, Present and Future, Intercontinental Drilling Program/SCEC workshop, Tokyo, Japan, ~75 participants.
2004 Co-Convener (with 4 others), Earthscope workshop on thermal processes.

ADDITIONAL RESEARCH ACTIVITIES & FIELD WORK

Field Work, Research Cruises, and Work Experience (Selected):

2016 IODP Expedition 365: NanTroSEIZE Observatories (Co-chief scientist)
2013 IODP Expedition 348: NanTroSEIZE Plate Boundary Stage 3: Deep Riser (Co-chief scientist)
2010 IODP Expedition 332: NanTroSEIZE Stage 2 Riserless Observatory (Shipboard Scientist; Observatory specialist)
2009 IODP Expedition 319: NanTroSEIZE Stage 2: Riser/Riserless Observatory (Co-chief scientist)
2007 Participant, IODP Expeditions #314-315 (in capacity as Specialty Coordinator), Oct-Nov, 2007
2006 Participant, D/V Chikyu Shimokita Shakedown Drilling Expedition, Oct. 2006
2003 CORK data acquisition and servicing cruise, ODP Sites 1253 and 1255, offshore Costa Rica
2002 ODP Leg 205 (Shipboard Scientist; Hydrogeology Specialist)
2000-2001 Independent Contractor, AOA Geophysics, Inc., Marine Division
2000 ODP Leg 190 (Shipboard Scientist; Physical Properties Specialist)
1999-2000 Staff Geologist, Rogers Johnson & Associates
1997 Heat flow survey and ROV seafloor mapping, Mariana Forearc
1996 ODP Leg 170 (Shore-based Scientist)
1996 R/V Sonne Research Cruise: Bathymetry and ROV seafloor mapping, Aleutian Trench
1998 Summer Intern, EXXON Exploration Company

Meeting Sessions Convened & Workshop Participation (Selected):

2017 Co-convener, "Subduction zone dynamics from regular earthquakes through slow earthquakes to creep", Special Session, JPGU Annual Meeting, Chiba, Japan.
2016 Co-convener, "Frontier studies on subduction zone megathrust earthquakes and tsunamis", Special Session, Joint AGU/JPGU Meeting, Chiba, Japan.
2016 Co-convener, "Models and Experiments that Couple Flow and Deformation in the Shallow Crust", AGU Fall Meeting.
2015 Co-convener, "Frontier studies on subduction zone megathrust earthquakes and tsunamis", Special Session, JPGU Annual Meeting, Chiba, Japan.

2013	Co-convener, "Slip to the Trench in Megathrust Earthquakes", Special Session, JPGU Annual Meeting, Chiba, Japan.
2011	Invited Speaker, Workshop on slow slip, Hikurangi subduction zone, August, 2011, Gisborne NZ
2010	Co-convener, "From subduction inputs to seismogenesis", Special Session, AGU Fall Meeting.
2009	INVEST IODP Planning Workshop & Meeting, Bremen Germany.
2007	Shell Belaire Technology Center Workshop on Soil Mechanics, Houston, TX.
2006	Convener, "Fluids at plate boundaries: Agents of mechanical and chemical processes", Topical Session, Geological Society of America fall meeting.
2005	Chapman conference: Radiated Energy and the Physics of Earthquake Faulting.
2005	Convener, "Hubbert and Rubey in the 21st Century", Special Session, AGU Fall meeting.
2004	Nankai IODP cork workshop, JAMSTEC, Yukuska, Japan.
2003	Co-convener, "At the Seismogenic Front: Dynamic Processes at Convergent Margins", Special Session, AGU Fall meeting.
2003	Earthscope Complimentary Geophysics Workshop, Denver, CO.
2003	Workshop on linkages between the Ocean Observatory Initiative and the IODP.
2002	NanTroSEIZE proposal planning workshop, Boulder, Colorado.
2000	Convener, "*Basin-Scale Hydrodynamic Systems: Stress State, Pore Pressure, Fluid Flow, and Deformation*", AGU Fall meeting.

INVITED PRESENTATIONS (SELECTED)

May, 2017	Joint AGU/Japan Geoscience Union Meeting
Sept, 2016	Subduction Zone Observatories Workshop, Boise, ID (*Keynote*)
Aug, 2016	GNS, New Zealand Colloquium
May, 2016	Joint AGU/Japan Geoscience Union Meeting
May, 2016	Texas A&M Geodynamics Colloquium
March 2, 2016	Hess Pore Pressure & Fracture Gradient Group
March 2, 2016	Hess Structure & Tectonics Group
Feb 23, 2016	Chapman Conference on Slow Earthquakes, Ixtapa, Mexico
Feb 19, 2016	Univ. Texas Institute for Geophysics Seminar
Feb 10, 2016	Earth and Atmospheric Sciences Seminar, Cornell University
Oct 13, 2015	GeoPRISMS Subduction Cycles and Deformation Theoretical & Experimental Institute
April 9, 2015	Woods Hole Oceanographic Institution
March 31, 2015	University of Texas, Dept. of Geological Sciences
March 30, 2015	University of Texas, Institute for Geophysics
Aug 2, 2014	KANAME meeting on Great Subduction Zone Earthquakes, Sapporo Japan
July 31, 2014	AOGS annual meeting, Sapporo Japan
Nov 9, 2012	Weeks Lecture, Univ. Wisconsin Madison
Oct 12, 2012	AIST, Tsukuba, Japan
Aug 17, 2012	AOGS annual meeting, Singapore
May 26, 2012	German Research Center SFB574 on Subduction processes, Kiel, Germany
May 18, 2012	Princeton University
April 27, 2012	Lamont-Doherty Earth Observatory
March 30, 2012	Penrose conference: Fluid Flow, Material Transfer and Deformation in the Forearcs of Convergent Margins (*Keynote*).
Feb 27, 2012	Conference on Great Earthquakes in Subduction Zones, Kochi Japan (*Keynote*)
July 31, 2011	Public Lecture on Subduction Earthquakes, Gisborne, NZ
June 4, 2011	Southwest Oregon Community College, Geology Lecture Series
May 16, 2011	SAFOD Workshop, Earthscope National Meeting, Austin TX
May 2, 2011	University of Marseille, Marseille France
April 28, 2011	New Mexico Inst. of Mining & Technology, Dept. Earth & Environmental Sciences
April 27, 2011	Univ. of Colorado, Boulder, Dept. of Geological Sciences
April 25, 2011	Indiana Univ. Purdue Univ. Indianapolis, Dept. of Earth Science
April 20, 2011	University of Minnesota, Dept. of Geology & Geophysics

Feb 3, 2011	Iowa State University, Dept. of Geological Sciences
Nov 4, 2010	German Research Center SFB574 on Subduction processes, Pucon Chile (*Keynote*)
Oct 14, 2010	European Science Foundtion Workshop on Borehole Monitoring
Mar 24, 2009	DrillNZ, ICDP Alpine Fault Drilling Workshop, Franz Josef Glacier, NZ
Sept 23, 2008	NSF-MARGINS Seismogenic Zone Initiative workshop
Apr, 2008	European Geophysical Union 2008 Meeting, Vienna, Austria
Apr 8, 2008	Williams College, Geology Dept. Colloquium Series
Feb 8, 2008	University of Michigan, Smith Lecture Series
Jul 18, 2007	Shell Bellaire Technology Center, Houston, TX
Jun 18, 2007	Workshop to Integrate Subduction Factory and Seismogenic Zone Studies in Central America, Heredia, Costa Rica (*Keynote*)
Mar 30, 2007	University of Rochester, Dept. Earth & Environmental Sciences
May, 2006	ICDP/IODP Fault Zone Drilling Workshop, Miyazaki, Japan
Sept, 2005	Rice University, Dept. of Earth Science
Mar, 2005	EarthScope National Meeting, Albuquerque, NM
May, 2004	Workshop on Downhole Tools in the IODP, Washington, DC
Apr, 2004	Joint DFG-NSF Conference for outstanding young researchers, Washington, DC
Mar, 2004	The Pennsylvania State University, Dept. of Geosciences
Oct, 2003	University of Missouri, Columbia, Dept. of Geological Sciences
Apr, 2003	The Pennsylvania State University, Dept. of Geosciences
Mar, 2003	NSF-MARGINS Theoretical - Experimental Institute, Snowbird, UT
Mar, 2003	University of Minnesota, Dept. of Geology & Geophysics
Apr, 2002	Woods Hole Oceanographic Institution, Geophysics Seminar Series
Oct, 2001	University of Colorado, Boulder, Dept. of Geological Sciences
Apr, 2001	University of Utah, Dept. Geology & Geophysics
Mar, 2001	New Mexico Inst. of Mining & Technology, Dept. Earth & Environmental Sciences
Dec, 2001	Hubbert Quorum, U.S. Geological Survey, Menlo Park, CA
Nov, 2000	Earthquake Megaproject Group, USGS, Menlo Park, CA
Mar, 2000	Joint ODP-Industry Workshop on overpressure in the Gulf of Mexico, Houston, TX
Nov, 1999	The Pennsylvania State University, Dept. of Geosciences
Dec, 1998	Cascades Volcano Observatory Vancouver, WA

SERVICE

University Committees (at Penn. State unless otherwise noted)

2016-present	Associate Dept. Head for Graduate Programs & Research, Geosciences
2016-present	Executive Committee, Geosciences
2016-present	Graduate Admissions Committee (*ex officio*)
2016-2017	Member, Faculty Search Committee (Eco-hydrology position)
2014-2015	Chair, Faculty Search Committee (Solid Earth Geosciences Position)
2014-2015	Associate Head for Graduate Programs & Research, Geosciences (*Interim*)
2014-2015	Executive Committee, Geosciences
2014-	Pulse of the Earth facility Steering Committee
2012-2014	Water Science Task Force (University-wide ad-hoc committee)
2012-2014	Chair, Faculty Search Committee (Hydrogeology position)
2012-2014	Dept. of Geosciences Tenure and Promotion Committee
2011-present	Graduate program committee, Dept. of Geosciences
2010-present	Steering committee, Marcellus Shale Center
2009-2010	Rover, Candidacy Exams, Dept. of Geosciences
2009-2010	Member, *ad hoc* committee to assess research infrastructure, College of EMS
2009	Member, *ad-hoc* planning committee for Tri-bio building, College of EMS
2008-2009	Chair, Graduate Admissions Committee
2008-2009	Executive Committee, Dept. of Geosciences
2008-2009	Member, Faculty Search Committee (CO_2 sequestration and Sedimentary Geology positions)
2007-present	Faculty co-advisor, Geosciences Departmental Colloquium Series
2007-2008	Dept. of Geosciences Tenure and Promotion Committee
2007-2008	Graduate Admissions committee
2007-2008	Faculty Search Committee, EME Dept.
2007-2008	Faculty Search Committee, Dept. of Geosciences
2005-2009	Graduate Program Committee, Dept. of Geosciences
2002-2003	Graduate Admissions Committee (Geology & Geophysics, Univ. of Wyoming)
2002	Earth systems science center committee (Univ. of Wyoming)
2001-2003	Chair, web-site committee (Geology & Geophysics, Univ. of Wyoming)
2001-2002	Computer committee (Geology & Geophysics, Univ. of Wyoming)
2002	Coordinator for student volunteers: AAPG Rocky Mountain Section Meeting
2001-2002	Faculty Advisor, Geology Club (Geology & Geophysics, Univ. of Wyoming)

Professional Service And Outreach

2016-2019	*GeoPRISMS* Office and Steering Committee Chair
2017-2018	co-Editor, *Oceanography, Special Issue*: "Scientific Ocean Drilling: Looking to the Future"
2016-2017	Associate Editor, *GSA Special Publication* "Geology and Tectonics of Subduction Zones: A Tribute to Dr. Gaku Kimura"
2016	Multiple Interviews for *Smithsonian Magazine* about Slow Earthquakes
2013-2016	Panel Member, NSF GEO-EAR
2014	Interview for *Discovery Magazine* Story on slow earthquakes
2014	Interview for *Seattle Times* story series on subduction earthquakes and monitoring systems
2014	Feature profile in *Chikyu Hakken*, JAMSTEC outreach magazine
2013	NSF Panel Member, OCE-OD
2011-present	San Andreas Fault Observatory at Depth (*SAFOD*) Core and Sample Committee (CoSWoG)
2011-2013	Project Management Team, *Japan Trench Fast Earthquake Drilling Project (J-FAST*): IODP proposal for rapid response drilling of March 2011 Tohoku Mw 9 Earthquake.
2011	NSF public relations/news article and video for "*Science Nation"*: http://www.nsf.gov/news/special_reports/science_nation/earthquakes.jsp
2011	Member, detailed planning group (DPG), rapid response drilling for Tohoku Japan Earthquake
2010-2012	U.S. IODP renewal leadership team (*invited*; one of 4 team members)

2010-2011	Writing committee, Integrated Ocean Drilling Program New Science Plan (*invited;* one of 12 members of international team representing ocean drilling community).
2010-2011	Consortium for Ocean Leadership, Distinguished Lecturer
2010-2011	NSF-MARGINS successor program (GeoPRISMS) Steering Committee
2010	NSF-MARGINS successor science plan writing (MSPW) Committee
2010	Co-convener, NSF MARGINS Successor program planning workshop, San Antonio TX
2009-present	Guest editor, Theme issue of *Geochemistry, Geophysics, Geosystems*: Mechanics, Deformation, and Hydrologic Processes at Subduction Complexes
2009	Interview for Integrated Ocean Drilling Program (IODP) "INVEST" outreach video: http://www.youtube.com/watch?v=P8tH0-q-MT0
2009	Speaker, Press conference on IODP Expedition 319, Tokyo, Japan, Sept. 3
2009	Interviewed for Australian Broadcasting Company production of science program "*Catalyst"*.
2009	NSF Panel Member, OCE-MGG
2008-2009	Steering Committee, Charting the Future Course of Scientific Ocean Drilling Workshop
2008-2009	Selection Panel: Marine Geosciences Leadership Symposium, Consortium for Ocean Leadership
2008-2009	Co-coordinator of inter-lab calibration of rock mechanics and friction studies for the SAFOD project (with C. Marone and D. Lockner).
2008	U.S. Geological Survey External Grants Program, NEHRP Panel member
2008	Co-convener, MARGINS Seismogenic Zone workshop, Portland OR, Sept, 22-26.
2008	Co-convener, Rapid Response Drilling: Past, Present and Future, Intercontinental Drilling Program (ICDP)/SCEC workshop, Tokyo, Japan, Nov. 17-19.
2007-2010	NSF-MARGINS Steering Committee
2007-2008	Geological Society of America, ad-hoc committee on Innovative Science
2007-2008	Interviewed for article on subseafloor observatories for *Civil Engineering* magazine.
2007	Panel member, AGU Press conference on NanTroSEIZE drilling program, Dec. 12.
2006	Interviewed for *Discovery Science New*s article (by L. O'Hanlon).
2006	U.S. Geological Survey External Grants Program, NEHRP Panel member
2003-2006	IODP Science Steering and Evaluation Panel (SSEPs) member
2003-2004	Major contributor, NSF MARGINS SEIZE science plan
2003	Physical properties editor, Post-Cruise Editorial Meeting, ODP Leg 205 Initial Reports.
2000	Physical properties editor, Post-Cruise Editorial Meeting, ODP Leg 190 Initial Reports.

PROFESSIONAL AND INDUSTRIAL ASSOCIATIONS

American Geophysical Union (AGU), Geological Society of America (GSA), American Academy for the Advancement of Science (AAAS), Japan Geoscience Union (JPGU), Asia Oceania Geosciences Society (AOGS), Seismological Society of America (SSA)