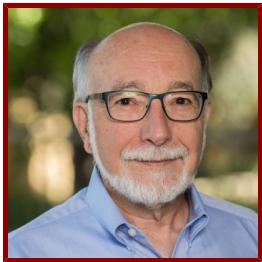


Stanford



William Ellsworth

Professor (Research) of Geophysics, Emeritus

Curriculum Vitae available Online

Bio

BIO

My research interests can be broadly defined as the study of active faults, the earthquakes they generate and the physics of the earthquake source. A major objective of my work is to improve our knowledge of earthquake hazards through the application of physics-based understanding of the underlying processes. As Co-Director of the Stanford Center for Induced and Triggered Seismicity, my students, postdocs and I conduct multi-disciplinary studies into the causes and consequences of anthropogenic earthquakes in a wide variety of settings. I have also long been committed to earthquake risk reduction, specifically through the transfer of scientific understanding of the hazard to people, businesses, policymakers and government agencies. Before coming to Stanford in 2015, I was a research geophysicist at the U. S. Geological Survey in Menlo Park, California for more than 40 years where I focused on problems of seismicity, seismotectonics, probabilistic earthquake forecasting, and earthquake source processes

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Geophysics

ADMINISTRATIVE APPOINTMENTS

- Geophysicist, U. S. Geological Survey, (1971-2008)
- Chief, Branch of Seismology, U. S. Geological Survey, (1982-1988)
- Consulting Professor of Geophysics, Stanford University, (1992-2008)
- Chief Scientist, Earthquake Hazards Team, U. S. Geological Survey, (2002-2005)
- Senior Research Geophysicist, U. S. Geological Survey, (2008-2015)
- Professor (Research), Stanford University, (2015- present)
- Co-Director, Stanford Center for Induced and Triggered Seismicity, Stanford University, (2015-2023)

HONORS AND AWARDS

- Meritorious Service Award, U. S. Department of the Interior (1990)
- Gilbert Fellow, U. S. Geological Survey (1993)
- Fellow, American Geophysical Union (2001)
- Distinguished Service Award, U. S. Department of the Interior (2010)
- EarthScope National Lecturer, National Science Foundation (2012)
- Gutenberg Lecture, American Geophysical Union (2018)
- Harry Fielding Reid Medal, Seismological Society of America (2021)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- President, Seismological Society of America (2007 - 2009)

PROFESSIONAL EDUCATION

- Ph.D, Massachusetts Institute of Technology , Geophysics (1978)
- M. S., Geophysics , Stanford University (1971)
- B.S., Stanford University , Physics (1971)

Teaching

COURSES

2022-23

- Introductory Seismology: GEOPHYS 130 (Aut)
- Seismology: GEOPHYS 385Q (Aut, Win, Spr)

2021-22

- Earthquake Seismology, Deformation, and Stress: GEOPHYS 385L (Sum)
- Seismology: GEOPHYS 385Q (Aut, Win, Spr, Sum)

2020-21

- Earthquake Seismology, Deformation, and Stress: GEOPHYS 385L (Aut, Win, Sum)
- Introductory Seismology: GEOPHYS 130 (Aut)
- Seismology: GEOPHYS 385Q (Aut, Win, Sum)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Axel Wang, Taiyi Wang

Publications

PUBLICATIONS

- **Reactivation of Precambrian Faults by Deep Wastewater Injection in Midland Basin, Texas, and Performance Evaluation of Seismic Response Areas** *BULLETIN OF THE SEISMOLOGICAL SOCIETY OF AMERICA*
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- **A comprehensive suite of earthquake catalogues for the 2016-2017 Central Italy seismic sequence.** *Scientific data*
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- **QuakeFlow: a scalable machine-learning-based earthquake monitoring workflow with cloud computing** *GEOPHYSICAL JOURNAL INTERNATIONAL*
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- **DevelNet: Earthquake Detection on Developcorder Films with Deep Learning: Application to the Rangely Earthquake Control Experiment** *SEISMOLOGICAL RESEARCH LETTERS*
Wang, K., Ellsworth, W., Beroza, G. C., Zhu, W., Rubinstein, J. L.
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- **Reply to: Multiple induced seismicity mechanisms at Castor underground gas storage illustrate the need for thorough monitoring.** *Nature communications*
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Zhu, W., McBrearty, I. W., Mousavi, S., Ellsworth, W. L., Beroza, G. C.
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Schultz, R., Ellsworth, W. L., Beroza, G. C.
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- **A Strategy for Choosing Red-Light Thresholds to Manage Hydraulic Fracturing Induced Seismicity in North America** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
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- **Revisiting the Timpson Induced Earthquake Sequence: A System of Two Parallel Faults** *GEOPHYSICAL RESEARCH LETTERS*
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- **Geodetic Slip Model of the 3 September 2016 M-w 5.8 Pawnee, Oklahoma, Earthquake: Evidence for Fault-Zone Collapse** *SEISMOLOGICAL RESEARCH LETTERS*
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- **Seismicity During the Initial Stages of the Guy-Greenbrier, Arkansas, Earthquake Sequence** *Journal of Geophysical Research – Solid Earth*
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2016; 121 (12): 8813-8832
- **Seismic-Hazard Forecast for 2016 Including Induced and Natural Earthquakes in the Central and Eastern United States** *SEISMOLOGICAL RESEARCH LETTERS*
Petersen, M. D., Mueller, C. S., Moschetti, M. P., Hoover, S. M., Llenos, A. L., Ellsworth, W. L., Michael, A. J., Rubinstein, J. L., McGarr, A. F., Rukstales, K. S.
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- **USGS scientists open to change** *SCIENCE*
Beroza, G. C., Ellsworth, W. L., McNutt, M. K.
2016; 353 (6303): 998
- **Stress drop estimates of potentially induced earthquakes in the Guy-Greenbrier sequence** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
Huang, Y., Beroza, G. C., Ellsworth, W. L.
2016; 121 (9): 6597-6607
- **Scaling relation between earthquake magnitude and the departure time from P wave similar growth** *GEOPHYSICAL RESEARCH LETTERS*
Noda, S., Ellsworth, W. L.
2016; 43 (17): 9053-9060
- **Fluid-faulting evolution in high definition: Connecting fault structure and frequency-magnitude variations during the 2014 Long Valley Caldera, California, earthquake swarm** *JOURNAL OF GEOPHYSICAL RESEARCH-SOLID EARTH*
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