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EDUCATION:

1985 B. Sc. (Geophysics) California Institute of Technology, Pasadena, California

1988 M. Sc. (Geophysics) University of South Carolina, Columbia, South Carolina

1991 Ph. D. (Geophysics) University of South Carolina, Columbia, South Carolina

PROFESSIONAL EXPERIENCE:

1985-1986 Graduate Student, University of Hawaii, Honolulu, Hawaii

1986-1991 Member of the Technical Staff, Jet Propulsion Laboratory, Pasadena, California

1987-1991 Graduate Student, University of South Carolina, Columbia, South Carolina

1991-1995 Postdoctoral Research Associate, Stanford University, Stanford, California

1995-1999 Assistant Research Professor of Geophysics, Geophysical Institute

1999-2004 Associate Professor of Geophysics, Geophysical Institute and Department of Geological Sciences, University of Alaska Fairbanks

2004-2018 Professor of Geophysics, Geophysical Institute and Department of Geological Sciences, University of Alaska Fairbanks

2018-present Endowed Chair for Geology of the Solid Earth, Dept. of Earth and Environmental Sciences, Michigan State University

2021-2022 Interim Department Chair, Dept. of Earth and Environmental Sciences, Michigan State University

2022-present Department Chair, Dept. of Earth and Environmental Sciences, Michigan State University

SOCIETIES AND FELLOWSHIPS:

American Geophysical Union, 1986-present

Geological Society of America, 1987-present

Seismological Society of America, 1994-present

American Association for the Advancement of Science, 1995-present

Associate of the International Association of Geodesy (IAG), 1993-present

Fellow of the International Association of Geodesy (IAG), 2011-present

Individual Member, International Association of Geodesy (IAG), 2003-present

Individual Member, International Association of Volcanology and Chemistry of the Earth’s Interior (IAVCEI), 2003-present

Institute of Navigation, 2012-present

AWARDS:

NASA Group Achievement Award, Development of OASIS/GIPSY Global Positioning System Analysis Software, 1992

Terris and Katrina Moore Prize for best research paper or accomplishment, Geophysical Institute, University of Alaska Fairbanks, 2000

College of Natural Sciences and Mathematics Award for Outstanding Graduate Student Mentoring and Advising, 2005

Usibelli Award for Distinguished Research, University of Alaska Fairbanks, 2013

Fellow of the American Geophysical Union, 2014, *for using modern space geodetic techniques to elucidate the tectonics of Alaska and Asia.*

AGU Editor’s Citation for Excellence in Refereeing, 2017

Fellow of the AAAS, 2019, *for outstanding contributions to research, teaching, innovation, service to societies and to the public in geodesy, tectonics, volcanology, glaciology, hydrology and geophysics.*

PROFESSIONAL SERVICE:

Member, Steering Committee, University NAVSTAR Consortium (UNAVCO), 1995-1999

Chairman, UNAVCO Steering Committee, 1998-1999

Member, Southern California Integrated GPS Network (SCIGN) Advisory Council, 1998-present; Chair, 1999-2002

Associate Editor, Journal of Geophysical Research – Solid Earth, 1999-2004

Member, Plate Boundary Observatory Steering Committee, 1999-2002

Member, EarthScope Working Group, 1999-2000

Chair, Second Plate Boundary Observatory Workshop Organizing Committee, 2000

Panelist, National Science Foundation, EAR-Geophysics Program, Fall 1999

President-Elect, Geodesy Section of the AGU, 2004-2006

President, Geodesy Section of the AGU, 2006-2008

Panelist, National Science Foundation, EAR-Geophysics Program, 2003-2006

Member, US National Committee for the IUGG, 2003-2011

US National Correspondent to the International Association of Geodesy, 2004-present

Associate Editor, Journal of Geodesy, 2007-2015

Member, organizing committee for the Workshop for an EarthScope Science Plan, 2009

Co-Editor, revised EarthScope Science Plan, 2010

Member, USGS Scientific Earthquake Studies Advisory Committee, 2010-2014

Member, Southern California Earthquake Center (SCEC) Advisory Council, 2002-2010

Chair, Southern California Earthquake Center (SCEC) Advisory Council, 2010-2013

Chair, US National Committee for the IUGG, 2011-2017

Member, EarthScope Steering Committee, 2012-2014

International Chief Editor, Journal of Geodesy and Geodynamics, 2013-2015

Chair, PBO Working Group (UNAVCO), 2013-2015

Chair, Transportable Array Advisory Committee (IRIS), 2014-2015

Member, GeoPRISMS Steering and Oversight Committee, 2014-2016

Official USA Delegate, International Union of Geodesy and Geophysics General Assembly, 2015

Member, UNAVCO Board of Directors, 2015-2017

Chair, UNAVCO Board of Directors, 2017-2018

Director, EarthScope National Office, 2015-2019

Organizer, *Re-examining our Grand Challenges in Geodesy*, Workshop and report, 2018-2019

Member, External Advisory Committee, Institute of Earth Sciences, Academia Sinica, 2011-present

Editor in Chief, International Association of Geodesy Symposia Series, 2015-present

Member, Committee on Solid Earth Geophysics (National Academies), 2019-present

Member, USGS Earthquake Early Warning External Advisory Committee, 2020-present

BOOKS EDITED:

Co-Editor, *Plate Boundary Zones*, AGU Geodynamics Series, Vol 30, 2002 (with Seth Stein)

Editor, *Active Tectonics and Seismic Potential of Alaska*, AGU Geophysical Monograph 179, Jeffrey T. Freymueller, Peter J. Haeussler, Robert L. Wesson, and Göran Ekstrom, eds, American Geophysical Union, Washington, DC, 431pp, 2008.

Power, J. A., M. L. Coombs, and J. T. Freymueller, eds., *The 2006 Eruption of Augustine Volcano, Alaska*, USGS Prof. Paper 1769, Reston, 667pp., 2010.

PUBLICATIONS:

1987 Kellogg, J. N., B. S. Wedgeworth, and J. Freymueller, Isostatic compensation and conduit structures of Western Pacific seamounts: Results of three-dimensional gravity modeling, in Seamounts, Islands, and Atolls, edited by B. H. Keating, P. Fryer, R. Batiza, and G. W. Boehlert, Am. Geophys. Union, *Geophysical Monograph Series, 43,* 85-96.

 Davidson, J. M., C. L. Thornton, S. A. Stephens. G. Blewitt, S. M. Lichten, O. J. Sovers, P. M. Kroger, L. L. Skrumeda, J. S. Border, R. E. Neilan, C. J. Vegos, B. G. Williams, J. T. Freymueller, T. H. Dixon, W. G. Melbourne, The Spring 1985 High Precision Baseline Test of the JPL GPS-based geodetic system: A final report, Jet Propulsion Laboratory Publication 87-35, 67pp.

1988 Freymueller, J. T., and M. P. Golombek, Geometry and Treatment of Fiducial Networks: Effect on GPS Baseline Precision in South America, *Geophys. Res. Letts.*, *15*, 1467-1469.

 Freymueller, J. T., Estimation of seamount isostatic compensation in the Western Pacific, MS Thesis, University of South Carolina, Columbia, SC.

1990 Freymueller, J. T. and J. N. Kellogg, The extended tracking network and indications of baseline precision and accuracy in the North Andes, CASA UNO Special Issue, *Geophysical Research Letters, 17,* 207-210.

 Kellogg, J. N., J. T. Freymueller, T. H. Dixon, R. E. Neilan, C. Ropaín U., S. Camargo M., B. Fernandez C., J. L. Stowell, A. Salazar, J. Mora. V., L. Espín, V. Perdue, L. Leos, First GPS baseline results from the North Andes, CASA UNO Special Issue, *Geophysical Research Letters, 17,* 211-214.

 Kornreich Wolf, S., T. H. Dixon, and J. T. Freymueller, The effect of tracking network configuration on GPS baseline estimates for the CASA UNO experiment, *Geophysical Research Letters, 17,* 647-650.

 Freymueller, J. T. and J. N. Kellogg, Comparison of TI-4100 and Trimble 4000SST GPS receivers over short and long baselines, Proceedings of the 2nd International Symposium on Precise Positioning with the Global Positioning System, Ottawa Canada, Sep. 3-7, 1990, pp. 477-491.

1991 Freymueller, J. T., CASA – Central and South America GPS Geodesy: Crustal motions determined from 1988 and 1990 epoch measurements in Colombia, Costa Rica and Ecuador, Ph.D. Thesis, University of South Carolina, Columbia, SC.

1992 Freymueller, J. T., and J. N. Kellogg, Isostasy and tectonic origins of Pacific seamounts, in B. Keating and B. Bolton eds., *Geology and Offshore Mineral Resources of the Central Pacific Basin*, Circum-Pacific Council for Energy and Mineral Resources Earth Science Series, *14*, 39-53.

 Freymueller, J. T., Comparison of baseline results for the TI-4100 and Trimble 4000SDT geodetic GPS receivers, *Bulletin Géodésique*, *66*, 272-280, 1992.

1993 Freymueller, J. T. and J.N. Kellogg, Plate motions and active crustal deformation in the North Andean region measured with the Global Positioning System, in W. Torge, A. Gonzalez Fletcher, J. G. Tanner (eds.): *Recent Geodetic and Gravimetric Research in Latin America*, 131-145, Springer-Verlag (Berlin and New York), 1993.

 Freymueller, J. T., J.N. Kellogg, and V. Vega, Plate Motions in the North Andean Region, *J. Geophys. Res.*, *98*, 21,853-21,864.

1994 Freymueller, J. T., N. E. King and P. Segall, The co-seismic slip distribution of the Landers earthquake, *Bull . Seism. Soc. Am.*, *84*, 646-659.

 Hudnut, K. W., Y. Bock, M. Cline, P. Fang, Y. Feng, J. Freymueller, X. Ge, W. K. Gross, D. Jackson, M. Kim, N. E. King, J. Langbein, S. C. Larsen, M. Lisowski, Z-K. Shen, J. Svarc, and J. Zhang, Coseismic displacements of the 1992 Landers earthquake sequence, *Bull . Seism. Soc. Am.*, *84*, 625-645.

1995 Larson, K. M. and J. Freymueller, Relative motions of the Australian, Pacific and Antarctic plates estimated by the Global Positioning System, *Geophys. Res. Lett.*, *22*, 37-40.

 Owen, S., P. Segall, J. Freymueller, A. Miklius, and R. Denlinger, Rapid deformation of the south flank of Kilauea volcano, Hawaii, *Science*, *267*, 1328-1332.

1996 Freymueller, J., R. Bilham, R. Bürgmann, K. M. Larson, J. Paul, S. Jade, and V. Gaur, Global Positioning System measurements of Indian plate motion and convergence across the Lesser Himalaya, *Geophys. Res. Lett.*, *23*, 3107-3110, 1996.

1997 Bilham, R., Larson, K., Freymueller, J., and Project Idylhim members, GPS measurements of present day convergence rates in the Nepal Himalaya, *Nature*, *336*, 61-64, 1997.

 Lu, Z., R. Fatland, M. Wyss, S. Li, J. Eichelberger, K. Dean, and J. Freymueller, Deformation of New Trident Volcano detected by ERS-1 SAR Interferometry, *Geophys. Res. Lett*., *24*, 695-698, 1997.

 Larson, K. M., J. T. Freymueller, and S. Philipsen, Global plate velocities from the Global Positioning System, *J. Geophys. Res.*, *102*, 9961-9982, 1997.

 Cohen, S. C., and J. T. Freymueller, Deformation of the Kenai Peninsula, *J. Geophys. Res.*, *102*, 20,479-20,487, 1997.

1998 Lu, Z., and J. Freymueller, Synthetic aperture radar (SAR) interferometry coherence analysis over Katmai volcano group, Alaska, *J. Geophys. Res.*, *103*, 29,887-29,894, 1998.

1999 Larson, K. M., R. Bürgmann, R. Bilham, and J. Freymueller, Kinematics of the India-Eurasia collision zone from GPS measurements, *J. Geophys. Res.*, *104*, 1077-1093, 1999.

 Freymueller, J. T., M. H. Murray, P. Segall, and D. Castillo, Kinematics of the Pacific–North America plate boundary zone, Northern California, *J. Geophys. Res.*, *104*, 7419-7441, 1999.

 Freymueller, J. T., and J. Beavan, Absence of strain accumulation in the western Shumagin segment of the Alaska subduction zone, *Geophys. Res. Lett.*, *26*, 3233-3236, 1999.

 Fletcher, H., and J. T. Freymueller, New GPS constraints on the motion of the Yakutat block, *Geophys. Res. Lett.*, *26*, 3029-3032, 1999.

2000 Bendick, R., R. Bilham, J. Freymueller, K. Larson, and G. Yin, Geodetic evidence for a low slip rate in the Altyn Tagh fault and constraints on the deformation of Asia, *Nature*, *404*, 69-72, 2000.

 Freymueller, J. T., S. C. Cohen, and H. J. Fletcher, Spatial variations in present-day deformation, Kenai Peninsula, Alaska, and their implications, *J. Geophys. Res.*, *105*, 8079-8101, 2000.

 Lu, Z., D. Mann, J. T. Freymueller, and D. Meyer, Synthetic aperture radar (SAR) interferometry observations of Okmok volcano, Alaska 1. Radar observations, *J. Geophys. Res.*, 105, 10,791-10,806, 2000.

 Lu, Z., C. Wicks, D. Dzurisin, W. Thatcher, J. T. Freymueller, S. R. McNutt and D. Mann, Aseismic inflation of Westdahl volcano, Alaska, revealed by satellite radar interferometry, *Geophys. Res. Lett.*, *27*, 1567-1570, 2000.

2001 Fletcher, H. J., J. Beavan, J. Freymueller, and L. Gilbert, High interseismic coupling of the Alaska subduction zone SW of Kodiak island inferred from GPS data, *Geophys. Res. Lett.*, 28, 443-446, 2001.

 Cohen, S. C., and J. T. Freymueller, Crustal uplift in the southcentral Alaska subduction zone: A new analysis and interpretation of tide gauge observations, *J. Geophys. Res.*, *106*, 11,259-11,270, 2001.

 Wang, Q., P. Zhang , Z. Niu, J. T. Freymueller, X. Lai, Y. Li, W. Zhu, J. Liu, R. Bilham, and K. M. Larson, Present-day Crustal Movement and Tectonic Deformation in Continental China, *Science in China* (Series D), V31 ,No.7, P529-536, 2001.

 Wang, Q., P. Zhang, J. T. Freymueller, R. Bilham, K. M. Larson, X. Lai, X. You, Z. Niu, J. Wu, Y. Li, J. Liu, Z. Yang, and Q. Chen, Present-day crustal deformation in China constrained by Global Positioning System measurements, *Science*, *294*, 574-577, 2001.

2002 Zweck, C., J. T. Freymueller, and S. C. Cohen, Elastic dislocation modeling of the postseismic response to the 1964 Alaska Earthquake, *J. Geophys. Res.*, 2001JB000409, 2002.

 Mann, D., J. T. Freymueller, and Z. Lu, Deformation associated with the 1997 eruption of Okmok volcano, Alaska, *J. Geophys. Res.*, 2001JB000163, 2002.

 Chen, Q., and J. T. Freymueller, Geodetic evidence for a near-fault compliant zone along the San Andreas fault in the San Francisco Bay area, *Bull. Seism. Soc. Am.*, 92, 656-671, 2002.

 Trenkamp, R., J. N. Kellogg, J. T. Freymueller, and H. P. Mora, Wide plate margin deformation, southern Central America and northwestern South America, CASA GPS observations, *J. South American Earth Sci.*, *15*, 157-171, 2002.

 Zweck, C., J. T. Freymueller, and S. C. Cohen, The 1964 Great Alaska Earthquake: Present Day and Cumulative Postseismic Deformation in the Western Kenai Peninsula, *PEPI*, 132, 5-20, 2002.

 Stein, S., and J. T. Freymueller, editors, *Plate Boundary Zones*, AGU Geodynamics Series v. 30, 425pp., Washington, DC, 2002.

2003 Eberhart-Phillips, D., P. J. Haeussler, J. T. Freymueller, A. D. Frankel, C. M. Rubin, P. Craw, N. A. Ratchkovski, G. Anderson, G. A. Carver, A. J. Crone, T. E. Dawson, H. Fletcher, R. Hansen, E. L. Harp, R. A. Harris, D. P. Hill, S. Hreinsdóttir, R. W. Jibson, L. M. Jones, R. Kayen, D. K. Keefer, C. F. Larsen, S. C. Moran, S. F. Personius, G. Plafker, B. Sherrod, K. Sieh, N. Sitar, and W. K. Wallace, The 2002 Denali Fault Earthquake, Alaska: A Large Magnitude, Slip-Partitioned Event, *Science*, 300, 113-119, 2003.

 Fletcher, H. J., and J. T. Freymueller, New constraints on the motion of the Fairweather fault, Alaska, from GPS observations, *Geophys. Res. Lett.*, *30*(3), 1139, doi:10.1029/2002GL016476, 2003.

 Larsen, C. F., R. Motyka, J. Freymueller, and K. Echelmeyer, Tide gauge records of uplift along the northern Pacific-North American plate boundary, 1937 to 2001, *J. Geophys. Res., 108*(B4), doi:10.1029/2001JB001685, 2003.

 Mann, D., and J. Freymueller, Volcanic and tectonic deformation on Unimak Island in the Aleutian Arc, Alaska, *J. Geophys. Res.*, *108*(B2), 2108, doi:10.1029/2002JB001925, 2003.

 Hreinsdóttir, S., J. T. Freymueller, H. J. Fletcher, C. F. Larsen, and R. Bürgmann, Coseismic slip distribution of the 2002 MW 7.9 Denali fault earthquake, Alaska, determined from GPS measurements, Geophys. Res. Lett., 30, 1670, doi: 10.1029/2003GL017447, 2003.

2004 Chen, Q., J. Freymueller, Q. Wang, Z. Yang, C. Xu, and J. Liu, A deforming block model for the present-day tectonics of Tibet, *J. Geophys. Res.,*Vol. 109, No. B1, B01403, doi:10.1029/2002JB002151, 2004.

 Chen, Q., J. T. Freymueller, Z. Yang, C. Xu, W. Jiang, Q. Wang, and J. Liu, Spatially variable extension in southern Tibet based on GPS measurements, *J. Geophys. Res.,*Vol. 109, No. B9, B09401, 10.1029/2002JB002350.

 Cohen, S. C., and J. T. Freymueller, Crustal Deformation in Southcentral Alaska: The 1964 Prince William Sound Earthquake Subduction Zone, *Advances in Geophysics*, 47, 1-63, 2004.

 Miyagi, Y., J. T. Freymueller, F, Kimata, T. Sato, and D. Mann, Surface deformation caused by shallow magmatic activity at Okmok Volcano, Alaska, detected by GPS campaigns 2000-2002, *Earth Planets and Space*, Vol. 56, e29-e32, 2004.

 Larsen, C. F., R. J. Motyka, J. T. Freymueller, K. A. Echelmeyer and E. R. Ivins, Rapid uplift of southern Alaska caused by recent ice loss, *Geophys. J. Intl.*, 158, 1118-1133, 2004.

2005 Larsen, C. F., R. J. Motyka, J. T. Freymueller, K. A. Echelmeyer, and E. R. Ivins, Rapid viscoelastic uplift in southeast Alaska caused by post-Little Ice Age glacial retreat, *Earth Planet. Sci. Lett.*, 237, 548-560, 2005.

2006 Freed, A. M., R. Bürgmann, E. Calais, J. Freymueller, and S. Hreinsdóttir (2006), Implications of Deformation Following the 2002 Denali, Alaska Earthquake for Postseismic Relaxation Processes and Lithospheric Rheology, J. Geophys. Res., doi:10.1029/2005JB003894.

 Williams, T. B., H. M. Kelsey, and J. T. Freymueller, Contemporary GPS-derived strain in northwestern California: termination of the San Andreas fault system and convergence with the Sierra Nevada block contribute to southern Cascadia forearc contraction, *Tectonophysics*, *413*, 171-184, 2006.

 Hreinsdóttir, S., J. T. Freymueller, R. Bürgmann, and J. Mitchell, Coseismic Deformation of the 2002 Denali Fault Earthquake: Insights from GPS measurements, J. Geophys. Res., 111, B03308, doi:10.1029/2005JB003676, 2006.

 Sil, S., and J. T. Freymueller, Well water level changes in Fairbanks, Alaska, due to the great Sumatra-Andaman earthquake, *Earth Planets and Space*, **58**, 181-184, 2006.

 Ohta, Y., J. T. Freymueller, S. Hreinsdóttir, and H. Suito, A Large Slow Slip Event and the depth of the seismogenic zone in the south central Alaska subduction zone, Earth Planet. Sci. Lett., Volume 247, Issues 1-2, 15 July, Pages 108-116, 2006.

 Cervelli, P., T. Fournier, J. T. Freymueller, and J. Power, Ground Deformation Associated with the Precursory Unrest and Early Phases of the January 2006 Eruption of Augustine Volcano, Alaska, *Geophys. Res. Lett.*, *33*, L18304, doi:10.1029/2006GL027219, 2006.

 Freed, A., R. Bürgmann, E. Calais, and J. Freymueller, Stress-dependent power-law flow in the upper mantle following the 2002 Denali, Alaska, earthquake, *EPSL*, **252**, 481-489, 2006.

2007 Rajendran, C.P., K. Rajendran, A. Earnest, R. Anu, T. Machado, and J. Freymueller, The style of crustal deformation and seismic history associated with the 2004 Indian Ocean earthquake: A perspective from the Andaman-Nicobar Islands, Bull. Seism. Soc. Am., **97**, no. 1A, S174-S191, 2007.

 Cross, R., and J. T. Freymueller, Plate Coupling Variation and Block Translation in the Andreanof Segment of the Aleutian Arc Determined by Subduction Zone Modeling Using GPS data, *Geophys. Res. Lett.*, 2006GL029073, 2007.

 Fournier, T. J., and J. T. Freymueller (2007), Transition from locked to creeping subduction in the Shumagin region, Alaska, Geophys. Res. Lett., 34, L06303, doi:10.1029/2006GL029073.

 Elliott, J., J. T. Freymueller, and B. Rabus (2007), Coseismic deformation of the 2002 Denali Fault Earthquake: Contributions from SAR range offsets, *J. Geophys. Res.*, 112, B06421, doi:10.1029/2006JB004428.

 Atwood, D. K., R. M. Guritz, R. R. Muskett, C. S. Lingle, J. M. Sauber, and J. T. Freymueller, DEM control in arctic Alaska with ICESat laser altimetry, *IEEE Trans. On Geoscience and Remote Sensing*, v. 45(11), 3710-3720, 2007.

2008 Cross, R. S., and J. T. Freymueller (2008), Evidence for and implications of a Bering plate based on geodetic measurements from the Aleutians and western Alaska, J. Geophys. Res., 113, B07405, doi:10.1029/2007JB005136.

 T. Sato, S. Miura, Y. Ohta, H. Fujimoto, W. Sun, C.F. Larsen, M. Heavner, A.M. Kaufman, J.T. Freymueller (2008), Earth tides observed by gravity and GPS in southeastern Alaska, *Journal of Geodynamics*, Volume 46, Issues 3-5, 78-89.

 Fournier, T., and J. Freymueller (2008), Inflation detected at Mount Veniaminof, Alaska, with campaign GPS, *Geophys. Res. Lett.*, 35, L20306, doi:10.1029/2008GL035503.

 Freymueller, J.T., H. Woodard, S. Cohen, R. Cross, J. Elliott, C. Larsen, S. Hreinsdottir, C. Zweck (2008), Active deformation processes in Alaska, based on 15 years of GPS measurements, in *Active Tectonics and Seismic Potential of Alaska,* AGU Geophysical Monograph, 179, J.T. Freymueller, P.J. Haeussler, R. Wesson, and G. Ekstrom, eds., pp. 1-42, AGU, Washington, D.C.

 Ruppert, N. A., K. D. Ridgway, J. T. Freymueller, R. S. Cross, and R. A. Hansen (2008), Active Tectonics of Interior Alaska: A Synthesis of Seismic, GPS and Geomorphic Studies, in *Active Tectonics and Seismic Potential of Alaska,* AGU Geophysical Monograph, 179, J.T. Freymueller, P.J. Haeussler, R. Wesson, and G. Ekstrom, eds., pp. 109-133, AGU, Washington, D.C.

 Heinkelmann, R., J. Freymueller, and H. Schuh (2008), A postseismic relaxation model for the 2002 Denali earthquake from GPS deformation analysis applied to VLBI data, Proceedings of the 5th IVS General Meeting, 335-340.

2009 Biggs, J., R. Bürgmann, J. Freymueller, Z. Lu, B. Parsons, I. Ryder, G. Schmalzle, and T. Wright (2008), The postseismic response to the 2002 M7.9 Denali Fault Earthquake: Constraints from InSAR 2003-2005, *Geophys. J. Int.*, **176**, 353–367 doi: 10.1111/j.1365-246X.2008.03932.x.

 Fournier, T., J. T. Freymueller, and P. Cervelli, Tracking magma volume recovery at Okmok Volcano using GPS and an Unscented Kalman Filter, J. Geophys. Res., vol. 114, B02405, doi:10.1029/2008JB005837, 2009.

 Johnson, K., R. Bürgmann, and J. T. Freymueller, Coupled afterslip and viscoelastic flow following the 2002 Denali Fault, Alaska earthquake, *Geophysical Journal International*, **176**, 670-682, doi:10.1111/j.1365-246X.2008.04029.x, 2009.

 Suito, H., and J. T. Freymueller, A viscoelastic and afterslip postseismic deformation model for the 1964 Alaska earthquake, *J. Geophys. Res.*, doi:10.1029/ 2008JB005954, 2009.

 Freymueller, J., Seasonal position variations and regional reference frame realization, in H. Drewes (ed.), *Geodetic Reference Frames*, International Association of Geodesy Symposia 134, pp. 191-196, Springer Verlag, doi:10.1007/978-3-642-00860-3\_30, 2009.

2010 Williams, M.L., K.M. Fischer, J.T. Freymueller, B. Tikoff, A.M. Tréhu, and others, Unlocking the Secrets of the North American Continent: An EarthScope Science Plan for 2010-2020, February, 2010, 78 pp.

 Elliott, J. L., C. F. Larsen, J. T. Freymueller, and R. J. Motyka (2010), Tectonic block motion and glacial isostatic adjustment in southeast Alaska and adjacent Canada constrained by GPS measurements, *J. Geophys. Res.*, 115, B09407, doi:10.1029/2009JB007139.

 Biggs, J., Z. Lu, T. Fournier, and J. T. Freymueller (2010), Magma flux at Okmok Volcano, Alaska from a joint inversion of continuous GPS, campaign GPS and InSAR, *J. Geophys. Res.*, 115, B12401, doi:10.1029/2010JB007577.

 Sun, W., S. Miura, T. Sato, T. Sugano, J. T. Freymueller, M. Kaufman, C. Larsen, R. Cross, and D. Inazu, Gravity measurements in southeastern Alaska reveal negative gravity rate of change caused by Glacial Isostatic Adjustment, *J. Geophys. Res.*, 115, B12406, doi:10.1029/2009JB007194, 2010.

 Cervelli, P., T. J. Fournier, J. T. Freymueller, J. A. Power, M. Lisowski, and B. A. Pauk, Geodetic Constraints on Magma Movement and Withdrawal During the 2006 Eruption of Augustine Volcano, *in* *The 2006 Eruption of Augustine Volcano, Alaska*, Power, J.A., Coombs, M.L., and Freymueller, J.T., editors, U.S. Geological Survey Professional Paper 1769, 2010.

 Freymueller, J. T., and A. M. Kaufman, Changes in the Magma System During the 2008 Eruption of Okmok Volcano, Alaska, Based on GPS Measurements, *J. Geophys. Res.*, 115, B12415, doi:10.129/2010JB007716, 2010.

 Freymueller, J. T., Active Tectonics of Plate Boundary Zones, and the Continuity of Plate Boundary Deformation from Asia to North America, *Current Science*, 99, 1719-1732, 2010.

2011 Freymueller, J. T., A new mechanical model for Tibet, *Nature*, 472, 48-49, 2011. (News and Views piece).

 Kogan, M. G., N. F. Vasilenko, D. I. Frolov, J. T. Freymueller, G. M. Steblov, B. W. Levin, and A. S. Prytkov (2011), The mechanism of postseismic deformation triggered by the 2006–2007 great Kuril earthquakes, *Geophys. Res. Lett.*, 38, L06304, doi:10.1029/2011GL046855.

 Wang, Q., X. Qiao Xuejun, Q. Lan, J. T. Freymueller, S. Yang, C. Xu, Y. Yang, X. You, K. Tan, and G. Chen, The 2008 Wenchuan earthquake: Rupture of deep faults in the 2008 Wenquan earthquake and uplift of the Longmen Shan, *Nature Geoscience*, doi: 10.1038/ngeo1210, 2011.

 Freymueller, J. T., GPS – Tectonic Geodesy, in Encyclopedia of Solid Earth Geophysics, H. Gupta, ed., Springer-Verlag, 2011.

 Grapenthin, R., and J. T. Freymueller (2011), The dynamics of a seismic wave field: Animation and analysis of kinematic GPS data recorded during the 2011 Tohoku-oki earthquake, Japan, *Geophys. Res. Lett.*, 38, L18308, doi:10.1029/2011GL048405.

 Sato, T., C. F. Larsen, S. Miura, Y. Ohta, H. Fujimoto, W. Sun, R. J. Motyka, J. T. Freymueller (2011), Reevaluation of the viscosity of upper mantle beneath Southeast Alaska, Tectonophysics, 511, 79-88, [doi:10.1016/j.tecto.2010.05.009](http://dx.doi.org/10.1016/j.tecto.2010.05.009).

2012 Sato, T., S. Miura, W. Sun, T. Sugano, J. T. Freymueller, C. F. Larsen, Y. Ohta, H. Fujimoto, D. Inazu, and R. J. Motyka (2012), Gravity and uplift rates observed in southeast Alaska and their comparison with GIA model predictions, J. Geophys. Res., 117, B01401, doi:10.1029/2011JB008485.

 Fu, Y., and J. T. Freymueller (2012), Seasonal and Long-term Vertical Deformation in the Nepal Himalaya Constrained by GPS and GRACE Measurements, *J. Geophys. Res*., 117, B03407, doi:10.1029/2011JB008925.

 Fu, Y., J. T. Freymueller, and T. van Dam, The effect of using inconsistent ocean tidal loading models on GPS coordinate solutions, *J. Geod.*, 86(6), 409-421, doi:10.1007/s00190-011-0528-1.

 Fu, Y., J. T. Freymueller, and T. Jensen (2012), Seasonal hydrological loading in southern Alaska observed by GPS and GRACE, *Geophys. Res. Lett.*, 39, L15310, doi:10.1029/2012GL052453.

 Grapenthin, R., J. T. Freymueller, and A. M. Kaufman (2013), Geodetic Observations during the 2009 eruption of Redoubt Volcano, Alaska, *Journal of Volcanology and Geothermal Research*, 259, 115-132, electronic access at <http://dx.doi.org/10.1016/j.jvolgeores.2012.04.021>.

 Protti, M., V. Gonzalez, J. Freymueller, and S. Doelger (2012), Isla del Coco, on Cocos Plate, converges with Isla San Andrés, on the Caribbean plate, at 78 mm/yr, Rev. Biol. Trop. (Int. J. Trop. Biol. ISSN-0034-7744) Vol. 60 (Suppl. 3): 33-41.

2013 Kogan, M. G., N. F. Vasilenko, D. I. Frolov, J. T. Freymueller, G. M. Steblov, A. S. Prytkov, and G. Ekström (2013), Rapid postseismic relaxation after the great 2006–2007 Kuril earthquakes from GPS observations in 2007–2011, J. Geophys. Res. Solid Earth, 118, doi:10.1002/jgrb.50245.

 Grapenthin, R., J. T. Freymueller, and S. S. Serovetnikov (2013), Surface Deformation of Bezymianny Volcano, Kamchatka, Recorded by GPS: The Eruptions from 2005-2010 and Long-term, Long-wavelength Subsidence, *Journal of Volcanology and Geothermal Research*, 263, 58-74, <http://dx.doi.org/10.1016/j.jvolgeores.2012.11.012>.

 Snay, R. A., J. T. Freymueller, and C. A. Pearson (2013), Crustal Motion Models Developed for Version 3.2 of the Horizontal Time-Dependent Positioning Utility, J. Appl. Geodesy, Vol. 7 (2013), pp. 173–190, doi: 10.1515/jag-2013-0005.

 Larson, K.M., R. Ray, F. Nievinski, and J. Freymueller, The Accidental Tide Gauge: A Case Study of GPS Reflections from Kachemak Bay, Alaska, IEEE GRSL, Vol 10(5), 1200-1205, doi:10.1109/LGRS.2012.2236075, 2013.

 Fu, Y., and J. T. Freymueller (2013), Repeated Large Slow Slip Events at the Southcentral Alaska Subduction Zone, *Earth and Planetary Science Letters*, 375, 303-311, <http://dx.doi.org/10.1016/j.epsl.2013.05.049>.

 Elliott, J., J. T. Freymueller, and C. F. Larsen (2013), Active tectonics of the St. Elias orogen, Alaska, observed with GPS measurements, *J. Geophys. Res. Solid Earth*, 118, 5625–5642, doi:[10.1002/jgrb.50341](http://dx.doi.org/10.1002/jgrb.50341).

 Yue, H., T. Lay, J. T. Freymueller, K. Ding, L. Rivera, N. A. Ruppert, and K. D. Koper (2013), Supershear rupture of the 5 January 2013 Craig, Alaska (Mw 7.5) earthquake, *J. Geophys. Res. Solid Earth*, 118, doi:[10.1002/2013JB010594](http://dx.doi.org/10.1002/2013JB010594).

 Fu, Y., D. F. Argus, J. T. Freymueller, and M. B. Heflin (2013), Horizontal motion in elastic response to seasonal loading of rain water in the Amazon Basin and monsoon water in Southeast Asia observed by GPS and inferred from GRACE, *Geophys. Res. Lett.*, 40, 6048–6053, doi:[10.1002/2013GL058093](http://dx.doi.org/10.1002/2013GL058093).

2014 Zou, R., J. T. Freymueller, K. Ding, S. Yang, and Q. Wang (2014), Evaluating seasonal loading models and their impact on global and regional reference frame alignment, *J. Geophys. Res. Solid Earth*, 119, doi:[10.1002/2013JB010186](http://dx.doi.org/10.1002/2013JB010186).

 Fu, G., S. Gao, J. T. Freymueller, G. Zhang, Y. Zhu, and G. Yang (2014), Bouguer gravity anomaly and isostasy at western Sichuan Basin revealed by new gravity surveys, *J. Geophys. Res. Solid Earth*, 119, 3925–3938, doi:[10.1002/2014JB011033](http://dx.doi.org/10.1002/2014JB011033)

 Wang, J., C. Xu, J. T. Freymueller, Z. Li, and W. Shen (2014), Sensitivity of Coulomb stress change to the parameters of the Coulomb failure model: A case study using the 2008 MW 7.9 Wenchuan earthquake, *J. Geophys. Res. Solid Earth*, 119, 3371–3392, doi:10.1002/2012JB009860.

 Steblov, G. M., G. Ekström, M. G. Kogan, J. T. Freymueller, N. N. Titkov, N. F. Vasilenko, M. Nettles, Y. V. Gabsatarov, A. S. Prytkov, D. I. Frolov, and M. N. Kondratyev (2014), First geodetic observations of a deep earthquake: The 2013 Sea of Okhotsk Mw 8.3, 611 km-deep, event, Geophys. Res. Lett., 41, 3826–3832, doi:[10.1002/2014GL060003](http://dx.doi.org/10.1002/2014GL060003).

 Hu, Y., R. Bürgmann, J. T. Freymueller, P. Banerjee, and K. Wang  (2014), Contributions of poroelastic rebound and a weak volcanic arc to the postseismic deformation of the 2011 Tohoku earthquake, Earth, Planets and Space, 66:106, <http://www.earth-planets-space.com/content/66/1/106>.

2015 Freymueller, J. T., J. B. Murray, H. Rymer, and C. A. Locke, [Chapter 64 - Ground Deformation, Gravity, and Magnetics](http://www.sciencedirect.com/science/article/pii/B978012385938900064X), in The Encyclopedia of Volcanoes, in The Encyclopedia of Volcanoes (Second Edition), H. Sigurdsson, B. Houghton, S. McNutt, H. Rymer and J. Stix, eds, pages 1101-1123, ISBN: 978-0-12-385938-9.

 Tanaka, Y., T. Sato, Y. Ohta, S. Miura, J. T. Freymueller, and V. Klemann (2015), The effects of compressibility on the GIA in southeast Alaska, Journal of Geodynamics, Available online 14 October 2014, ISSN 0264-3707, <http://dx.doi.org/10.1016/j.jog.2014.10.001>.

 Gong, W., Meyer, F. J., Lee, C.-W., Lu, Z. and Freymueller, J. (2015), Measurement and interpretation of subtle deformation signals at Unimak Island from 2003 to 2010 using weather model-assisted time series InSAR. *J. Geophys. Res. Solid Earth*, 120: 1175–1194. doi: [10.1002/2014JB011384](http://dx.doi.org/10.1002/2014JB011384).

 Ding, K., J. T. Freymueller, Q. Wang, and R. Zou (2015), Coseismic and early postseismic deformation of the 5 January 2013 Craig Mw 7.5 earthquake from static and kinematic GPS solutions, *Bulletin of the Seismological Society of America*, v. 105 no 2B, 1153-1164, doi: 10.1785/012014017.

 Marechal, A., S. Mazzotti, J. L. Elliott, J. T. Freymueller, and M. Schmidt (2015), Indentor-corner tectonics in the Yakutat-St. Elias collision constrained by GPS, J. Geophys. Res. Solid Earth, 120, doi:10.1002/2014JB011842.

 Bennington, N. L., M. Haney, S. De Angelis, C. H. Thurber, and J. Freymueller (2015), Monitoring changes in seismic velocity related to an ongoing rapid inflation event at Okmok volcano, Alaska, J. Geophys. Res. Solid Earth, 120, doi:10.1002/2015JB011939.

 Qu, F.; Lu, Z.; Poland, M.; Freymueller, J.; Zhang, Q.; Jung, H.-S. Post-Eruptive Inflation of Okmok Volcano, Alaska, from InSAR, 2008–2014. *Remote Sens.* **2015**, *7*, 16778-16794.

 Tsang, L. L. H., A. J. Meltzner, B. Philibosian, E. M. Hill, J. T. Freymueller, and K. Sieh (2015), A 15 year slow-slip event on the Sunda megathrust offshore Sumatra, *Geophys.*  *Res. Lett.*, *42*, 6630–6638, doi:10.1002/2015GL064928.

 Tsang, L. L. H., A. J. Meltzner, E. M. Hill, J. T. Freymueller, and K. Sieh (2015), A paleogeodetic record of variable interseismic rates and megathrust coupling at Simeulue Island, Sumatra, Geophys. Res. Lett., 42, 10,585–10,594, doi:[10.1002/2015GL066366](http://dx.doi.org/10.1002/2015GL066366).

 Fu, Y., Z. Liu, and J. T. Freymueller (2015), Spatiotemporal variations of the slow slip event between 2008 and 2013 in the southcentral Alaska subduction zone, Geochem. Geophys. Geosyst., 16, doi:10.1002/ 2015GC005904.

 Zou, R.; Wang, Q.; Freymueller, J.T.; Poutanen, M.; Cao, X.; Zhang, C.; Yang, S.; He, P. Seasonal Hydrological Loading in Southern Tibet Detected by Joint Analysis of GPS and GRACE. *Sensors,* **2015**, *15*, 30525-30538.

 Guo, A., Ni, S., Chen, W., Freymueller, J. T., Shen, Z. C., (2015), Rapid earthquake focal mechanism inversion using high-rate GPS velometers in sparse network, Sci. China Earth Sci. (2015) 58: 1970. doi:10.1007/s11430-015-5174-7

2016 Hu, Y., R. Bürgmann, N. Uchida, P. Banerjee, and J. T. Freymueller (2016), Stress-driven relaxation of heterogeneous upper mantle and time-dependent afterslip following the 2011 Tohoku earthquake, J. Geophys. Res. Solid Earth, 121, doi:10.1002/ 2015JB012508.

 Li, S., J. Freymueller, and R. McCaffrey (2016), Slow slip events and time-dependent variations in locking beneath Lower Cook Inlet of the Alaska-Aleutian subduction zone, *J. Geophys. Res. Solid Earth*, 121, doi:10.1002/2015JB012491.

 Snay, R. A., J. T. Freymueller, M. R. Craymer, C. F. Pearson, and J. Saleh (2016), Modeling 3-D crustal velocities in the United States and Canada, *J. Geophys. Res. Solid Earth*, 121, doi:10.1002/2016JB012884.

 Ye, L., T. Lay, H. Kanamori, J. Freymueller, and L. Rivera (2016), Joint inversion of high-rate GPS and teleseismic observations for rupture process of the 23 June 2014 (Mw 7.9) Rat Islands archipelago, Alaska, intermediate-depth earthquake, Natural Hazards and Plate Boundaries, in *Plate Boundaries and Natural Hazards, AGU Geophysical Monograph 219,* João C. Duarte and Wouter P. Schellart , editors, 149-166.

 Hao, M., J. T. Freymueller, Q. Wang, D. Cui, S. Qin (2016), Vertical crustal movement around the southeastern Tibetan Plateau constrained by GPS and GRACE data, *Earth Planet. Sci. Letters*, 437, 1-8, doi: j.epsl.2015.12.038.

 Yi, S., J. T. Freymueller, and W. Sun (2016), How fast is the middle-lower crust ﬂowing in eastern Tibet? A constraint from geodetic observations, *J. Geophys. Res.* *Solid Earth*, 121, doi:10.1002/2016JB013151.

 Nicolsky, D. J., J. T. Freymueller, R. C. Witter, E. N. Suleimani, and R. D. Koehler (2016), Evidence for shallow megathrust slip across the Unalaska seismic gap during the great 1957 Andreanof Islands earthquake, eastern Aleutian Islands, Alaska, *Geophys. Res. Lett.*, 43, 10,328–10,337, doi:[10.1002/2016GL070704](http://dx.doi.org/10.1002/2016GL070704).

2017 Kogan, M. G., D. I. Frolov, N. F. Vasilenko, J. T. Freymueller, G. M. Steblov, G. Ekström, N. N. Titkov, and A. S. Prytkov (2017), Plate coupling and strain in the far western Aleutian arc modeled from GPS data, *Geophys. Res. Lett.*, 44, 3176–3183, doi:[10.1002/2017GL072735](http://dx.doi.org/10.1002/2017GL072735).

 Freymueller, J. T. (2017), Geodynamics (Chapter 37), in *GNSS Handbook*, O. Montenbruck and P. Teunissen, editors, Springer International, 1063-1106, ISBN: 978-3-319-42926-7.

 Wang, J., C. Xu, J. T. Freymueller, and Z. Li (2017), Probing Coulomb stress triggering effects for a Mw > 6.0 earthquake sequence from 1997 to 2014 on the periphery of the Bayan Har block on the Tibetan Plateau, *Tectonophysics*, 694, 249-267.

 Grapenthin, R., M. West, and J. T. Freymueller (2017), The Utility of GNSS for Earthquake Early Warning in Regions with Sparse Seismic Networks, *Bull. Seism. Soc. Am.*, 107, 10.1785/0120160317.

 Wang, T., K. Degrandpre, Z. Lu, J. T. Freymueller (2017), Complex surface deformation of Akutan volcano, Alaska revealed from InSAR time series, *Int. J. Appl. Earth Obs. Geoinformation*, 64, 171-180.

 Lay, T., Ye, L., Bai, Y., Cheung, K. F., Kanamori, H., Freymueller, J., Steblov, G. M., and Kogan, M. G. (2017). Rupture along 400 km of the Bering fracture zone in the Komandorsky Islands earthquake (MW 7.8) of 17 July 2017. *Geophysical Research Letters*, 44. https://doi.org/ 10.1002/2017GL076148.

 Degrandpre, K., T. Wang, Z. Lu, and J. T. Freymueller (2017), Episodic inflation and complex surface deformation of Akutan volcano, Alaska revealed from GPS time-series, *Journal of Volcanology and Geothermal Research*, 347, 337-359, <https://doi.org/10.1016/j.jvolgeores.2017.10.003>.

2018 Damman, D. O., J. Eicken, A. R. Mahoney, F. J. Meyer, J. T. Freymueller, and A. M. Kaufman (2018), Evaluating landfast sea ice stress and fracture in support of operations on sea ice using SAR interferometry, Cold Regions Science and Technology 149, 51-64, doi: <https://doi.org/10.1016/j.coldregions.2018.02.001>.

 Li, S., and Freymueller, J. T. (2018). Spatial variation of slip behavior beneath the Alaska Peninsula along Alaska-Aleutian subduction zone. *Geophysical Research Letters*, *45*. https://doi.org/10.1002/ 2017GL076761.

 Zimmerman, M., G. T. Ruggerone, J. T. Freymueller, and N. Kinsman (2018), Volcanic ash deposition, eelgrass beds, and inshore habitat loss from the 1920s to the 1990s at Chignik, Alaska, [*Estuarine, Coastal and Shelf Science*](https://www.sciencedirect.com/science/article/pii/S0272771417306716?via%3Dihub), 202, 69-86; doi:10.1016/j.ecss.2017.12.001.

 He, X., Ni, S., Zhang, P., & Freymueller, J. (2018). The 1 May 2017 British Columbia-Alaska earthquake doublet and implication for complexity near the southern end of Denali fault system. *Geophysical Research Letters*, 45, 5937–5947. <https://doi.org/10.1029/2018GL078014>.

 Ruppert, N. A., Rollins, C., Zhang, A.,

Meng, L., Holtkamp, S. G., West, M. E., &

Freymueller, J. T. (2018). Complex

faulting and triggered rupture during

the 2018 M

W

7.9 offshore Kodiak, Alaska,

earthquake. Geophysical Research

Letters, 45. https://doi.org/10.1029/

2018GL078931

Ruppert, N. A., Rollins, C., Zhang, A.,

Meng, L., Holtkamp, S. G., West, M. E., &

Freymueller, J. T. (2018). Complex

faulting and triggered rupture during

the 2018 M

W

7.9 offshore Kodiak, Alaska,

earthquake. Geophysical Research

Letters, 45. https://doi.org/10.1029/

2018GL078931

Ruppert, N. A., Rollins, C., Zhang, A.,

Meng, L., Holtkamp, S. G., West, M. E., &

Freymueller, J. T. (2018). Complex

faulting and triggered rupture during

the 2018 M

W

7.9 offshore Kodiak, Alaska,

earthquake. Geophysical Research

Letters, 45. https://doi.org/10.1029/

2018GL078931

Ruppert, N. A., Rollins, C., Zhang, A.,

Meng, L., Holtkamp, S. G., West, M. E., &

Freymueller, J. T. (2018). Complex

faulting and triggered rupture during

the 2018 M

W

7.9 offshore Kodiak, Alaska,

earthquake. Geophysical Research

Letters, 45. https://doi.org/10.1029/

2018GL078931

 Ruppert, N. A., Rollins, C., Zhang, A., Meng, L., Holtkamp, S. G., West, M. E., & Freymueller, J. T. (2018). Complex faulting and triggered rupture during the 2018 MW7.9 offshore Kodiak, Alaska, earthquake. *Geophysical Research Letters*, 45. <https://doi.org/10.1029/2018GL078931>.

 Coombs, M. L., A. G. Wech, A. G., M. M. Haney, J. J. Lyons, D. J. Schneider, H. F. Schwaiger, K. L. Wallace, D. Fee, J. T. Freymueller, J. R. Schaefer, and G. Tepp (2018), Short-Term Forecasting and Detection of Explosions During the 2016–2017 Eruption of Bogoslof Volcano, Alaska, *Frontiers in Earth Science*, 6, article 122, URL: <https://www.frontiersin.org/article/10.3389/feart.2018.00122>, doi: 10.3389/feart.2018.00122.

 Boggs, K. J. E., R. C. Aster, P. Audet, G. Brunet, R. M Clowes, C. D. de Groot-Hedlin, E. Donovan, D. W. Eaton, J. Elliott, J. T. Freymueller, M. A. H. Hedlin, R. D Hyndman, T. S James, P. J Kushner, K. D. Morell, C. D. Rowe, D. L. Schutt, M. G. Sideris, M. Ulmi, F. L. Vernon, N. West (2018), EON-ROSE and the Canadian Cordillera Array–Building Bridges to Span Earth System Science in Canada, *Geoscience Canada*, 45(2), 97-109, https://doi.org/10.12789/geocanj.2018.45.136.

2019 Mora-Paez, H., J. N. Kellogg, J. T. Freymueller, D. Mencin, R. M. S. Fernandes, H. Diederix, P. LaFemina, L. Cardona-Piedrahita, S. Lizarazo, J.-R. Peleaez-Gaviria, F. Díaz-Mila, O. Bohórquez-Orozco, L. Giraldo-Londoño, Y. Corchuelo-Cuervoa (2019), Crustal deformation in the northern Andes – A new GPS velocity field, J. South American Earth Sci., 89, 76-91, doi: <https://doi.org/10.1016/j.jsames.2018.11.002/>.

 Ding, K., Freymueller, J. T., He, P., Wang, Q., & Xu, C. (2019). Glacial isostatic adjustment, intraplate strain, and relative sea level changes in the eastern United States. Journal of Geophysical Research: Solid Earth, 124, 6056–6071. https://doi.org/10.1029/ 2018JB017060.

 DeGrandpre, K. G., & Freymueller, J. T. (2019). Vertical velocities, glacial isostatic adjustment, and Earth structure of Northern and Western Alaska based on repeat GPS measurements. *Journal of Geophysical Research: Solid Earth*, 124. <https://doi.org/10.1029/2018JB017163>.

 Albright, J. A., Gregg, P. M., Lu, Z., & Freymueller, J. T. (2019). Hindcasting magma reservoir stability preceding the 2008 eruption of Okmok, Alaska. Geophysical Research Letters, 46. <https://doi.org/10.1029/2019GL083395>.

 Huang, Y., Qiao, X., Freymueller, J. T., Wang, Q., Yang, S., Tan, K., & Zhao, B. (2019). Fault geometry and slip distribution of the 2013 Mw 6.6 Lushan earthquake in China constrained by GPS, InSAR, leveling, and strong motion data. Journal of Geophysical Research: Solid Earth, 124, 7341–7353. <https://doi.org/10.1029/2019JB017451>.

 Hu, Y., and J. T. Freymueller (2019), Geodetic Observations of Time-Variable Glacial Isostatic Adjustment in Southeast Alaska and its Implications for Earth Rheology. *Journal of Geophysical Research Solid Earth*, <https://doi.org/10.1029/2018JB017028>.

 Murray, J. R., N. Bartlow, Y. Bock, B. A. Brooks, J. Foster, J. Freymueller, W. C. Hammond, K. Hodgkinson, I. Johanson, A. López‐Venegas, D. Mann, G. S. Mattioli, T. Melbourne, D. Mencin, E. Montgomery‐Brown, M. H. Murray, R. Smalley, and V. Thomas (2019). Regional Global Navigation Satellite System Networks for Crustal Deformation Monitoring. *Seismological Research Letters*, <https://doi.org/10.1785/0220190113>.

 Xu, P., Y. Shu, J. Liu, T. Nishimura, Y. Shi, and J. T. Freymueller (2019). A large scale of apparent sudden movements in Japan detected by high-rate GPS after the 2011 Tohoku Mw9.0 earthquake: Physical signals or unidentified artifacts? *Earth, Planets and Space*, 71, Article 43. <https://doi.org/10.1186/s40623-019-1023-9>.

 Terhune, P.J., Benowitz, J.A., Trop, J.M., O’Sullivan, P.B., Gillis, R.J., and Freymueller, J.T., (2019). Cenozoic tectono-thermal history of the southern Talkeetna Mountains, Alaska: Insights into a potentially alternating convergent and transform plate margin. *Geosphere*, 15, 1–38, <https://doi.org/10.1130/GES02008.1>.

 Mora–Páez, H., Kellogg, J.N. & Freymueller, J.T. (2019). Contributions of space geodesy for geodynamic studies in Colombia: 1988 to 2017. In: Gómez, J. & Pinilla–Pachon, A.O. (editors), The Geology of Colombia, Volume 4 Quaternary. Servicio Geológico Colombiano, Publicaciones Geológicas Especiales 38, p. 577–613. Bogotá. <https://doi.org/10.32685/pub.esp.38.2019.14/>

 Freymueller, J., R. Bendick, A. Borsa, A. V. Newman (Eds.), 2019. “*Measuring the Restless Earth: Grand Challenges in Geodesy*”, Report from the NSF-sponsored workshop “Revisiting Our Grand Challenges in Geodesy”, Michigan State University, 2019.

 Guo, A., S. Ni, J. Xie , J. T. Freymueller, Y. Wang, B. Zhang, Z. Yu, Y. Yao, and W. Ma (2019). Millimeter-level ultra-long period multiple Earth-circling surface waves retrieved from dense high-rate GPS network. Earth and Planetary Science Letters 525, 115705. DOI: <https://doi.org/10.1016/j.epsl.2019.07.007>.

2020 Tian, Z., J. T. Freymueller, and Z. Yang (2020). Spatio-temporal variations of afterslip and viscoelastic relaxation following the Mw 7.8 Gorkha (Nepal) earthquake, *Earth and Planetary Science Letters*, vol 532, 116031, doi: <https://doi.org/10.1016/j.epsl.2019.116031>.

 Freymueller J.T. (2020) GPS, Tectonic Geodesy. In: Gupta H. (eds) Encyclopedia of Solid Earth Geophysics. Encyclopedia of Earth Sciences Series. Springer, Cham. <https://doi.org/10.1007/978-3-030-10475-7_77-1>.

 Mora–Páez, H., Kellogg, J.N. & Freymueller, J.T. 2020. Contributions of space geodesy for geodynamic studies in Colombia: 1988 to 2017. In: Gómez, J. & Pinilla–Pachon, A.O. (editors), The Geology of Colombia, Volume 4 Quaternary. Servicio Geológico Colombiano, Publicaciones Geológicas Especiales 38, p. 577–613. Bogotá. <https://doi.org/10.32685/pub.esp.38.2019.14>.

 Xue, X., J. Freymueller, & Z. Lu (2020). Modeling the post-eruptive deformation at Okmok based on the GPS and InSAR timeseries: changes in the shallow magma storage system, *Journal of Geophysical Research*, <https://doi.org/10.1029/2019JB017801>.

 Dai, C., Howat, I. M., Freymueller, J. T., Vijay, S., & Jia, Y. (2020). Characterization of the 2008 phreatomagmatic eruption of Okmok from ArcticDEM and InSAR: Deposition, erosion, and deformation. *Journal of Geophysical Research: Solid Earth*, 125, e2019JB018977. Doi: <https://doi.org/10.1029/2019JB018977>.

 Elliott, J., & Freymueller, J. T. (2020). A block model of present‐day kinematics of Alaska and western Canada. Journal of Geophysical Research: Solid Earth, 125, e2019JB018378. <https://doi.org/10.1029/2019JB018378>.

 Suleimani, E., & Freymueller, J. T. (2020). Near‐field modeling of the 1964 Alaska tsunami: The role of splay faults and horizontal displacements. Journal of Geophysical Research: Solid Earth, 125, e2020JB019620. <https://doi.org/10.1029/2020JB019620>.

 Xue, X., & Freymueller, J. T. (2020). A 25‐year history of volcano magma supply in the east central Aleutian arc, Alaska. Geophysical Research Letters, 47, e2020GL088388. <https://doi.org/10.1029/2020GL088388>.

 Hamlington, B. D., and 46 co-authors (2020). Understanding of Contemporary Regional Sea-level Change and the Implications for the Future. *Reviews of Geophysics*, vol. 58, e2019RG000672, <https://doi.org/10.1029/2019RG000672>.

 Huang, K., Y. Hu, and J. T. Freymueller (2020). Decadal Viscoelastic Postseismic Deformation of the 1964 Mw9.2 Alaska Earthquake. Journal of Geophysical Research, e2020JB019649, <https://doi.org/10.1029/2020JB019649>.

 Dai, C., Higman, B., Lynett, P. J., Jacquemart, M., Howat, I. M., Liljedahl, A. K., et al. (2020). Detection and assessment of a large and potentially tsunamigenic periglacial landslide in Barry Arm, Alaska. Geophysical Research Letters, 47, e2020GL089800. <https://doi.org/10.1029/2020GL089800>.

 Shirzaei, M., J.T. Freymueller, T. E. Törnqvist, D. L. Galloway, T. Dura, and P. S. J. Minderhoud (2020). Measuring, Modeling and Predicting Coastal Land Subsidence. Nature Reviews: Earth and Environment, <https://doi.org/10.1038/s43017-020-00115-x>.

2021 Freymueller, J. T., and J. L. Elliott (2021) Geodesy. In: Alderton, David; Elias, Scott A. (eds.) Encyclopedia of Geology, 2nd edition. vol. 1, pp. 719-735. United Kingdom: Academic Press. <https://dx.doi.org/10.1016/B978-0-08-102908-4.00176-4>.

 Tian, Z., Freymueller, J. T., & Yang, Z. (2021). Postseismic deformation due to the 2012 Mw 7.8 Haida Gwaii and 2013 Mw 7.5 Craig earthquakes and its implications for regional rheological structure. Journal of Geophysical Research: Solid Earth, 126, e2020JB020197. <https://doi.org/10.1029/2020JB020197>.

 Boggs, K. J. E., K. O’Connor, R. Sharp, J. M. Withey, M. C. Clark, D. W. Eaton, J. C. Droboth, M. Craymer, A. Trimble, J. T. Freymueller, N. Scherger, D. Kurila (2021). EON-ROSE Community Science Liaison Program; Inspired by EarthScope Education and Outreach Programs. The Earth Scientist, vol. XXXVI, Issue 4, pp 7-12. <https://www.nestanet.org/resources/Documents/Advocacy/TES/2015-2020/Winter%202020%20TES%20Final.pdf>

 Rollins, C., Freymueller, J. T., & Sauber, J. M. (2021). Stress promotion of the 1958 Mw∼7.8 Fairweather Fault earthquake and others in southeast Alaska by glacial isostatic adjustment and inter-earthquake stress transfer. Journal of Geophysical Research: Solid Earth, 126, e2020JB020411. <https://doi.org/10.1029/2020JB020411>.

 Drooff, C., & Freymueller, J. T. (2021). New constraints on slip deficit on the Aleutian megathrust and inflation at Mt. Veniaminof, Alaska from repeat GPS measurements. Geophysical Research Letters, 48, e2020GL091787. <https://doi.org/10.1029/2020GL091787>.

 Freymueller, J. T., E. N. Suleimani, and D. J. Nicolsky (2021). Constraints on the Slip Distribution of the 1938 MW 8.3 Alaska Peninsula Earthquake from Tsunami Modeling. Geophysical Research Letters, 2021GL092812.

 Xiao, Z., J. T. Freymueller, R. Grapenthin, J. L. Elliott, C. Drooff, and L. Fusso (2021). The Deep Shumagin Gap Filled: Kinematic Rupture Model and Slip Budget Analysis of the 2020 Mw 7.8 Simeonof Earthquake Constrained by GNSS, Global Seismic Waveforms, and Floating InSAR. Earth and Planetary Science Letters 576 (2021), 117241. <https://doi.org/10.1016/j.epsl.2021.117241>.

 Marsman, C. P., W. van der Wal, R. E. M. Riva, and J. T. Freymueller (2021). The impact of a 3-D Earth structure on glacial isostatic adjustment in Southeast Alaska following the Little Ice Age. Journal of Geophysical Research, e2021JB022312, <https://doi.org/10.1029/2021JB022312>.

2022 Bolton, A. R., D. L. Schutt, R. C. Aster, P. Audet, A. J. Schaeffer, C. Estéve, J. T. Freymueller, and J. F. Cubley (2022). Evidence for a rotation in asthenospheric flow in northwest Canada: insights from shear wave splitting. *Geophysical Journal International*, ggab396, <https://doi.org/10.1093/gji/ggab396>.

 Sauber, J., C. Rollins, J. T. Freymueller, and N. Ruppert (2022). Glacially Induced Faulting in Alaska. Chapter 8.2, in Steffen, Holger, Olesen, Odleiv, Sutinen, Raimo, eds., *Glacially-triggered faulting*. Cambridge University Press, Cambridge, United Kingdom, 438 pp., www.cambridge.org/9781108490023, DOI: 10.1017/9781108779906.

 Zhuohui Xiao, Jianjun Wang, Caijun Xu, Jeffrey T. Freymueller, Yangmao Wen, Zhibin Zhang, Jie Li, Bin Zhao; Rupture Process of the 2017 MwMw 6.3 Earthquake in Jinghe, Northwest China, Constrained by GNSS, InSAR, and Teleseismic Waveforms. Seismological Research Letters 2022; doi: <https://doi.org/10.1785/0220210354>.

 Elliott, J. L., R. Grapenthin, R. Parameswaran, Z. Xiao, J. T. Freymueller, and L. Fusso (2022). Cascading Rupture of a Megathrust. *Science Advances*, 8 (18), eabm4131. DOI: 10.1126/sciadv.abm4131.

 Li, J., Yao, Y., Li, R., Yusan, S., Li, G., Freymueller, J. T., & Wang, Q. (2022). Present-day strike-slip faulting and thrusting of the Kepingtage fold- and-thrust belt in southern Tianshan: Constraints from GPS observations. Geophysical Research Letters, 49, e2022GL099105. https://doi. org/10.1029/2022GL099105

 Naganawa, K., Kazama, T., Fukuda, Y. et al. Updated absolute gravity rate of change associated with glacial isostatic adjustment in Southeast Alaska and its utilization for rheological parameter estimation. *Earth Planets Space* 74, 116 (2022). <https://doi.org/10.1186/s40623-022-01666-7>.

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 Chen, Q., Crustal Deformation Along the San Andreas Fault and Within the Tibetan Plateau Measured using GPS, Ph.D. thesis, University of Alaska Fairbanks, 140pp., 2002.

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