

ANDREA DONNELLAN, PH.D.

Education

Ph.D., Geophysics, California Institute of Technology (1991)
M.S., Computer Science, University of Southern California (2003)
M.S., Geophysics, California Institute of Technology (1988)
B.S., Geology, Ohio State University, *with honors and distinction in geology and minor in math* (1986)

History of Employment

Purdue University (2025 –)
 Head Earth, Atmospheric, and Planetary Science (2025 –)
Jet Propulsion Laboratory (1993 – 2024)
 Manager Instrument Systems Section (2021 – 2024)
 Senior Research Scientist (2024 – 2024)
 Principal Research Scientist (2008 – 2024)
 NASA HQ Program Area Co-Lead for Natural Disasters (2009–2011)
 InSAR Lead Scientist/Pre-Project Scientist (2005–2007/2007–2008)
 Deputy Manager Science Division (2002–2005)
 Deputy Manager Exploration Systems Autonomy Section (2000–2002)
 Supervisor Data Understanding Systems Group (1999–2000)
 Member Satellite Geodesy and Geodynamics Systems Group (1993–1999)
California State Polytechnic University, Pomona Adjunct Professor, Lecturer Geosciences (2018)
University of Southern California, Adjunct Asst. Prof. (Research) of Earth Sci. (1999–2015)
California Institute of Technology, Visiting Assoc., Seismological Laboratory (1995–1996)
NASA Goddard Space Flight Center, National Res. Council Postdoctoral Fellow (1991–1993)
California Institute of Technology (1986–1991) Grad. Research/Teaching Asst. (1986–1991/87–88)
Ohio State University (1983–1986)
 Research Assistant, Institute for Polar Studies, Ohio State University (1983–1986)
 Thin Section Laboratory Technician, Ohio State University (1983)
Geochemistry Group, Sohio Research and Development (1985)

Research Experience

Creating a NASA Surface Topography and Vegetation (STV) Novel Observing System (NOS) (2025 – 2027)
NASA Surface Topography and Vegetation Study Lead (2020 – 2021, 2022 – 2025, 2025 –)
Quantifying Uncertainty and Kinematics of Earth Systems Imager ((QUAKES-I) (2020 – 2025)
Quantifying Uncertainty and Kinematics of Earthquake Systems (QUAKES-A) Analytic Collaborative Framework (2020 – 2022)
NISAR Science Team member (2019 – 2024)
Connecting Plate Boundary Processes to Surface Faulting using Geodetic Imaging (2017 – 2020)
UAVSAR Geodetic Imaging Principal Investigator (2009 – 2020)
GeoGateway for Analysis, Modeling, and Response Principal Investigator (2014 – 2019)
QuakeSim Principal Investigator (2002–2014)

Research Products

QUAKES-I airborne imaging data sets (Grand Canyon, Lake Mead, Numerous Locations over California (2021 and 2022 flights)
SAR-Fusion short wavelength infrared (SWIR) and visible stereoimaging products (2021 Caldor Fire, 2022 Mauna Loa eruption)
GeoGateway (<http://geo-gateway.org>) for analysis of geodetic imaging data. Underlying software used in NISAR mission calibration/validation using UAVSAR and GNSS data.

NASA Surface Topography and Vegetation Study Lead (2020 – 2021, 2022 – 2025): Observing Earth's Changing Surface Topography and Vegetation Structure: A Framework for the Decade (2021)
NASA-ISRO SAR (NISAR) Mission Science Users' Handbook (2018) Chief Editor

Service Roles

Professional Organizations and Service

IEEE: The Remote sensing Environment, Analysis and Climate Technologies Technical Committee (REACT TC)

American Geophysical Union

AGU Honors Ambassador Committee Chair (2020)

AGU Honors committee chair for Natural Hazards Section (2020)

Diversity and Inclusion Task Force (2017 – 2018)

Nonlinear Geophysics Focus Group President-Elect/President/Past (13–14/2015–2016/17–18)

Ethics Task Force (2016 – 2017)

UNAVCO: Board (2018 – 2020) Vice-Chair (2019–2020)

APEC Cooperation on Earthquake Simulation: US Rep. to the International Science Board (2000–2017)

Natl. Academy of Sciences: Committee on Spatial Data Enabling USGS Strategic Science in the 21st Century (2010)

Editor

AGU Earth and Space Science Journal (2014 – 2021)

PAGEOPH Topical Vol. editor: "Multihazard Simulation and Cyberinfrastructure (2013–2014)

ISRN Geophysics, Editorial Board (2012 – 2014)

Editor ACES PAGEOPH special volume on earthquake simulations (2003)

Programmatic

NASA Earth Surface and Interior Program CORE Steering committee member (2015–2016)

NASA HQ Program Area Co-Lead for Natural Disasters (2009–2011)

Responsible for program elements and strategic direction of program

Represented NASA on the White House Subcommittee for Disaster Reduction

Ex-officio member representing NASA, National Academy of Sciences Disaster Roundtable

Convener

NASA Surface Topography and Vegetation (STV) Study

Community Meetings (2020, 2023)

American Geophysical Union STV Town Hall (2020)

American Geophysical Union STV Session (2022, 2023)

International Geosciences and Remote Sensing Society (IGARSS) STV Session (2024)

Analyzing Geodetic Imaging Data using GeoGateway Short Course (SSA, Seattle, WA, 2018)

NASA Earth Observing Missions Applications Workshop (Colorado Springs, 2010)

DESDynI Applications Workshop (Sacramento, 2008)

NSF/NASA Sponsored Community InSAR Workshop (Oxnard, 2003)

NSF/NASA Sponsored Autonomous Systems in Extreme Environments Workshop (1999)

Southern California Integrated GPS Network (SCIGN) network design workshops (1995 and 1997)

Research Funding (Past 10 years, Principal Investigator unless noted)

Creating a NASA Surface Topography and Vegetation (STV) Novel Observing System (NOS) (2025 – 2027)

NASA Surface Topography and Vegetation Study Lead (2020 – 2021, 2022 – 2025, 2025 –)

High-Resolution Stereophotogrammetry and Analysis for Achieving STV DSI Goals, NASA, 8/2022 – 8/2025

Study Team Lead: Surface Topography and Vegetation, NASA, 4/19 – 8/2025

NISAR Solid Earth Science Team Member: Calibration and Validation using UAVSAR and GNSS, NASA, 9/2022 – 2/2025 (6 months past NISAR commissioning)
NISAR Calibration and Validation for Solid Earth and Applications, NASA, 4/2019 – 3/2022
Quantifying Uncertainty and Kinematics of Earthquake Systems (QUAKES-A) Analytic Center, NASA, 1/2020 – 12/2021
Quantifying Uncertainty and Kinematics of Earth Systems Imager (QUAKES-I), NASA, 1/2020 – 12/2021
Project/Proposal Title: SAR and InSAR Training Materials for the Earth Surface and Interior Community, NASA, 1/2019 – 12/2020 (Co-I)
UAVSAR Imager, NASA, 10/2019 – 9/2020
Connecting Plate Boundary Processes to Surface Faulting using Geodetic Imaging, NASA, 1/2017 – 3/2020
Enhanced Access to NASA Heterogeneous Geodetic Imaging Products through GeoGateway Analysis, Modeling, and Response Tools, NASA, 8/2016 – 9/2019
Excitation and Detection of Tsunamis by the Global Navigation Satellite System, NASA, 1/2017 – 9/2019 (Co-I)
QuakeSim: Multi-Source Synergistic Data Intensive Computing for Earth Science, NASA, 6/2012 – 6/2015
Application of UAVSAR Imaging to California Earthquake Potential Due to Tectonic Deformation, NASA, 3/2012 – 2/2015
3D Simulations of Active Tectonic Processes, NASA, 11/2008 – 7/2012

Selected Honors (28 total)

Fellow, American Geophysical Union (2021)
Fellow, American Association for the Advancement of Science (2020)
JPL Voyager Award for Lead of NASA's Surface Topography and Vegetation Incubation Study (2020)
JPL Voyager Award for Chief Editor NISAR Handbook (2018)
QuakeSim 2.0: NASA Software of the Year Award (2012)
MUSES California Science Center Foundation, Woman of the Year (2006)
Women in Aerospace Award for Outstanding Achievement (2003)
Presidential Early Career Award for Scientists and Engineers (1996)
NASA Group Achievement Award for *Response to the 2015 Nepal Gorkha Earthquake* (2016)
NASA Group Achievement Award for *Response to the 2010 Gulf Oil Spill* (2011)
NASA Space Act Awards for software (2004 (3), 2005, 2009, 2012)
JPL Lew Allen Award for Excellence (2000)
Donnellan Glacier named by Advisory Comm. on Antarctic Names (2006)
Women at Work Medal of Excellence (2004)

Memberships

American Geophysical Union (1986–present), Fellow
American Association for the Advancement of Science (2016–present), Fellow
Seismological Society of America (2000–2003, 2012, 2015–present)
IEEE Senior Member, and IEEE Geoscience and Remote Sensing Society (2016–present)
The Explorers Club (2012–present), Fellow National

Certifications

FAA and NASA certified small UAS pilot and ground control operator
FAA Commercial instrument single engine land and sea plane pilot (~500 hours): Flights in the US, Mexico, Canada, and Africa
PADI Open Water scuba diver: Dives include California, Hawaii, Palau, Australia, and Caribbean

Peer-Reviewed Publications

- [1] A. Jafari, G. Fox, J. Rundle, **A. Donnellan**, L. Grant Ludwig (2024), Time Series Foundation Models and Deep Learning Architectures for Earthquake Temporal and Spatial Nowcasting, *Geohazards*, <https://doi.org/10.3390/geohazards5040059>.
- [2] **Donnellan, A.**, C. Padgett, J. Green, R. Zinke, R. Applegate, R. Chao, K. Tighe, H. Aghazarian, D. Kogan, C. Assad, Y. Lou, R. Arrowsmith, S. DeLong, M. Schwartz, (submitted), The QUAKE-I Stereoimaging Instrument for Measuring Surface Topography and Land Surface Processes, *Earth and Space Science*.
- [3] **Donnellan, A.**, C. Padgett, J. Green, R. Zinke, R. Applegate, R. Chao, K. Tighe, H. Aghazarian, D. Kogan, C. Assad, Y. Lou, (to be submitted 2023), The SAR-Fusion Stereoimaging Instrument for UAVSAR, *Earth and Space Science*.
- [4] Rundle, J.B., **Donnellan, A.**, Fox, G., Ludwig, L.G. and Crutchfield, J., 2023. Does the Catalog of California Earthquakes, with Aftershocks Included, Contain Information about Future Large Earthquakes? *Earth and Space Science*, 10(2), p.e2022EA002521.
- [5] Rundle, J.B., **Donnellan, A.**, Fox, G. and Crutchfield, J.P., 2022. Nowcasting earthquakes by visualizing the earthquake cycle with machine learning: A comparison of two methods. *Surveys in Geophysics*, 43(2), pp.483-501.
- [6] Rundle, J.B., Y. Yazbeck, **A. Donnellan**, G. Fox, L. Grant Ludwig, M. Heflin, J. Crutchfield, 2022, Optimizing Earthquake Nowcasting with Machine Learning: The Role of Strain Hardening in the Earthquake Cycle, *Earth and Space Science*
- [7] **Donnellan, A.**, J. Suarez, D. Asimaki, C. Goulet, D. McPhillips, Z. Meng, S. Devine, G. Lyzenga, 2022, Toppling of Trona Pinnacles in the 2019 Ridgecrest Earthquake Sequence and subsequent M5.6 Aftershock of June 2020, *Seismological Research Letters*.
- [8] Fox, G.C., Rundle, J.B., **Donnellan, A.** and Feng, B., 2022. Earthquake nowcasting with deep learning. *Geohazards*, 3(2), pp.199-226.
- [9] Grzan, D.P., S. Ward, J. Wilson, J. Rundle, **A. Donnellan**, submitted, Tsunami Squares Implementation Changes to Improve Wave Resolution and Accuracy, *Geohazards*.
- [10] Granat, R., **A. Donnellan**, M. Heflin, G. Lyzenga, M. Glasscoe, J. Parker, M. Pierce, J. Wang, J. Rundle, L. Grant Ludwig, 2021, Clustering Analysis Methods for GNSS Observations: A Data-Driven Approach to Identifying California's Major Faults, *Earth and Space Science*, DOI: 10.1029/2021EA001680.
- [11] Rundle, J.B., Donnellan, A., Fox, G. and Crutchfield, J.P., 2021. Nowcasting Earthquakes by Visualizing the Earthquake Cycle with Machine Learning: A Comparison of Two Methods. *Surveys in Geophysics*, pp.1-19.
- [12] Grzan, D.P., Rundle, J.B., Wilson, J.M., Song, T., Ward, S.N. and Donnellan, A., 2021. Tsunami Squares: Earthquake driven inundation mapping and validation by comparison to the Regional Ocean Modeling System. *Progress in Disaster Science*, p.100191.
- [13] Goulet, C.A., Wang, Y., Nweke, C.C., Tang, B.X., Wang, P., Hudson, K.S., Ahdi, S.K., Meng, X., Hudson, M.B., Donnellan, A. and Lyzenga, G.A., 2021. Comparison of near-fault displacement interpretations from field and aerial data for the M 6.5 and 7.1 ridgecrest earthquake sequence ruptures. *Bulletin of the Seismological Society of America*, 111(5), pp.2317-2333. <https://doi.org/10.1785/0120200222>.
- [14] Parker, J., **A. Donnellan**, R. Bilham, L Grant Ludwig, J. Wang, M. Pierce, N. Mowery, S. Janecke, 2021, Buried Aseismic Slip and Off-Fault Deformation on the Southernmost San Andreas Fault Triggered by the 2010 El Mayor Cucapah Earthquake Revealed by UAVSAR, *Earth and Space Science*, DOI:10.1029/2021EA001682.

- [15] Saylor, C., Rundle, J.B. and Donnellan, A., 2021. Multifractal Analysis of a Seismic Moment Distribution Obtained From InSAR Inversion. *Earth and Space Science*, 8(9), p.e2020EA001433.
- [16] Simons, M., Bekaert, D., Borsa, A., Donnellan, A., Fielding, E., Jones, C., Lohman, R., Lu, Z., Meyer, F., Owen, S. and Rosen, P.A., 2021, July. Nisar Requirements and Validation Approach for Solid Earth Science. In 2021 IEEE International Geoscience and Remote Sensing Symposium IGARSS (pp. 543-546). IEEE.
- [17] Rundle, J.B., S. Stein, **A. Donnellan**, D.L. Turcotte, W. Klein, C. Saylor, 2021, The Complex Dynamics of Earthquake Fault Systems: New Approaches to Forecasting and Nowcasting of Earthquakes, *Reports on Progress in Physics*, <https://doi.org/10.1088/1361-6633/abf893>.
- [18] Parker, J., **A. Donnellan**, R. Bilham, L. Grand Ludwig, J. Wang, M. Pierce, N. Mowry, S. Jänecke, 2021, Buried Aseismic Slip and Off-Fault Deformation on the Southernmost San Andreas Fault triggered by the 2010 El Mayor Cucapah Earthquake revealed by UAVSAR, *Earth and Space Science*, DOI: 10.1029/2021EA001682.
- [19] Parker, J. **A. Donnellan**, M. Glasscoe, 2021, Survey of Transverse Range Fire Scars in Ten Years of UAVSAR Polarimetry, *Earth and Space Science*, doi: 10.1029/2021EA001644.
- [20] Milliner, C., **A. Donnellan**, S.Aati, J-P. Avouac, R. Zinke, J. Dolan, K. Wang, R. Bürgmann, 2021, Bookshelf Kinematics and the Effect of Dilatation on Fault Zone Inelastic Deformation: Examples from Optical Image Correlation Measurements of the 2019 Ridgecrest Earthquake Sequence, *J. Geophys. Res.*, DOI: 10.1029/2020JB020551.
- [21] **Donnellan, A.**, 2021. Remote Sensing of Deformation and Disturbance to Monitor and Assess Infrastructure in Urban Environments. In *Advances in Remote Sensing for Infrastructure Monitoring* (pp. 137-157). Springer, Cham.
- [22] **Donnellan, A.**, J. Parker, M. Heflin, M. Glasscoe, G. Lyzenga, M. Pierce, J. Wang, J. Rundle, L. Grant Ludwig, R. Granat, M. Mirkhanian, N. Pulver, 2021, Improving Access to Geodetic Imaging Crustal Deformation Data Using GeoGateway, *Earth Science Informatics*, DOI: 10.1007/s12145-020-00561-7.
- [23] Dawson, T., C.B. DuRoss, R. Gold, K. Scharer, D. Ponti, T. Ladinsky, V.E. Langenheim, D. McPhillips, A. Morelan, C. Milliner, K. Kendrick, J. Hernandez, K. Hudnut, S. Akciz, S. Angster, J-P. Avouac, S. Bacon, J. Bachhuber, N. Barth, S. Bennett, L. Blair, K. Blake, S. Bork, B. Brooks, T. Bullard, W.P. Burgess, C. Chupik, M. DeFrisco, J. Delano, J. Dolan, **A. Donnellan**, T. Ericksen, E. Frost, G. Funning, N. Graehl, C. Gutierrez, E. Haddon, P. Holland, A. Hatem, J. Helms, C. Hitchcock, J.T. Jobe, R. Koehler, O. Kozaci, C. Madugo, R. Leeper, M. Mareschal, D. McPhillips, M. O'Neil, J. Nevitt, B. Olson, S. Padilla, J. Patton, B. Philibosian, A.J. Pickering, I. Pierce, C. Pridmore, N. Roth, D. Sandwell, G. Seitz, D. Singleton, B. Smith-Konter, E. Spangler, B. Swanson, K. Thomas, J. Treiman, F. Valencia, A. Williams, X. Xu, J. Zachariasen, J. Zimmerman, and R. Zinke, submitted, Field-based Observations of Surface Ruptures Associated with the 2019 Ridgecrest Earthquake Sequence, *Bull. Seism. Soc. Am.*
- [24] **Donnellan, A.**, G. Lyzenga, A. Ansar, C. Goulet, J. Wang, M. Pierce, 2020, Targeted High-Resolution Structure from Motion Observations over the M6.4 and M7.1 Ruptures of the Ridgecrest Earthquake Sequence, *Seismological Research Letters*, XX, 1–9, doi: 10.1785/0220190274.
- [25] Rundle, J.B., **A. Donnellan**, 2020, Nowcasting Earthquakes in Southern California with Machine Learning: Bursts, Swarms and Aftershocks May Be Related to Levels of Regional Tectonic Stress, *Earth and Space Science*, doi: 10.1029/2020EA001097.

- [26] Milliner, C. and **Donnellan, A.**, 2020. Using Daily Observations from Planet Labs Satellite Imagery to Separate the Surface Deformation between the 4 July Mw 6.4 Foreshock and 5 July Mw 7.1 Mainshock during the 2019 Ridgecrest Earthquake Sequence. *Seismological Research Letters*, doi: 10.1785/0220190271.
- [27] Brandenburg, S.J., Stewart, J.P., Wang, P., Nweke, C.C., Hudson, K., Goulet, C.A., Meng, X., Davis, C.A., Ahdi, S.K., Hudson, M.B., **Donnellan, A.**, Lyzenga, G., Pierce, M., Wang, J., Winters, M.A., Delisle, M-P., Lucey, J., Kim, Y., Gallien, T.W., Lyda, A., Yeung, J.S., Issa, O., Buckreis, T., Yi, Z., 2020, Ground Deformation Data from GEER Investigations of Ridgecrest Earthquake Sequence, *Seismological Research Letters*, <https://doi.org/10.1785/0220190291>.
- [28] Share, P-E., P. Tábořík, P. Štěpančíková, J. Stemberk, T.K. Rockwell, A. Wade, J.R. Arrowsmith, **A. Donnellan**, F.L. Vernon, and Y. Ben-Zion, 2020, Characterizing the uppermost 100 m structure of the San Jacinto fault zone southeast of Anza, California, through joint analysis of geologic, topographic, seismic and resistivity data, *Geophysical Journal International*.
- [29] Ponti, D.J., J.L. Blair, C.M. Rosa, K. Thomas, A.J. Pickering, S. Akciz, S. Angster, J-P. Avouac, J. Bachhuber, S. Bacon, S. Bennett, K. Blake, S. Bork, B. Brooks, T. Bullard, P Burgess, C. Chupik, T. Dawson, M. DeFrisco, J. Delano, S. DeLong, J. Dolan, **A. Donnellan**, C. DuRoss, T. Ericksen, E. Frost, G. Funning, R. Gold, N. Graehl, C. Gutierrez, E. Haddon, A. Hatem, J. Helms, J. Hernandez, C. Hitchcock, P. Holland, K. Hudnut, K. Kendrick, R. Koehler, O. Kozaci, T. Ladinsky, R. Leeper, C. Madugo, M. Mareschal, J. McDonald, D. McPhillips, C. Milliner, D. Mongovin, A. Morelan, J. Nevitt, M. O'Neal, B. Olson, M. Oskin, S. Padilla, J. Patton, B. Philibosian, I. Pierce, C. Pridmore, N. Roth, D. Sandwell, K. Scharer, G. Seitz, D. Singleton, B. Smith-Konter, E. Spangler, B. Swanson, J.T. Jobe, J. Treiman, F. Turner, A. Williams, X. Xu, J. Zachariasen, J. Zimmerman, R. Zinke, 2020, Documentation of surface fault rupture and ground deformation features produced by the Ridgecrest M6.4 and M7.1 earthquake sequence of July 4 and 5, 2019, *Seismological Research Letters*.
- [30] Heflin, M., **A. Donnellan**, J. Parker, G. Lyzenga, A. Moore, L. Grant Ludwig, J. Rundle, J. Wang, M. Pierce, 2020, Automated Estimation and Tools to Extract Positions, Velocities, Breaks, and Seasonal Terms from Daily GNSS Measurements: Illuminating Nonlinear Salton Trough Deformation, *Earth and Space Science*, doi: 10.1029/2019EA000644.
- [31] Rundle, J.B., Luginbuhl, M., Khapikova, P., Turcotte, D.L., **Donnellan, A.** and McKim, G., 2020. Nowcasting great global earthquake and tsunami sources. *Pure and Applied Geophysics*, 177(1), pp.359-368.
- [32] **Donnellan, A.**, Y. Lou, C. Padgett, A. Tanner, B. Hawkins, J. Parker, A. Ansar, M. Heflin, J. Green, R. Muellerschoen, 2019. Improving UAVSAR Results with GPS, Radiometry, and QUAKES Topographic Imager, *IEEE Aerospace Conference*, Big Sky, Montana, 2019.
- [33] Rundle, J.B., Giguere, A., Turcotte, D.L., Crutchfield, J.P. and **Donnellan, A.**, 2019. Global Seismic Nowcasting with Shannon Information Entropy. *Earth and Space Science*, <https://doi.org/10.1029/2018EA000464>.
- [34] **Donnellan, A.**, Green, J., Ansar, A., Muellerschoen, R., Parker, J., Tanner, A., Lou, Y., Heflin, M., Arrowsmith, R., Rundle, J., Ben-Zion, Y., DeLong, S., Grant Ludwig, L., 2018, July. Geodetic Imaging of Fault Systems from Airborne Platforms: UAVSAR and Structure from Motion. In *IGARSS 2018-2018 IEEE International Geoscience and Remote Sensing Symposium* (pp. 7878-7881). IEEE.
- [35] **Donnellan, A.**, J.W. Parker, M.B. Heflin, G.A. Lyzenga, L. Grant Ludwig, J.B. Rundle, J. Wang, M. Pierce, 2018, Fracture Advancing Step Tectonics Observed in the Yuha Desert and Ocotillo Following the 2010 M7.2 El Mayor – Cucapah Earthquake, *Earth and Space Science*.

- [36] **Donnellan, A.**, J. Parker, C. Milliner, T.G. Farr, M. Glasscoe, Y. Lou, B. Hawkins, 2018, UAVSAR and Optical Analysis of the Thomas Fire Scar and Montecito Debris Flows: Case Study of Methods for Disaster Response using Remote Sensing Products, *Earth and Space Science*.
- [37] **Donnellan, A.**, J. Green, A. Ansar, R. Muellershoen, J. Parker, A. Tanner, M. Heflin, R. Arrowsmith, J. Rundle, Y. Ben-Zion, S. DeLong, L. Grant Ludwig, 2018. Geodetic Imaging of Fault Systems from Airborne Platforms: UAVSAR and Structure from Motion. In *Geoscience and Remote Sensing Symposium (IGARSS)*, 2018 IEEE International (in press), IEEE.
- [38] **Donnellan, A.**, J. Green, J. Aletky, M. Glasscoe, R. Arrowsmith, Y. Ben-Zion, S. DeLong, 2017, Imaging of Earthquake Faults using Small UAVs as a Pathfinder for Air and Space Observations, *IEEE Aerospace Conference, Big Sky, Montana*, 2017.
- [39] **Donnellan, A.**, R. Arrowsmith, S. DeLong, 2017. Spatio-Temporal Mapping of Plate Boundary Faults in California using Geodetic Imaging, Special Issue "Advances in Lithological and Structural Mapping Using Earth Observation Data," K. Tansey and S. Grebby eds., *Geosciences*, 7, 15, doi:10.3390/geosciences7010015.
- [40] Rundle, J. B., D. L. Turcotte, **A. Donnellan**, L. Grant Ludwig, M. Luginbuhl, and G. Gong, 2016, Nowcasting earthquakes, *Earth and Space Science*, 3, doi:10.1002/2016EA000185.
- [41] Parker, J., M. Glasscoe, **A. Donnellan**, T. Stough, M. Pierce, J. Wang, 2016, Radar Determination of Fault Slip and Location in Partially Decorrelated Images, *Pure and Applied Geophysics*, 174: 2295, doi:10.1007/s00024-016-1403-z.
- [42] DeLong, S.B., **A. Donnellan**, D.J. Ponti, R.S. Rubin, G. Seitz, D.P. Schwartz, C.S. Prentice, T.E. Dawson, J.J. Lienkaemper, K.W. Hudnut, C. Rosa, A. Pickering, J.W. Parker, 2016, Tearing the terroir: Details and implications of surface rupture and deformation from the 24 August 2014 M6.0 South Napa earthquake, California, *Earth and Space Science*, 3, 416–430, doi:10.1002/2016EA000176.
- [43] **Donnellan, A.**, R. Arrowsmith, V. Langenheim, 2016, Select Airborne Techniques for Mapping and Problem Solving, in *Applied Geology in California* (book), eds. R. Anderson and H. Ferriz, Star Publishing, California, pp 541-566.
- [44] Rundle, J.B., J.R. Holliday, W.R. Graves, P.B. Rundle, B. Jeremic, S. Kunnath, R. Feltstykke, K. Mayeda, D.L. Turcotte, **A. Donnellan**, 2016, A Practitioner's Guide to Operational Real Time Earthquake Forecasting, in *Applied Geology in California* (book), eds. R. Anderson and H. Ferriz, Star Publishing, California, pp 983-1003.
- [45] Kargel, J.S., G.J. Leonard, D.H. Shugar, U.K. Haritashya, A. Bevington, E.J. Fielding, K. Fujita, M. Geertsema, Evan S. Miles, Jakob Steiner, S. Bajracharya, G.W. Bawden, D.F. Breashears, B. Collins, M.R. Dhital, **A. Donnellan**, M.T. Glasscoe, D. Green, K. Hudnut, C. Huyck, W.W. Immerzeel, N.R. Khanal, D. Kirschbaum, P.D.A. Kraaijenbrink, D. Lamsal, LIU Shiyin, D. McKinney, T.H. Painter, M. Pleasants, A. Sakai, SHANGGUAN Donghui, J.M. Shea, A.B. Shrestha, D. Stumm, M. van der Kooij, M.R. Yoder, Eric Anderson, Alton Byers, E. Czerwowska-Wisniewski, Teresa L. Evans, Marie-Laure Geai, Deo Raj Gurung, R. Heijenk, A. Hilborn, JIANG Liming, Randall Jibson, A. Käab, LV Mingyang, N.K. Nahirnick, NAN Zhuotong, S. Ojha, J. Olsenholler, K.C. Pratima, QI Yuan, B. Raup, D. Regmi, David R. Rounce, A. Shukla, K. Voss, WANG Xin, Brandon Weihs, David Wolfe, WU Lizong, YAO Xiaojun, and Neal Young, 2015, Geomorphic and geologic controls of geohazards induced by Nepal's 2015 Gorkha earthquake, *Science*, DOI: 10.1126/science.aac8353.
- [46] Yoder, M.R., K.W. Schultz, E.M. Heien, J.B. Rundle, D.L. Turcotte, J.W. Parker, **A. Donnellan**, 2015, The Virtual Quake earthquake simulator: A simulation based forecast of the El Mayor-Cucapah region and evidence of earthquake predictability, *Geophys. J. Int.*, 203, 1587-1604, doi: 10.1093/gji/ggv320.

- [47] Yoder, M.R., K.W. Schultz, E.M. Heien, J.B. Rundle, D.L. Turcotte, J.W. Parker, A. Donnellan, 2015, Forecasting earthquakes with the Virtual Quake simulator: Regional and fault-partitioned catalogs, in series International Association of Geodesy Symposia, doi: 10.1007/1345_2015_198.
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