

## Craig Howard Jones

Department of Geological Sciences  
Campus Box 399  
University of Colorado, Boulder  
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### Education

Ph.D., Geophysics October, 1987  
Massachusetts Institute of Technology,  
"A Geophysical and Geological Investigation of Extensional  
Structures, Great Basin, Western United States,"  
Peter H. Molnar, advisor.

B.S., Geophysics and Planetary Science (with honors) June, 1981  
California Institute of Technology.

### Professional Experience

Professor July 2015-  
Associate Professor August 1998-June 2015  
Research Assistant Professor September 1996-June 1998  
Dept. of Geological Sciences

Fellow June 1999-  
Research Associate December 1993-August 1998  
CIRES  
University of Colorado, Boulder

Research Asst. Professor March 1992-November 1993  
Research Associate

Postdoctoral Research Fellow January 1991-February 1992  
Center for Neotectonic Studies,  
University of Nevada Reno.

Staff Scientist (part-time) November 1990-December 1990  
California Institute of Technology.

Research Fellow in Geophysics November 1989-October 1990  
California Institute of Technology.

Weizmann Postdoctoral Fellow  
California Institute of Technology.

November 1987-October 1989

Research Assistant  
(Teaching Assistant Jan-May 1985)  
Massachusetts Institute of Technology.

1981-1987

Research Assistant  
California Institute of Technology.

June - September, 1980

Teaching Experience: (*Italicized* are courses developed by me)

Geology 5001, *Physics and Chemistry of the Earth* (with Lang Farmer, was 5700) Fall 2004, 2006, 2008, Spring 2012, 2014, 2016, 2018, 2020

Geology 6650 Earthquake Seismology (with A. F. Sheehan) Fall 2017

Geology 4717/5717, *Field Seminar in Western U.S. Tectonics* Spring 2000, 2002, 2003, 2005, 2007, 2009, 2011, 2013, 2015, 2017, 2020

Geology 5690, *Tectonic History of the Western U.S.* Fall 1999, Spring 2002, F 2003, 2005, Spring 2010, F 2013, 2016

Geology 4714/5714, Field Geophysics Fall 1998, 2000, 2003, 2005, 2008-2013, 2015-9

Geology 5703, Tectonics seminar Fall 2015, Spring 2018, Fall 2019

First year seminar FYS-0049 How Mountains Made Modern America Fall 2018

Geology 1020, Introduction to Earth History S 1999, Fall 2000, 2001, 2002, S 2004, 2005, F2006, S2008, 2011, 2012, 2014

Geology/Phys/Astr 6650, Geophysics seminar Fall 2009

Geology 5700, Seminar on uplift of Rockies and adjoining areas (with Bob Anderson) Fall 2005

Geology 5750, Extensional Tectonics of the Basin and Range (1 semester hour) Spring 1998

Geology 1140, Our Dynamic Earth II (non-majors geophysics/geology) Spring 1996

Geology 6650, Physics and History of the Rocky Mountains and Colorado Plateau (with A. F. Sheehan) Spring 1994

Seminar: History and Physics of the Basin and Range (with S. G. Wesnousky) Spring 1992

Teaching Asst., M.I.T. Field Geophysics Camps 1983, 1985, 1987

Field Experience (major projects only)

Passive seismology experiment, Sierra Nevada (SNEP) Spring 2005-2007

Paleomagnetic sampling, Utah/Colorado and California Fall 2000, 2002-2004, 2007

Short-period/broadband array experiment, Marlborough region, South Island, New Zealand December 2000-May 2002

Short-period array experiment, China Lake Naval Weapons Center November 1998-May 2000

Teleseismic tomography experiment, Sierra Nevada May 1997-October 1997

Teleseismic CPGB experiment deployment, Utah and Nevada October 1994-June 1995

Teleseismic and refraction experiment deployment, Sierra Nevada June-Oct, 1993; June-Oct 1994

Paleomagnetic sampling, Lake Mead area several months from 1988 to 1995

Seismological deployment, Sierra Nevada May-Oct 1988

Geologic mapping, Alexander Hills (Death Valley area)                      several months, 1984-1986  
 Microearthquake deployment, northern Utah    Aug-Oct 1983  
 MIT Field Geophysics Camps (as T.A.), southern Nevada and SE Calif.    1983, 1985, 1987

### Computer Experience

Operating systems/computers: UNIX, Macintosh, DOS, some older OSes.

Languages: Fortran, Basic (and RealBasic), C, Tk/Tcl, Perl, Xojo.

Most of the programming has focused on data reduction, analysis, and display and has included creation of interactive codes with a graphical interface, including several self-contained GUI geophysical software programs.

### Awards, Honors and Fellowships

Outstanding Paper, SGT section, Geol. Soc. Am.	2018
Exceptional reviewer, <i>Geosphere</i>	2012
Exceptional reviewer, <i>GSA Today</i>	2008
Best Presentation for 2005 (Past Presidents' Award), Colorado Scientific Society	2005
Geological Society of America Fellow	2002
Geological Society of America Distinguished Service Award	2001
Editors' Citation for Excellence in Refereeing, <i>Tectonics</i>	1989
Weizmann Postdoctoral Fellow, California Institute of Technology	1987-1989
Amoco Fellowship, Massachusetts Institute of Technology	1986-1987
Chevron Fellowship, California Institute of Technology	1980-1981

Professional Service

Chair, Geophysics Ph.D. Program, Univ. Colorado	August 2009-
Associate Editor, <i>Geosphere</i>	December 2004-
Publications Committee, Geological Society of America	July 2014-June 2018
Associate Chair for Graduate Studies, Geological Sciences	July 2011-June 2014
GSA Nominations committee (emergency replacement)	2013
Member, NSF Earthscope panel	2010-2012
Co-chair, Continental Deformation Thematic Working Group for EarthScope Science	October 2008--2010
Publications Committee, Geological Society of America	July 2004-June 2007
Organizing Committee, “Thermal Processes in the Context of EarthScope” workshop	March 2004
Electronic Journal Committee, Geological Society of America	Summer 2003
Associate Editor, <i>Tectonics</i>	2000-2003
Technical Program co-chair, 1999 Geological Society of America national meeting (also entails membership in GSA’s Annual Program Committee, 1998-2000)	
Editorial board, <i>Geology</i> magazine	1990-1992
Reviewed articles for <i>Science</i> , <i>Nature</i> , <i>Geology</i> , <i>Tectonics</i> , <i>Geological Society of America Bulletin</i> , <i>Bulletin of the Seismological Society of America</i> , <i>Tectonophysics</i> , <i>Geophysical Journal International</i> , <i>Geosphere</i> , <i>Journal of Geophysical Research</i> , <i>Geophysical Research Letters</i> , <i>GSA Today</i> , <i>Geol. Soc. America Special Papers</i> , <i>G-cubed</i> , <i>Earth and Planetary Science Letters</i> , <i>Seismotectonics of Nepal Himalaya</i> special volume and <i>Reviews in Mineralogy and Geochemistry</i> .	

Professional Affiliations

American Geophysical Union  
Geological Society of America

Students Advised

- Charlie Wilson, Ph.D., “Constraining Lithospheric Deformation Mechanisms with Teleseismic Conversions,” 2003.
- Joya Tétreault, Ph.D., “Paleomagnetic, structural, and seismological evidence for oblique-slip deformation in fault-related folds in the Rocky Mountain Foreland, Colorado Plateau, and central Coast Ranges”, November 2006.
- Heidi Reeg, M.S., “Seismic Structure of the Crust and upper Mantle of the Sierra Nevada, California,” August 2008.
- William Levandowski, Ph.D., "Geophysical investigations of the origins and effects of density variations in the crust and upper mantle beneath the western and central United States", March 2014.

Melissa Bernardino, PhD, “Decrypting the upper mantle seismic structure of the Sierra Nevada, CA and vicinity: Insights from Vp/Vs, anisotropy, and attenuation,” defended May 2019.

Kyren Bogolub, PhD student

### Student Committees

Jefferson Yarce (PhD defense, spring 2020)

Lindsay Harrison (advisory (1<sup>st</sup> year) committee, Jan 2020)

Vanessa Gabel (advisory (1<sup>st</sup> year) committee Oct 2019)

Hongda Wang (comprehensive exam, Nov. 2019)

Lili Feng (PhD defense, August 2019)

Wei Mao (comprehensive exam, April 2019)

Ashley Bellas (comprehensive exam, Nov 2018)

Nadine Reitman (comprehensive exam, May 2018, committee meeting spring 2019)

Anne Fetrow (comprehensive exam, Nov 2018, 1<sup>st</sup> year PhD committee meeting, fall 2016, 17, 19)

Barra Peak (advisory (1<sup>st</sup> year) committee, fall 2019)

Katherine Pfeiffer (1<sup>st</sup> year MS meeting, fall 2016)

Jim Mize (1<sup>st</sup> year MS meeting, fall 2016; MS defense 2017)

Jiayi Xie (comprehensive exam, fall 2014, PhD defense May 2016)

Xi Liu (comprehensive exam, fall 2014, PhD defense May 2016)

Dan Zietlow (comprehensive exam, fall 2012, PhD defense March 2016)

Colin Sturrock (1<sup>st</sup> year committee meeting, fall 2015, comprehensive exam Dec 2017, committee meeting spring 2019)

Rachel Havranek (1<sup>st</sup> year committee meeting, fall 2015)

Rachel Landman (comprehensive exam, fall 2012, PhD defense fall 2015)

Colin O'Rourke (comprehensive exam, fall 2012, PhD defense fall 2015)

William Yeck (comprehensive exam, fall 2011, PhD defense, spring 2015)

Joshua Johnson (MS defense, April 2015)

Jenny Nakai (comprehensive exam, summer 2014, PhD defense April 2018)

Weisen Shen (PhD defense, March 2014)

Danny Feucht (comprehensive exam, fall 2013; PhD summer 2017)

Lesley Butcher (MS defense, summer 2013)

Henry Berglund (MS defense, summer 2010)

Kevin Befus (MS defense, Spring 2010)

Nan Zhang (Physics, comprehensive exam fall 2009, PhD defense spring 2011)  
 Katherine Dayem (Ph.D. committee, summer 2009)  
 Walter Szeliga (comprehensive exam, spring 2008; PhD defense summer 2010)  
 Fan-Chi Lin (Physics, comprehensive exam committee, spring 2008; PhD defense fall 2009)  
 Wei Leng (comprehensive exam committee, spring 2008; PhD defense spring 2010)  
 Morgan Moschetti (comprehensive exam, physics, spring 2007; PhD defense summer 2009)  
 Chris Harig (comprehensive exam, spring 2007; PhD defense, summer 2010)  
 Nate Bradley (comprehensive exam, spring 2007; PhD defense Summer 2010)  
 Greg Benson (geophysics comprehensive exam, fall 2006)  
 Katherine Dayem (comprehensive exam, fall 2005)  
 Gaspar Monsalve (comprehensive exam, spring 2005)  
 Mary Beth Cheversia (preliminary/comprehensive exam, fall 2004, ongoing mtgs, 2005-7,  
 PhD defense summer 2010)  
 Treasure Bailey (preliminary exam, spring 2004, comprehensive exam spring 2005, ongoing  
 mtgs 2006, PhD defense 2010)  
 Vicki Rystrom (M.S., 2003)  
 Eric Cannon (preliminary exam, spring 2002)  
 Oliver Boyd (preliminary exam, spring 2002; comps, 2002; PhD 2004)  
 Lynda Lastowka (M.S., defended summer 2001)  
 Otina Fox (preliminary exam, fall 2000)

#### Students Supervised (not thesis advisor)

Colin Shaw, M.S. student, mapping in Gale Hills, southern Nevada, fall 1994 to spring, 1995.

Sierran Paradox Experiment fieldwork, summer 1997, undergraduates working under me under NSF Research Experiences for Undergraduate (REU) grant: Seth Mueller, Jason Edwards, Amy Jiron, Karen Doty, Sarah Keyser.

Jason Edwards, undergraduate, earthquake locations in the southern Sierra, fall 1997 (presented talk at Seismological Society of America meeting)

Kevin Reitz, earthquake locations in the southern Sierra, summer 1998 (on Sierran REU NSF grant).

David Oliver, undergraduate, literature searching for seismic velocity structures, fall 1999.

Daniel Brothers, working under supervision of grad student Charlie Wilson, picking arrival times of teleseisms for New Zealand and Coso datasets, 2002

Mariela Salas, SMART student (from Univ. Puerto Rico), assisting Joya Tetreault in California paleomag study (her project to do magnetostratigraphy of Etchegoin Fm), summer 2003

Byron Boyle, mentorship/SURF, magnetostratigraphy of Mesozoic sediments, Colorado Plateau, spring/summer 2003 (working mainly with Joya Tetreault)

Max Knop, assisting in fieldwork, California paleomag project, summer 2003.

Asa Firestone, independent study on paleomagnetism in western Colorado, fall 2004.

Amanda Thomas, IRIS intern from Georgia Inst. Technology, Sierra Nevada seismology, summer 2005.

Will Levandowski, IRIS intern from Princeton Univ., Sierra Nevada Seismology, summer 2006.

Ashley Grijalva, RESESS intern from Univ. Texas, El Paso, Pn tomography, summer 2012.

### Publications

*CU Students indicated by italics*

#### Refereed Publications (including ms accepted for publication)

Ryan, J., A. M. Frassetto, O. Hurd, **C. H. Jones**, J. Unruh, G. Zandt, H. Gilbert, and T. J. Owens, Unusually Deep Earthquakes in the Central Sierra Nevada: Foundering Ultramafic Lithosphere?, *Geosphere*, 16 (1), 357-377, doi: 10.1130/GES02158.1, 2020.

*Bernardino, M., C. H. Jones*, W. Levandowski, I. Bastow, T. J. Owens, H. Gilbert, A multicomponent Isabella anomaly: Resolving the physical state of the Sierra Nevada upper mantle from Vp/Vs-anisotropy tomography, *Geosphere*, 15, 2018-2042, 2019. doi: 10.1130/GES02093.1.

*Levandowski, W. B., C. H. Jones, L. A. Butcher and K. Mahan*, Lithospheric density models reveal evidence for Cenozoic uplift of the Colorado Plateau and Great Plains by lower-crustal hydration, *Geosphere*, 14, 1150-1164. doi:10.1130/GES01619.1, 2018.

*Levandowski, W. B., and C. H. Jones*, Linking Sierra Nevada, California uplift to subsidence of the Tulare basin using a seismically derived density model, *Tectonics*, 34, 2349-2358, doi: 10.1002/2015TC003824, 2015.

Molnar, P., P. England, **C. H. Jones**, Mantle dynamics, isostasy, and the construction and support of high terrain, *JGR*, 120 (3), 1932-1957, doi: 10.1002/2014JB011724, 2015.

**Jones, C. H.**, Reeg, H., G. Zandt, H. Gilbert, T. J. Owens, J. Stachnik, P-wave tomography of potential convective downwellings and their source regions, Sierra Nevada, California, *Geosphere*, in press, doi:10.1130/GES00961.1, 2014.

*Levandowski, W.B., C.H. Jones*, W. Shen, M.H. Ritzwoller and V. Schulte-Pelkum, Crustal and upper mantle density variations beneath the western U.S.: Origins of topography in the Western US: Mapping crustal and upper mantle density variations using a uniform seismic velocity model, *J. Geophys. Res.*, doi: 10.1002/2013JB010607, 2014

Unruh, J. R., E. Hauksson, and **C. H. Jones**, Internal deformation of the Southern Sierra Nevada microplate associated with foundering lower lithosphere, California, *Geosphere*, 10(1), 107-128, doi:10.1130/GES00936.1, 2014.



- Levandowski, W., **C. H. Jones**, H. Reeg, A. Frassetto, H. Gilbert, G. Zandt, and T. J. Owens, Seismological estimates of means of isostatic support of the Sierra Nevada, *Geosphere*, 9(6), 1552-1561, doi: 10.1130/GES00905.1, 2013.
- Farmer, G.L., A. F. Glazner, W. T. Kortmeier, M. A. Cosca, **C. H. Jones**, J. E. Moore, R. A. Schweickert, Mantle lithosphere as source of post-subduction magmatism, northern Sierra Nevada, California, *Geosphere*, 9(5), 1102-1124, doi: 10.1130/GES00885.1, 2013.
- Gilbert, H., Y. Yang, D. W. Forsyth, **C.H. Jones**, T.J. Owens, G. Zandt, and J.C. Stachnik, Imaging lithospheric foundering in the structure of the Sierra Nevada, *Geosphere*, 8(6), 1310-1330, doi: 10.1130/GES00790.1, 2012
- Schulte-Pelkum, V, G. P. Biasi, A. F. Sheehan, and **C. H. Jones**, Differential motion between upper crust and lithospheric mantle in the Central Basin and Range, *Nature Geoscience*, 4(9), 619-623, doi: 10.1038/NGEO1229, 2011.
- Frassetto, A., G. Zandt, H. Gilbert, T. J. Owens, and **C. H. Jones**, Structure of the Sierra Nevada from receiver functions and implications for lithospheric foundering, *Geosphere*, 7(4), 898-921, doi: 10.1130/GES00570.1, 2011.
- Yang, Y.; M. H. Ritzwoller, and **C. H. Jones**, Crustal structure determined from ambient noise tomography near the magmatic centers of the Coso region, southeastern California, *Geochem. Geophys. Geosyst.*, 12 (2), Q02009, DOI:10.1029/2010GC003362, 2011.
- Jones, C. H.**, G. L. Farmer, B. Sageman, and S. Zhong, Hydrodynamic Mechanism for the Laramide Orogeny, *Geosphere*, 7(1), 183-201, doi: 10.1130/GES00575.1, 2011.
- Frassetto, A., G. Zandt, H. Gilbert, T. J. Owens, and **C. H. Jones**, Improved imaging with phase-weighted common-conversion-point stacks of receiver functions, *Geophys. J. Int.*, doi: 10.1111/j.1365-246X.2010.04617.x, 182 (1), 368-374, 2010.
- Mueller, K., G. Kier, T. Rockwell, and **C. H. Jones**, Quaternary rift-flank uplift of the Peninsular Ranges in Baja and Southern California by removal of mantle lithosphere, *Tectonics*, doi:10.1029/2007TC002227, 28, TC5003, 2009.
- Tetreault, J.*, **C. H. Jones**, E. Erslev, M. Hudson, S. Larson, and S. Holdaway, Paleomagnetic and structural evidence for oblique-slip in a fault-related fold, Grayback Monocline, Colorado, *Geol. Soc. Am. Bull.*, 120 (7/8); p. 877–892; doi: 10.1130/B26178.1, 2008.
- Boyd, O. S.*, M. K. Savage, A. F. Sheehan, **C. H. Jones**, Illuminating the plate interface structure beneath Cook Strait, New Zealand with receiver functions, *J. Geophys. Res.* 112 (B6), B06310, <http://dx.doi.org/10.1029/2006JB004552>, 2007
- Gilbert, H., **C. Jones**, T. J. Owens, and G. Zandt, Imaging Sierra Nevada Lithospheric Sinking, *EOS*, 88 (21), pp. 225 & 229, May 22, 2007
- Jones, C. H.**, G. L. Farmer, and J. R. Unruh, Tectonics of Pliocene removal of lithosphere of the Sierra Nevada, California, *Geol. Soc. Am. Bull.*, 116 (11/12), 1408-1422, 2004.  
<http://www.gsa-journals.org/gsaonline/?request=get-abstract&doi=10.1130%2FB25397.1>

- Wilson, C. K., C. H. Jones, A. F. Sheehan, P. Molnar, O. S. Boyd*, Distributed deformation in the lower crust and upper mantle beneath a continental strike-slip fault zone: Marlborough fault system, South Island, New Zealand, *Geology*, *32*, 837-840, 2004.  
<http://www.gsa-journals.org/gsaonline/?request=get-abstract&doi=10.1130%2FG20657.1>
- Zandt, G., H. Gilbert, T. J. Owens, M. Ducea, J. Saleeby, and **C. H. Jones**, Active foundering of a continental arc root beneath the southern Sierra Nevada, California, *Nature*, *431*, 41-46, 2004.
- Boyd, O., C. H. Jones, A. F. Sheehan*, Foundering lithosphere imaged beneath the southern Sierra Nevada, California, USA, *Science*, *305*, 660-662, 2004.  
<http://www.sciencemag.org/cgi/content/short/305/5684/660>
- Molnar, P. H., and **C. H. Jones**, A test of laboratory based rheological parameters of olivine from an analysis of late Cenozoic convective removal of mantle lithosphere beneath the Sierra Nevada, California, USA, *Geophysical Journal International*, doi: 10.1111/j.1365-246X.2004.02138, *156*, 555-564, 2004.
- Wilson, C. K., C. H. Jones, and H. J. Gilbert*, A single-chamber silicic magma system inferred from shear-wave discontinuities of the crust and uppermost mantle, Coso geothermal area, California, *J. Geophysical Research*, *108* [B5], 10.1029/2002JB001798, 2003.  
<http://www.agu.org/pubs/crossref/2003/2002JB001798.shtml>
- Jones, C. H.**, User-driven Integrated Software Lives: "PaleoMag" Paleomagnetism Analysis on the Macintosh, *Computers and Geosciences*, *28* (10), 1145-1151, 2002.
- Wannamaker, P. E., J. M. Bartley, A. F. Sheehan, **C. H. Jones**, A. R. Lowry, Trevor A. Dumitru, Todd A. Ehlers, W. S. Holbrook, G. L. Farmer, M. J. Unsworth, D. B. Hall, D. S. Chapman, D. A. Okaya, B. E. John, and J. A. Wolfe, Great Basin-Colorado Plateau transition in central Utah: An interface between active extension and stable interior, in *The Geologic Transition, High Plateaus to Great Basin: A symposium and field guide: The Mackin Volume*, ed. by M. C. Erskine, J. E. Faulds, J. M. Bartley and P. Rowley, *Utah Geol. Assoc. UGA-30/Amer. Assoc. Petr. Geol. Guideb. GB78*, Cedar City, Utah, September 20-23, p. 1-38, 2001.
- Jones, C. H.**, L. J. Sonder, and J. R. Unruh, Lithospheric gravitational potential energy and past orogenesis: Implications for conditions of initial Basin and Range and Laramide deformation, *Geology*, *26*, 639-642, 1998.  
[http://www.gsa-journals.org/gsaonline/?request=get-abstract&doi=10.1130%2F0091-7613\(1998\)026%3C0639:LGPEAP%3E2.3.CO%3B2](http://www.gsa-journals.org/gsaonline/?request=get-abstract&doi=10.1130%2F0091-7613(1998)026%3C0639:LGPEAP%3E2.3.CO%3B2)
- Jones, C. H.**, and R. A. Phinney, Seismic structure of the lithosphere from teleseismic converted arrivals observed at small arrays in the southern Sierra Nevada and vicinity, California, *Journal of Geophysical Research*, *103*, 10,065-10,090, 1998.
- Unruh, J.R., Sonder, L.J., and **Jones, C.H.**, Relation of gravitationally driven lithospheric extension to low slip-rate faults and regional seismic hazards in the western United States, in Lund, W.R., ed., Proceedings Volume, Basin and Range Province Seismic-Hazards Summit, Western States Seismic Policy Council: *Utah Geological Survey Miscellaneous Publication 98-2*, p. 167-179, 1998.

- Sheehan, A. F., **C. H. Jones**, M. K. Savage, S. Ozalaybey, and J. M. Schneider, Contrasting lithospheric structure beneath the Colorado Plateau and Great Basin: Initial results from Colorado Plateau - Great Basin PASSCAL experiment, *Geophysical Research Letters*, 24 (21), 2609-2612, 1997.
- Jones, C.H.**, J. R. Unruh, and L. J. Sonder, The role of gravitational potential energy in active deformation in the southwestern United States, *Nature*, 381 (6577), 37-41, 1996.
- Wernicke, B., R. Clayton, M. Ducea, **C. H. Jones**, S. Park, S. Ruppert, J. Saleeby, J. K. Snow, L. Squires, M. Fliedner, G. Jiracek, R. Keller, S. Klemperer, J. Luetgert, P. Malin, K. Miller, W. Mooney, H. Oliver, and R. Phinney, Origin of high mountains in the continents: The southern Sierra Nevada, *Science*, 271, 190-193, 1996.
- Sheehan, A. F., G. A. Abers, **C. H. Jones**, and A. Lerner-Lam, Crustal thickness variations across the Colorado Rocky Mountains from teleseismic receiver functions, *J. Geophys. Res.*, 100, 20,391-20,404, 1995.
- Park, S. K., R. Clayton, M. Ducea, B. Wernicke, **C. H. Jones**, and S. Ruppert, Project combines seismic and magnetotelluric surveying to address the Sierran root question, *EOS*, 76 (30), 297-8, July 25, 1995.
- Wesnousky, S. G., and **C. H. Jones**, Slip partitioning, spatial and temporal changes in the regional stress field, and the relative strength of active faults in the Basin and Range, *Geology*, 22, 1031-1034, 1994. [http://www.gsaonline.org/gsaonline/?request=get-abstract&doi=10.1130%2F0091-7613\(1994\)022%3C1031:OSSPSA%3E2.3.CO%3B2](http://www.gsaonline.org/gsaonline/?request=get-abstract&doi=10.1130%2F0091-7613(1994)022%3C1031:OSSPSA%3E2.3.CO%3B2)
- Sonder, L. J., **C. H. Jones**, S. L. Salyards, and K. M. Murphy, Vertical-axis rotations in the Las Vegas Valley Shear Zone, southern Nevada: Paleomagnetic constraints on kinematics and dynamics of block rotations, *Tectonics*, 13 (4), 769-788, 1994. <http://www.agu.org/journals/tc/tc9404/94TC00352.pdf>
- Savage, M. K., Li Li, J. P. Eaton, **C. H. Jones**, and J. N. Brune, Earthquake refraction profiles of the root of the Sierra Nevada, *Tectonics*, 13 (4), 803-817, 1994.
- Jones, C. H.**, H. Kanamori, and S. W. Roecker, Missing roots and mantle "drips:" Regional  $P_n$  and teleseismic arrival times in the Southern Sierra Nevada and vicinity, California, *J. Geophys. Res.*, 99 (B3), 4567-4601, 1994.
- Jones, C. H.**, B. P. Wernicke, G. L. Farmer, J. D. Walker, D. S. Coleman, L. W. McKenna, and F. V. Perry, Variations across and along a major continental rift: An interdisciplinary study of the Basin and Range Province, western USA, *Tectonophysics*, 213, 57-96, 1992.
- Magistrale, H., H. Kanamori, and **C. H. Jones**, Forward and inverse three-dimensional P-wave velocity models of the southern California crust, *J. Geophys. Res.*, 97, 14,115-14,135, 1992.
- Jones, C. H.**, and S. G. Wesnousky, Variations in strength and slip rate along the San Andreas Fault system, *Science*, 256, 83-86, 1992.
- Jones, C. H.**, Is extension in Death Valley accommodated by thinning of the mantle lithosphere beneath the Sierra Nevada, California?, *Tectonics*, 6, 449-473, 1987.

MIT 1985 Field Geophysics Course (**C. H. Jones**, M. R. Nelson, G. Abers, C. Decker, J. Hegley, R. Herrmann, M. Kohn, T. Madden, R. Manikkalingam, J. Matarese, D. Meinholz, P. Molnar, and C. Ruppel) and S. Biehler, A geophysical investigation of the northern Panamint Valley, Inyo County, California: Evidence for possible low-angle normal faulting at shallow depth in the crust, *J. Geophys. Res.*, *92*, 10427-10441, 1987.

Nelson, M. R., and **C. H. Jones**, Paleomagnetism and crustal rotations along a shear zone, Las Vegas Range, southern Nevada, *Tectonics*, *6*, 13-33, 1987.

Refereed Publications as a minor member of a large group:

Fliedner, M.M., S. Ruppert, and Southern Sierra Nevada Continental Dynamics Working Group (**C. H. Jones** 9th of 14 listed), Three-dimensional crustal structure of the southern Sierra Nevada from seismic fan profiles and gravity modeling, *Geology*, *24*, 367-370, 1996.

Invited Publications (no peer review)

**Jones, C. H.**, and J. B. Saleeby, Introduction: Geodynamics and Consequences of Lithospheric Removal in the Sierra Nevada, California. *Geosphere*, *9*(2), 188–190.  
doi:10.1130/GES00907.1, 2013.

Sonder, L. J., and **C. H. Jones**, Western United States extension: How the West was widened, *Annual Review of Earth and Planetary Sciences*, *27*, 417-462, 1999.  
<http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.earth.27.1.417>

**Jones, C. H.**, How faults accommodate plate motion [Perspective], *Science*, *300*, 1105-1106, 2003. <http://www.sciencemag.org/cgi/content/summary/300/5622/1105>

Non-Refereed Publications

**Jones, C. H.**, H. Gilbert, G. Zandt, and T. Owens, The Sierra Nevada EarthScope Project: A first report from the broadband FlexArray, *IRIS Newsletter*, pp. 12-14, Nov. 2006.  
<[http://www.iris.edu/news/IRISnewsletter/2006/3/2006\\_Issue3NewsletterHi.pdf](http://www.iris.edu/news/IRISnewsletter/2006/3/2006_Issue3NewsletterHi.pdf)>

*Wilson, C. K.*, and **C. H. Jones**, Using Antelope for PASSCAL field data management, *IRIS DMS Electronic Newsletter*, *4*, no. 2,  
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#### Colloquia (since 2000)

- Rocky Mountain Map Society, “How the Sierra Nevada Made Colorado,” Denver, Colorado, 10 September 2019.
- Mineral King (campfire talk), “The Hidden Geology of the Sierra Nevada”, Sequoia National Park, 4 August 2018, 27 July 2019.
- Powder Keg Brewing Company, "Making the Rockies by Drowning Colorado," Tuesday Nerd Talks, 20 February 2018.
- Center for Environmental Journalism and CIRES, CU, "More than just mountains", 8 February 2018
- Center for Environmental Journalism, seminar for Ted Scripps Fellows in Environmental Journalism, 8 February 2018.
- UNAVCO, Boulder, "How modern Colorado emerged from the Sierra Nevada," Lunchtime Series Seminar, 2 February 2018.
- Sequoia National Park, "Mysterious origins of the southern Sierra Nevada", Ash Mountain headquarters, Sequoia National Park, 19 October 2017.

- University of California at Davis, Wednesday seminar, "The Significance of the Sierran Orogen", 18 October 2017.
- University of California Press lunchtime talk, "How—And Why—Yosemite Changed America", Oakland California, 17 October 2017.
- California State University at Fresno, Earth and Environmental Sciences Seminar, "The continuing mysteries surrounding the elevation of the Sierra Nevada", 12 October 2017.
- Mono Lake Committee talk, "Refreshments with Refreshing 'Ologists" series, "Water law plus geology", Lee Vining, California, 11 October 2017.
- Yosemite National Park, Yosemite Forum, "How—And Why—Yosemite Changed America", 10 October 2017.
- Colorado State University, "Making the Rockies by drowning Colorado", 3 March 2016.
- Ball Aerospace, Boulder, "Making the Rockies by drowning Colorado", 11 September 2015.
- Luxembourg University, "Studying the Mountains that Remade America: The Origin of the Sierra Nevada of California," 6 June 2015.
- Denver Museum of Nature and Science, "Making the Rockies by drowning Colorado", 3 February 2015.
- Denver Geophysical Society, "Exploring an alternative explanation for the Laramide Orogeny," 12 July 2012
- Univ Wyoming, "Exploring an alternative explanation for the Laramide Orogeny," 27 February 2012
- USGS Lakewood, "Exploring an alternative explanation for the Laramide Orogeny," 13 December 2011
- Univ. Kansas, "Exploring an alternative explanation for the Laramide Orogeny," 17 November 2011
- New Mexico State, "Exploring an alternative explanation for the Laramide Orogeny," 10 November 2011
- (Lecturer, CIDER workshop, Berkeley, Calif., July 2011).
- Purdue Univ. (Crough Memorial Lecture), "Exploring an alternative explanation for the Laramide Orogeny," 28 April 2011.
- Colorado State Univ., "Exploring an alternative explanation for the Laramide Orogeny," 7 February 2011
- University of Utah, "Exploring an alternative explanation for the Laramide Orogeny," 28 February 2008
- Caltech, "Exploring an alternative explanation for the Laramide Orogeny," 30 November 2007.
- Scripps Institute of Oceanography (UCSD), Sierra Nevada talk, October 15, 2007.

Yosemite National Park, monthly Yosemite Forum talk, "Raising the Sierra: New insights into an old problem", October 9, 2007.

Northwestern University, "Sierra Nevada: Testing Mantle Foundering as a Tectonic Engine", invited colloquium, May 26, 2006.

University of California at Berkeley, "The Sierra Nevada: Type Locale of a Different Tectonic Engine?", invited Seisology Lab colloquium, April 25, 2006.

Princeton University, "Bob's Bookends: Receiver Functions and Tectonics In and Near the Southern Sierra Nevada, California", Phinney retirement colloquium, invited, May 16, 2005.

Colorado Scientific Society, Haunted By A Cryptic Orogen: The Sierra Nevada And Its Impact On The Evolution Of California, 19 January 2005.

Ball Aerospace, Boulder, Untitled talk on the Sierra Nevada, 19 November 2004.

Colorado State University, "Haunted by a Cryptic Orogen: Pliocene Deformation Under the Sierra Nevada and its Implications for Intracontinental Deformation," 1 December 2003.

University of New Mexico Dept. of Earth and Planetary Sciences, "Haunted by a Cryptic Orogen: Pliocene Deformation Under the Sierra Nevada and its Implications for Intracontinental Deformation", 18 April 2003

Victoria University of Wellington, New Zealand, "Haunted by a Cryptic Orogen: Pliocene deformation under the Sierra Nevada of California," 31 May 2002.

University of Otago, Dunedin, New Zealand, "Haunted by a Cryptic Orogen: Pliocene deformation under the Sierra Nevada of California," 30 May 2002.

Institute for Geological and Nuclear Sciences, Lower Hutt, New Zealand, "Beyond Plate Tectonics: Body Forces and the Mantle in the Western United States," 25 May 2001.

Geophysics Section of the Royal Society of New Zealand, Wellington, "Beyond Plate Tectonics: Body Forces and the Mantle in the Western United States," 17 May 2001.

Northwestern University, 26 May 2000, two talks (Sierra Nevada and Coso).

University of California, Riverside, 9 May 2000.