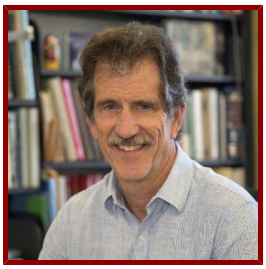
Stanford



Paul Segall

The Cecil H. and Ida M. Green Professor of Geophysics

Curriculum Vitae available Online

Bio

BIO

My students and I study active earthquake and volcanic process through data collection, inversion, and theoretical modeling. Using methods such as precise Global Positioning System (GPS) positioning and Interferometric Synthetic Aperture Radar (InSAR) we are able to measure deformation in space and time and invert these data for the geometry of faults and magma chambers, and spatiotemporal variations in fault slip-rate and magma chamber dilation. The accumulation of shear strain in tectonic regions provides a direct measure of earthquake potential. Similarly, magma accumulation in the crust prior to eruptions causes measurable inflation. We use these data to develop and test models of active plate boundaries such as the San Andreas, and the Cascade and Japanese subduction zones, the nucleation of earthquakes, slow slip events, induced seismicity, and the physics of magma migration leading to volcanic eruptions. These physics-based models rely on principles and methodologies from solid and fluid dynamics.

ACADEMIC APPOINTMENTS

- Professor, Geophysics

ADMINISTRATIVE APPOINTMENTS

- Chair, Geophysics, (2025- present)
- Cecil and Ida Green Professor of Geophysics, Stanford University, (2020- present)
- Committee on Graduate Studies, Stanford University, (2018-2020)
- Summer Research Program for Teachers, Stanford University, (2018-2018)
- Pre-Major Advisor, Stanford University, (2013-2015)
- School of Earth Sciences Council, Stanford University, (2013-2015)
- Office of Judicial Affairs – Internal Review Panel, Stanford University, (2010-2012)
- School of Earth Sciences Space Committee, Stanford University, (2010-2012)
- Geoscape Bay Area: Teacher Professional Development Course on Volcanoes, Stanford University, (2010-2010)
- Admit Weekend Lecture, Stanford University, (2008-2010)
- Instructor, Stanford (Summer) Engineering Academy, Stanford University, (2005-2018)
- Admit Weekend Lecture, Stanford University, (2005-2006)
- Associate Chair, Geophysics Department, Stanford University, (2003-2004)
- Member, Earth Sciences Council, Stanford University, (2003-2004)
- Alumni Weekend Lecture, Stanford University, (2000-2001)
- Chair, C-ACIS Committee on Academic Computing and Information Services, Stanford University, (2000-2001)

- Member, University Needs Task Force on Information Technology, Stanford University, (2000-2001)
- Visiting Professor, Insitute de Physique du Globe, Paris, (2000-2000)
- Professor, Stanford University, (1998- present)
- Member, C-ACIS Committee on Academic Computing and Information Services, Stanford University, (1997-2000)
- Freshman/Sophmore Advisor, Stanford University, (1995-2005)
- Chair, Geophysics Department Admissions Committe, Stanford University, (1995-1998)
- Chair, School of Earth Sciences Computer Committee, Stanford University, (1994-2007)
- Associate Professor, Stanford University, (1993-1998)
- Visiting Associate Professor, University of Grenoble, (1991-1991)
- Associate Professor (Research), Stanford University, (1989-1993)
- Consulting Professor, Stanford University, (1987-1989)
- Project Chief Mechanics of Faulting and Fracturing, USGS, (1983-1993)
- Geologist, USGS, (1981-1983)

HONORS AND AWARDS

- Member, National Academy of Sciences (2016)
- Charles A. Whitten Medal, American Geophysical Union (2014)
- William Smith Lecturer, Geological Society of London (2011)
- Stanford Postdoctoral Mentoring Award (Honorable Mention), Stanford University (2009)
- Citation for Excellence in Refereeing, American Geophysical Union (2002)
- Fellow, Geological Society of America (1997)
- Fellow, American Geophysical Union (1990)
- J.B. Macelwane Medal, American Geophysical Union (1990)
- USGS Special Achievement Award, USGS (1984)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Invited Speaker, International Conference on Crustal Dynamics (Kyoto) (2019 - 2019)
- Invited Speaker, Nagoya University (2019 - 2019)
- Invited Speaker, University of Iceland (2018 - 2018)
- Invited Speaker, UNAVCO Annual Meeting (2018 - 2018)
- Keynote Speaker, Keynote Speaker NSF Workshop on Modeling Earthquake Source Processes (Caltech) (2018 - 2018)
- Editor, PNAS (2017 - present)
- Thesis advisory committee member, Nanyang Technical University, Singapore (2017 - present)
- Invited Speaker, Davos workshop on Induced Seismicity (2017 - 2017)
- Invited Speaker,, Univ. Illinois, Northwestern University (2017 - 2017)
- Review Panel Member, US Geological Survey Earthquake Hazards (2017 - 2017)
- Reviewer, National Academies report, Onshore Unconventional Hydrocarbon Development (2017 - 2017)
- Tudor Commemorative Lecture, Indiana University (2017 - 2017)
- Member, NAS Committee on Improving Understanding of Volcanic Eruptions (2016 - 2017)
- International Review Committee, Earth Observatory Singapore (2016 - 2016)

- Invited speaker, University of Leeds, University of Cambridge (2016 - 2016)
- Lecturer, International Center for Theoretical Physics, Advanced School on Physics of Volcanoes, Trieste, Italy (2016 - 2016)
- Solas Lecture, University of Bristol (2016 - 2016)
- Advisory Board, COMET (2015 - present)
- Expert Adviser, NSF GEO Future Facility Needs (2015 - present)
- Invited Speaker, NSF Workshop on Seismic and Geodetic Network Needs (2015 - present)
- Invited Speaker, USGS Menlo Park (2015 - 2015)
- Keynote Speaker, NSF Workshop “Future of the Plate Boundary Observatory” (2014 - 2014)
- Chair, UNAVCO Nominating Committee (2013 - 2014)
- Assessment Panel Member, U.K. National Centre of Earth Observation (2013 - 2013)
- Invited Participant, USGS New Madrid Workshop (2013 - 2013)
- Invited Speaker, Earthquake Research Institute, University of Tokyo (2013 - 2013)
- Invited Speaker, Hawaiian Volcano Observatory (2013 - 2013)
- Invited Speaker, Oberlin College (2013 - 2013)
- Member, NASA, Solid Earth and Natural Hazards, Science Plan Committee (2013 - 2013)
- NSF Panel: Frontiers of Earth System Dynamics, NSF (2013 - 2013)
- Earth and Ocean Sciences Colloquium,, University of British Columbia (2012 - 2012)
- Keynote speaker, Chapman Conference on Hawaiian Volcanism. (2012 - 2012)
- Chair Reid Medal Committee, Seismological Society of America (2011 - 2011)
- Invited Speaker, Royal Society Workshop, Magma Migration, Storage and Eruption (2011 - 2011)
- Invited Speaker, Invited Speaker - Univ. Colorado (2011 - 2011)
- Invited Speaker, J.R. Rice Symposium Caltech (2011 - 2011)
- Invited Speaker, University of Kyoto, Disaster Prevention Research Institute (2011 - 2011)
- Invited speaker, USGS Workshop on Great Cascadia earthquakes, Eugene Oregon (2011 - 2011)
- Keynote speaker, Seismic and aseismic deformation workshop, Strasbourg France (2011 - 2011)
- Plenary speaker, Chapman Conference, The Galápagos as a Laboratory for the Earth Sciences, Puerto Ayora, Ecuador (2011 - 2011)
- Invited Speaker, Earthscope Institute: Spectrum of Fault Slip Behavior (2010 - 2010)
- Invited Speaker, Hawaiian Volcano Observatory (2010 - 2010)
- Discussion Leader, NSF Long Range Science Plan for Geodesy (2009 - 2009)
- Invited Keynote Speaker, Earthscope National Meeting (2009 - 2009)
- Invited Seminar, U.C. Berkeley (2009 - 2009)
- Invited Speaker, Workshop on Numerical Modeling of Crustal Deformation and Earthquake Faulting (2009 - 2009)
- Invited presentation, UC Santa Cruz (2009 - 2009)
- Chair, U.C. Riverside IGPP External Review (2008 - 2008)
- Invited Presentation, Caltech Geological and Planetary Sciences (2008 - 2008)
- Invited Presentation, US Geological Survey (2008 - 2008)
- Invited Presentation, Volcano Deformation Workshop (2008 - 2008)
- NSF Long Range Planning for Seismology Workshop, NSF (2008 - 2008)
- Review Panel, Canadian Institute for Advanced Research (2008 - 2008)

- Board of Directors, Southern California Earthquake Center (2007 - present)
- Invited Speaker, Euro-Conference - Rock Physics and Geomechanic (2007 - 2007)
- Invited presentation, IGPP U. C. San Diego (2007 - 2007)
- Invited presentation, Harvard University (2007 - 2007)
- Invited presentation, SCEC/ERI Workshop (2006 - 2006)
- USGS working group on National Volcano Early Warning System extramural program, USGS (2006 - 2006)
- Donath Medal Committee, Geological Society of America (2005 - 2008)
- 2005 Invited participant, Kavli Institute of Theoretical Physics "Fracture and friction from atomic to tectonic scales" (2005 - 2005)
- Invited Participant, Dahlem Workshop "Dynamics of Fault Zones", Berlin (2005 - 2005)
- Invited presentation, Purdue University (2005 - 2005)
- Chair, Plate Boundary Observatory (Earthscope) Standing Committee (2003 - 2006)
- President, Tectonophysics Section, AGU (2003 - 2004)
- Coconvener, NSF/USGS sponsored workshop "volcanic processes in Long Valley Caldera - Mono Craters volcanic field", NSF/USGS (2003 - 2003)
- Invited Presentation, U.C. Riverside (2003 - 2003)
- Member, CEPEC, California Earthquake Prediction Evaluation Council (2002 - 2009)
- Department of Interior's Scientific Earthquake Advisory Committee, Department of Interior (2002 - 2006)
- Invited Presentation, Academica Sinica, Taipei, Taiwan (2002 - 2002)
- Invited Seminar, University of Southern California (2002 - 2002)
- Invited Seminar, I.G.P.P., Scripps Institute of Oceanography (2002 - 2002)
- Board of Directors, UNAVCO, Inc. (2001 - 2003)
- Invited Presentation, Hawaiian Volcano Observatory (2001 - 2001)
- Invited Presentation, Whole Earth Seminar, U.C. Santa Cruz (2001 - 2001)
- Invited Presentation, Invited Presentation: E.G.S. Nice, France (2001 - 2001)
- Invited presentation, University of Utah, Rate Debate Workshop (2001 - 2001)
- Invited presentation, Caltech (2001 - 2001)
- Board of Directors, UNAVCO (NSF GPS Facility) (2000 - 2003)
- Member, American Geophysical Union Meetings Committee (2000 - 2002)
- President Elect, American Geophysical Union, Tectonophysics Section (2000 - 2002)
- Invited Presentation, Stress Interactions Workshop, Erice, Italy (2000 - 2001)
- Invited Presentation, D.O.E. Workshop, Gaithersburg Md. (2000 - 2001)
- Invited Presentation, Ecole Normale Superieur, Paris, France (2000 - 2001)
- Invited Presentation, Southern California Earthquake Center (SCEC) Annual Meeting (2000 - 2001)
- Invited Presentation, Universite de Bretagne Occidentale, Brest, France (2000 - 2001)
- Invited Presentation, Observatoire du Midi Pyrenees, Tolouse, France (2000 - 2001)
- Invited Presentation, 2nd Plate Boundary Observatory Workshop (2000 - 2001)
- Invited Presentation, U.S.- Japan Conference on Earthquake Studies (2000 - 2001)
- Invited Presentation:, Institute de Physique du Globe, Paris, France (2000 - 2001)
- Invited Presentation: U.S.G.S. Workshop on New Madrid Earthquakes, USGS (2000 - 2001)
- Member, UNAVCO (University Navstar Consortium) Steering Committee (2000 - 2001)

- Member, CNRS review committee of Laboratoire de Tectonique-Mechanique de la Lithosphere, Institute de Physique du Globe, Paris (2000 - 2000)
- Member, Plate Boundary Observatory Steering Committee (1999 - 2002)
- Member, NAS Committee to review the Volcano Hazards Program of the U.S. Geological Survey (1999 - 2000)
- Chair, UC Santa Cruz Tectonics Advisory Committee (1999 - 1999)
- Invited presentations, Invited presentations: UCLA (1999 - 1999)
- Invited presentations, GPS 99, Tsukuba, Japan (1999 - 1999)
- Invited presentations, Stanford University Statistics Department (1999 - 1999)
- Invited presentations, Plate Boundary Observatory Workshop, Snowbird, Utah (1999 - 1999)
- Invited presentations, UNAVCO Annual Meeting (1999 - 1999)
- Invited presentations, UNAVCO workshop on Volcano Deformation (1999 - 1999)
- Invited presentations, AGU (Spring) Meeting (1999 - 1999)
- Member, Southern California Integrated GPS Network Advisory Council (1998 - 2002)
- Invited Symposium Presentation: Space-Based Geoscience Observations: Looking Down at the Future, University of Texas, Austin (1998 - 1998)
- Invited lectures, IRIS Annual Meeting (1998 - 1998)
- Invited lectures: Special Session Organizer and Presentation, SSA Annual Meeting (1998 - 1998)
- NSF Review Panel, Instruments and Facilities, NSF (1997 - 2000)
- Member, James B. Macelwane Medal Committee, American Geophysical Union (1996 - 1998)
- Member, Science Advisory Team for Long Valley caldera, USGS (1994 - 2010)

PROFESSIONAL EDUCATION

- Ph.D, Stanford University , Geology (1981)
- M.S., Case Western Reserve University , Earth Sciences (1976)
- B.S., Case Western Reserve University , Earth Sciences

LINKS

- Group Website: https://cdfm.stanford.edu/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Research

I study active earthquake and volcanic process through data collection, inversion, and theoretical modeling. Using methods such as precise Global Positioning System (GPS) positioning and Interferometric Synthetic Aperture Radar (InSAR) we are able to measure deformation in space and time and invert these data for the geometry of faults and magma chambers, and spatiotemporal variations in fault slip-rate and magma chamber dilation. The accumulation of shear strain in tectonic regions provides a direct measure of earthquake potential. Similarly, magma accumulation in the crust prior to eruptions causes measurable inflation. We use these data to develop and test models of active plate boundaries such as the San Andreas, and the Cascade and Japanese subduction zones, the nucleation of earthquakes, slow slip events, induced seismicity, and the physics of magma migration leading to volcanic eruptions. These physics-based models rely on principles and methodologies from solid and fluid dynamics.

Teaching

I teach introductory undergraduate classes in natural hazards and the prediction of volcanic eruptions, as well as graduate level courses on modeling earthquake and volcano deformation and geophysical inverse theory.

Professional Activities

James B. Macelwane Medal, American Geophysical Union (1990); fellow, American Geophysical Union (1990); fellow, Geological Society of America (1997); president, Tectonophysics Section, AGU (2002-04); U.S.G.S. Science of Earthquakes Advisory Committee (2002-06); California Earthquake Prediction Evaluation Committee (2003-07); chair, Plate Boundary Observatory Steering Committee (2003-06); N.S.F. Panel, Instruments and Facilities Program (1997-2000); associate editor, Journal of Geophysical Research (1984-87). William Smith Lecturer, Geological Society of London (2011). Charles A. Whitten Medal, American Geophysical Union (2014), National Academy of Sciences (2016)

Teaching

COURSES

2026-27

- Earthquakes and Volcanoes: EARTHSYS 113, GEOPHYS 90 (Aut)
- Frontiers of Geophysical Research at Stanford: GEOPHYS 101, GEOPHYS 201 (Aut)
- Geophysical Inverse Problems: ENERGY 283, GEOPHYS 281 (Win)
- Geophysics Department Seminar: GEOPHYS 300 (Aut)
- Physical Volcanology: GEOPHYS 385R (Aut, Win, Spr)

2025-26

- Crustal Deformation: GEOPHYS 288 (Spr)
- Frontiers of Geophysical Research at Stanford: GEOPHYS 101, GEOPHYS 201 (Aut)
- How to Predict a Super Eruption: GEOPHYS 20N (Win)
- Physical Volcanology: GEOPHYS 385R (Aut, Win, Spr)

2024-25

- Earthquakes and Volcanoes: EARTHSYS 113, GEOPHYS 90 (Aut)
- Geophysical Inverse Problems: ENERGY 283, GEOPHYS 281 (Win)
- Physical Volcanology: GEOPHYS 385R (Aut, Win, Spr, Sum)

2023-24

- Crustal Deformation: GEOPHYS 288 (Spr)
- Geophysics Department Seminar: GEOPHYS 300 (Spr)
- How to Predict a Super Eruption: GEOPHYS 20N (Win)
- Physical Volcanology: GEOPHYS 385R (Win, Spr)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Anna Ruefer, Yifan Yu

Postdoctoral Faculty Sponsor

Amr Ibrahim, Xinyi Qian, Yudong Sun

Doctoral Dissertation Advisor (AC)

Rebeca Ursu

Master's Program Advisor

Gabby Rose

Publications

PUBLICATIONS

- **Evolution of Summit Magma Pressure During the 2018 Caldera Collapse at Kīlauea Volcano** *GEOPHYSICAL RESEARCH LETTERS*
  Berg, E., Wang, T. A., Wig, E., Segall, P., Anderson, K.
  2026; 53 (21)
- **Permeability heterogeneity controls fluid migration and microseismicity evolution in The Geysers geothermal field, California.** *Nature communications*
  Li, L., Zeng, X., McBrearty, I. W., Cui, X., Tan, X., Mao, S., Beroza, G. C., Tan, J., Liu, J., Segall, P., Ellsworth, W. L.
  2026; 17 (1)
- **Modeling of injection-induced seismicity on rough faults in porous media** *EARTH AND PLANETARY SCIENCE LETTERS*
  Mei, C., Suarez, A., Segall, P.
  2026; 681
- **Large Deformation, Pressure-Driven Mechanistic Modeling of the 2018 Caldera Collapse at Kīlauea Volcano, HI** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  del Castillo, E. M., Segall, P.
  2026; 131 (4)
- **Fast Data Inversion for High-Dimensional Ornstein-Uhlenbeck Processes from Noisy Measurements** *SIAM-ASA JOURNAL ON UNCERTAINTY QUANTIFICATION*
  Lin, Y., Liu, X., Segall, P., Gu, M.
  2026; 14 (3): 1134-1159
- **Pore Pressure Perturbations on Rough Fault Earthquake Cycle Simulations** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*
  Suarez, A., Segall, P., Cattania, C.
  2025; 115 (6): 2608-2622
- **Graph Neural Network based elastic deformation emulators for magmatic reservoirs of complex geometries** *VOLCANICA*
  Wang, T. A., Mcbrearty, I. W., Segall, P.
  2025; 8 (1): 95-109
- **Deep Learning Forecasts Caldera Collapse Events at Kilauea Volcano** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  McBrearty, I. W., Segall, P.
  2024; 129 (8)
- **Modeling dike trajectories in a biaxial stress field with coupled magma flow, fracture, and elasticity** *BULLETIN OF VOLCANOLOGY*
  Blackstone, L. A., Grossman-Ponemon, B. E., Heimisson, E. R., Lew, A. J., Segall, P.
  2024; 86 (5)
- **Dynamic Rupture Simulations of Caldera Collapse Earthquakes: Effects of Wave Radiation, Magma Viscosity, and Evidence of Complex Nucleation at Kilauea 2018** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wang, T. A., Dunham, E. M., Krenz, L., Abrahams, L. S., Segall, P., Yoder, M. R.
  2024; 129 (4)
- **Stress-driven recurrence and precursory moment-rate surge in caldera collapse earthquakes** *NATURE GEOSCIENCE*
  Segall, P., Matthews, M. V., Shelly, D. R., Wang, T. A., Anderson, K. R.
  2024
- **Ring fault creep drives volcano-tectonic seismicity during caldera collapse of Ki over bar lauea in 2018** *EARTH AND PLANETARY SCIENCE LETTERS*
  Wang, T. A., Segall, P., Hotovec-Ellis, A. J., Anderson, K. R., Cervelli, P. F.
  2023; 618
- **Incorporating Full Elastodynamic Effects and Dipping Fault Geometries in Community Code Verification Exercises for Simulations of Earthquake Sequences and Aseismic Slip (SEAS)** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*

Erickson, B. A., Jiang, J., Lambert, V., Barbot, S. D., Abdelmeguid, M., Almquist, M., Ampuero, J., Ando, R., Cattania, C., Chen, A., Dal Zilio, L., Deng, S., Dunham, et al
2023; 113 (2): 499-523

- **Disposal From In Situ Bitumen Recovery Induced the M-L 5.6 Peace River Earthquake** *GEOPHYSICAL RESEARCH LETTERS*
  Schultz, R., Woo, J., Pepin, K., Ellsworth, W. L., Zebkar, H., Segall, P., Gu, Y., Samsonov, S.
  2023; 50 (6)
- **Could Kilauea's 2020 Post Caldera-Forming Eruption Have Been Anticipated?** *GEOPHYSICAL RESEARCH LETTERS*
  Segall, P., Anderson, K., Wang, T. A.
  2022; 49 (15)
- **The Surface Deformation Signature of a Transcrustal, Crystal Mush-Dominant Magma System** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Mullet, B., Segall, P.
  2022; 127 (5)
- **Physics-Based Model Reconciles Caldera Collapse Induced Static and Dynamic Ground Motion: Application to Kilauea 2018** *GEOPHYSICAL RESEARCH LETTERS*
  Wang, T. A., Coppess, K. R., Segall, P., Dunham, E. M., Ellsworth, W.
  2022; 49 (8)
- **Constraints on Absolute Magma Chamber Volume From Geodetic Measurements of Trapdoor Faulting at Sierra Negra Volcano, Galapagos** *GEOPHYSICAL RESEARCH LETTERS*
  Zheng, Y., Blackstone, L., Segall, P.
  2022; 49 (5)
- **How Steady is Interseismic Crustal Deformation in Northeast Japan? Evidence From an Integrated Analysis of Centennial Geodetic Data** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Meneses-Gutierrez, A., Segall, P., Sagiya, T.
  2022; 127 (2)
- **Repeating caldera collapse events constrain fault friction at the kilometer scale.** *Proceedings of the National Academy of Sciences of the United States of America*
  Segall, P., Anderson, K.
  2021; 118 (30)
- **Post-2018 Caldera Collapse Re-Inflation Uniquely Constrains Kilauea's Magmatic System** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wang, T., Zheng, Y., Pulvirenti, F., Segall, P.
  2021; 126 (6)
- **Precursory Slow Slip and Foreshocks on Rough Faults** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Cattania, C., Segall, P.
  2021; 126 (4)
- **Joint Inversions of Ground Deformation, Extrusion Flux, and Gas Emissions Using Physics-Based Models for the Mount St. Helens 2004-2008 Eruption** *GEOCHEMISTRY GEOPHYSICS GEOSYSTEMS*
  Wong, Y., Segall, P.
  2020; 21 (12)
- **Caldera Collapse Geometry Revealed by Near-Field GPS Displacements at Klauea Volcano in 2018** *GEOPHYSICAL RESEARCH LETTERS*
  Segall, P., Anderson, K. R., Pulvirenti, F., Wang, T., Johanson, I.
  2020; 47 (15)
- **Role of Fluid Injection on Earthquake Size in Dynamic Rupture Simulations on Rough Faults** *GEOPHYSICAL RESEARCH LETTERS*
  Maurer, J., Dunham, E. M., Segall, P.
  2020; 47 (13)
- **The Community Code Verification Exercise for Simulating Sequences of Earthquakes and Aseismic Slip (SEAS)** *SEISMOLOGICAL RESEARCH LETTERS*

Erickson, B. A., Jiang, J., Barall, M., Lapusta, N., Dunham, E. M., Harris, R., Abrahams, L. S., Allison, K. L., Ampuero, J., Barbot, S., Cattania, C., Elbanna, A., Fialko, et al
2020; 91 (2): 874–90

- **Logarithmic Growth of Dikes Froma Depressurizing Magma Chamber** *GEOPHYSICAL RESEARCH LETTERS*
  Grossman-Ponemon, B. E., Heimisson, E. R., Lew, A. J., Segall, P.
  2020; 47 (4)
- **Physically Consistent Modeling of Dike-Induced Deformation and Seismicity: Application to the 2014 Bar partial derivative arbunga Dike, Iceland** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Heimisson, E. R., Segall, P.
  2020; 125 (2)
- **On the Integrated Surface Uplift for Dip-Slip Faults** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*
  Segall, P., Heimisson, E.
  2019; 109 (6): 2738–40
- **Numerical Analysis of Time-Dependent Conduit Magma Flow in Dome-Forming Eruptions With Application to Mount St. Helens 2004-2008** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wong, Y., Segall, P.
  2019
- **Mechanics of Inflationary Deformation During Caldera Collapse: Evidence From the 2018 Kilauea Eruption** *GEOPHYSICAL RESEARCH LETTERS*
  Segall, P., Anderson, K. R., Johanson, I., Miklius, A.
  2019
- **Magma chambers: what we can, and cannot, learn from volcano geodesy.** *Philosophical transactions. Series A, Mathematical, physical, and engineering sciences*
  Segall, P.
  2019; 377 (2139): 20180158
- **Crack Models of Repeating Earthquakes Predict Observed Moment#Recurrence Scaling** *Journal of Geophysical Research*
  Cattania, C., Segall, P.
  2019
- **Magma reservoir failure and the onset of caldera collapse at Kīlauea Volcano in 2018.** *Science (New York, N.Y.)*
  Anderson, K. R., Johanson, I. A., Patrick, M. R., Gu, M. n., Segall, P. n., Poland, M. P., Montgomery-Brown, E. K., Miklius, A. n.
  2019; 366 (6470)
- **Bounding the Moment Deficit Rate on Crustal Faults Using Geodetic Data: Application to Southern California** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Maurer, J., Johnson, K., Segall, P.
  2018; 123 (12): 11048–61
- **Magnitudes of Induced Earthquakes in Low-Stress Environments** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*
  Maurer, J., Segall, P.
  2018; 108 (3A): 1087–1106
- **Constitutive Law for Earthquake Production Based on Rate-and-State Friction: Dieterich 1994 Revisited** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Heimisson, E. R., Segall, P.
  2018; 123 (5): 4141–56
- **Constraining the Magmatic System at Mount St. Helens (2004-2008) Using Bayesian Inversion With Physics-Based Models Including Gas Escape and Crystallization** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Wong, Y., Segall, P., Bradley, A., Anderson, K.
  2017; 122 (10): 7789–7812
- **Deformation rates in northern Cascadia consistent with slow updip propagation of deep interseismic creep** *GEOPHYSICAL JOURNAL INTERNATIONAL*

Bruhat, L., Segall, P.
2017; 211 (1): 427–49

- **A Physical Model for Interseismic Erosion of Locked Fault Asperities** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Mavrommatis, A. P., Segall, P., Johnson, K. M.
  2017; 122 (10): 8326–46
- **Bounding the moment deficit rate on crustal faults using geodetic data: Methods** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Maurer, J., Segall, P., Bradley, A. M.
  2017; 122 (8): 6811–35
- **Effects of linear trends on estimation of noise in GNSS position time-series** *GEOPHYSICAL JOURNAL INTERNATIONAL*
  Dmitrieva, K., Segall, P., Bradley, A. M.
  2017; 208 (1): 281-288
- **Repressurization following eruption from amagma chamber with a viscoelastic aureole** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Segall, P.
  2016; 121 (12): 8501-8522
- **Coupling on the northern Cascadia subduction zone from geodetic measurements and physics-based models** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Bruhat, L., Segall, P.
  2016; 121 (11): 8297-8314
- **Seismicity on Basement Faults Induced by Simultaneous Fluid Injection-Extraction** *PURE AND APPLIED GEOPHYSICS*
  Chang, K. W., Segall, P.
  2016; 173 (8): 2621-2636
- **Injection-induced seismicity on basement faults including poroelastic stressing** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
  Chang, K. W., Segall, P.
  2016; 121 (4): 2708-2726
- **A Network Inversion Filter combining GNSS and InSAR for tectonic slip modeling** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
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PRESENTATIONS

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