

## Christopher J. Pluhar

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### Professional Preparation

University of California, Santa Cruz	postdoctoral fellow, Earth Sciences	2004-2007
University of California, Santa Cruz	Ph.D., Earth Sciences	2003
California Institute of Technology	B.S., Geology	1991

### Appointments

Assistant Professor	California State University, Fresno	2007-present
Lecturer	University of California, Santa Cruz	2004-2007
Post-doctoral Researcher	University of California, Santa Cruz	2004-2007
Teaching Assistant	University of California, Santa Cruz	1996-2001
Graduate Student Researcher	University of California Santa Cruz	1996-2003
Environmental Consulting Geologist	Parsons Engineering Science Inc.	1991-1996
Research Assistant	California Institute of Technology	1988-1991

### Teaching Experience (at UC Santa Cruz)

Lecturer EART 10/10L	Physical Geology	Spring 2007
Lecturer EART 109/109L	Introductory Field Methods	Spring 2006
Lecturer EART 80A	Earth Catastrophes	Fall 2005
Lecturer EART 152/207	Tectonics	Spring 2004
Instructor EART 196A/203	Teaching Assistant Training Seminar	2000, 2001
T.A. EART 113	Physics in the Earth Sciences	1996-99, 2001
T.A. EART 80	Water Planet	1999
T.A. EART 8	Earth Catastrophes	1997, 1998
T.A. EART 188A	Advanced Field Mapping, Poleta Folds, CA	1997, 1998
T.A. EART 80	Earthquakes and You	1996
T.A. EART 154	Paleomagnetism	1996

### Funding Experience

- Principle Investigator, U.S. Navy Geothermal Program Office contract – “An Expanded Kinematic and Geochronologic Study of the White Hills Anticline and White Hills Lake Beds” (7/04-9/05 - \$84,468)
- Principle Investigator, NSF, EAR-Sedimentary Geology and Paleobiology – “When did the first “Missoula Flood” occur? Geochronology of early and middle Pleistocene glacial outburst flood sediments of Pasco Basin, WA” (submitted 7/2005, declined, reviews – 2 excellent, 2 very good)
- UC IGPP grant for collaboration at Lawrence Livermore - “Dating the early Missoula floods using cosmogenic radionuclide burial methods and innovative paleo-exposure dating” (2003-2004 - \$39,955)
- Co-Principle Investigator, U.S. Navy Geothermal Program Office contract – “Pliocene to Recent Kinematics of the Wild Horse Mesa and Coso Wash: An Integrated Study Using Micropolar Theory and Paleomagnetic Determinations to Examine Spatial and Temporal Variations in Strain” (9/01-6/03 - \$44,471)
- Principle Investigator, Battelle Memorial Institute/Pacific Northwest National Laboratory contracts – various magnetostratigraphy projects (4/01-9/02, 10/02-9/03, 2-8/05 – totaling \$25,725)

## Publications

- Pluhar**, C.J., Coe, R.S., Lewis, J.C., Monastero, F.C., and Glen, J.M.G., 2006. Fault block kinematics at a releasing stepover of the Eastern California Shear Zone; partitioning of rotation style in and around the Coso geothermal area and nascent metamorphic core complex. *EPSL*, v.250(1-2), pp. 134-163.
- Pluhar**, C.J., Bjornstad, B.N., Reidel, S., Coe, R.S., Nelson, P.B., 2006. Magnetostratigraphic evidence from the Cold Creek bar for onset of ice-age cataclysmic floods in eastern Washington during the early Pleistocene. *Quaternary Research*, v. 65(1), pp. 123-135.
- Busby, C.J., Wagner, D., Hagan, J., Putirka, K., **Pluhar**, C.J., Gans, P., Rood, D., and Skilling, I., 2006. Mapping of Cenozoic volcanic rocks in the central high Sierra: Clues to understanding landscape evolution and range-front faulting. In: *Geology of the Central Sierra, NAGT Far Western Section field trip guidebook, September 29 - October 1, 2006, Sonora California*, pp. 1-53.
- Pluhar** C.J., 2006. An expanded kinematic and geochronologic study of the White Hills anticline and White Hills lake beds. *Technical Report N68936-04-C-0062* to U.S. Dept. of Defense, Naval Air Warfare Center, Geothermal Program Office, China Lake, CA.
- Pluhar**, C.J., Coe, R.S., Sampson, D.E., Glen, J.M.G., Monastero, F.C., and Tanner, S.B., 2005. Lava fingerprinting using paleomagnetism and innovative X-ray fluorescence spectroscopy; a case study from the Coso volcanic field, California. *Geochemistry, Geophysics, Geosystems*, v.6, Q04001, doi:10.1029/2004GC000707.
- Pluhar** C.J., 2004. Paleomagnetism of Drillcore C3826/E17-22 and C3827/E17-23 Sediments, Hanford, WA. Technical report for Battelle Memorial Institute and Pacific Northwest National Laboratory.
- Lewis, C.J. and **Pluhar** C.J., 2003. Pliocene to Recent Kinematics of the Wild Horse Mesa and Coso Wash: An Integrated Study Using Micropolar Theory and Paleomagnetic Determinations to Examine Spatial and Temporal Variations in Strain. *Technical Report N68936-01-C-0094* to U.S. Dept. of Defense, Naval Air Warfare Center, Geothermal Program Office, China Lake, CA.
- Pluhar** C.J. and Coe, R.S., 2002. Paleomagnetism of Kiona Quarry and Corehole E33-338, W19-44, and W22-48 Sediments, Hanford, WA. Technical report for Battelle Memorial Institute and Pacific Northwest National Laboratory.
- Pluhar** C.J. and Coe, R.S., 2002. Paleomagnetism of Corehole E24-21, W10-27, W11-39, W19-43, and W23-21 Sediments, Hanford, WA. Technical report for Battelle Memorial Institute and Pacific Northwest National Laboratory.
- Bjornstad, B.N., Fecht, K.R. and **Pluhar**, C.J., 2001. Long History of Pre-Wisconsin, Ice-Age Cataclysmic Floods: Evidence from Southeastern Washington State. *Journal of Geology*, v. 109, no. 6, pp. 695-713.
- Pluhar** C.J. and Coe, R.S., 2000. Paleomagnetism of Borehole E33-335, W22-48 and W22-50 Sediments, Hanford, WA. Technical report for Battelle Memorial Institute and Pacific Northwest National Laboratory.
- Pluhar** C.J. and Coe, R.S., 1999. Paleomagnetism of Borehole 299-E17-21 Sediments, Hanford, WA. Technical report for Battelle Memorial Institute and Pacific Northwest National Laboratory.
- Downey, D.C., **Pluhar**, C.J., Archabal, S.R., 1995. Performance and Cost Evaluation of Purus PADRE Regenerative Resin System for the Treatment of Hydrocarbon Vapors from Fuel-Contaminated Soils. Report to United States Air Force by Parsons Engineering Science Inc., Denver, CO, 30 pp.
- Pluhar**, C.J., Holt, J.H., Kirschvink, J.L., Beratan, K. and Adams. R.W., 1992. Magnetostratigraphy of the Plio-Pleistocene Lake Sediments in the Confidence Hills of Southern Death Valley, California. *San Bernardino County Museum Association Quarterly*, v. 39, no. 2, pp. 12-19. See <http://es.ucsc.edu/~cpluhar/PluharDeathValley.pdf>
- Pluhar**, C.J., Kirschvink, J.L. and Adams. R.W., 1991. Magnetostratigraphy and Clockwise Rotation of the Plio-Pleistocene Mojave River Formation, Central Mojave Desert,

### Manuscripts in Press, Revision, or Review

- Busby, C.J., Hagan, J., Putirka, K., **Pluhar** C.J., Gans, P., Rood, D., DeOreo, S., Skilling, I. And Wagner, D. 200x. The ancestral Cascade arc, central Sierra Nevada, California: implications for development of the Sierran microplate and tectonic significance of high K<sub>2</sub>O volcanism. Accepted to *GSA special publication* ed. Hopson.
- Lewis, C.J., Twiss, R.J., **Pluhar** C.J., and Monastero, F.C., 200x. Multiple constraints on divergent strike-slip deformation along the eastern margin of the Sierran microplate, SE California. In press GSA special volume *Exhumation associated with continental strike-slip fault systems*.
- King, N.M., Hillhouse, J.W., Gromme, S., Hausback, B.P., and **Pluhar**, C.J., 200x. Stratigraphy, paleomagnetism, geochemistry, and anisotropy of magnetic susceptibility of the Miocene Stanislaus Group, central Sierra Nevada and Sweetwater Mountains, California and Nevada, submitted to *Geosphere*.

### Selected Conference Abstracts

- Pluhar**, C.J., Stock, G., Bjornstad, B.N., Coe, R.S., Finkel, R.C., Anderson, R.S., and Reidel, S. 2005. Combined Cosmogenic Burial Dating and Magnetostratigraphy of pre-LGM Cataclysmic Flood Sediments, Pasco Basin, WA, Abstracts with Programs - Geological Society of America, vol.37
- Pluhar**, C.J., Nomade, S., Glen, J.M.G., Coe, R.S., and Renne, P., 2004. Magnetostratigraphy, Geochronology and Geochemical Evolution of the Pliocene Coso Volcanic Field, CA and Contemporaneity with Sierra Nevada Delamination. Abstracts with Programs - Geological Society of America, vol 36, no. 5
- Pluhar**, C.J., Nomade, S., Glen, J.M.G., Coe, R.S., and Renne, P., 2003. Jaramillo, Cobb Mtn., or Punaruu? - Re-examination of "Cobb Mtn. Event" Lavas at the Coso Volcanic Field, CA. AGU 2003 Fall meeting, Eos, Transactions, American Geophysical Union,
- Pluhar**, C.J., Stock, G., Finkel, R.C. Anderson, R.S., Coe, R.S., Reidel, S. and Bjornstad, B.N., 2003. Cosmogenic Burial Dating and Magnetostratigraphy of Early and Mid-Pleistocene Missoula Flood Sediments, Hanford, WA, Abstracts with Programs - Geological Society of America, vol.35, no.6, pp.217.
- Pluhar**, C.J., Bjornstad, B.N., Reidel, S., Coe, R.S., Nelson, P.B., 2002 Updated Magnetostratigraphy of Ice Age Flood Deposits of the Cold Creek Bar at the Hanford Site, Southeastern Washington. AGU 2002 Fall meeting, Eos, Transactions, American Geophysical Union, vol.83
- Pluhar**, C.J., Reidel, S., Bjornstad, B.N., Nelson, P.B., Coe, R.S., 2002 New Magnetostratigraphic Analysis Indicates that Onset of Pleistocene Cataclysmic Flooding Predates 1.07 Ma in East-Central Washington. Abstracts with Programs - Geological Society of America, vol.34, no.5, pp.25.
- Pluhar**, C.J., Coe, R.S., and Glen, J.M.G., 2001. Rotated and Tilted Domains within the Coso Range, CA; Paleomagnetism and Geochemical Correlation of Pliocene Lavas Provides Clues to Formation of the Coso Geothermal Field, AGU 2001 Fall meeting, Eos, Transactions, American Geophysical Union, vol.82, no.47, Suppl., p.314.
- Pluhar**, C.J., Coe, R.S., and Glen, J.M.G., 2001. Paleomagnetism and Geochemical Correlation of Pliocene Lavas Reveals Block Rotation and Tilting in the Wildhorse Mesa and Coso Range, CA. Geothermal Program Office Technical Symposium.
- Pluhar**, C.J., Glen, J.M.G., and Coe, R.S., 2000. Paleomagnetism and Geochemical Correlation of Pliocene Lavas Reveals Block Rotation in the Coso Range, CA. AGU 2000 Fall meeting, Eos, Transactions, American Geophysical Union, vol.81, no.48, Suppl., p.363.
- Pluhar**, C.J., Bjornstad, B.N., Coe, R.S., Reidel, S., 2000. Magnetostratigraphy of Early-Pleistocene Cataclysmic Flood Deposits Beneath the Hanford Site, East-Central Washington. GSA Annual Meeting,, Abstracts with Programs, vol.32, no.7, p.173.

- Pluhar**, C.J., Glen, J.M.G., and Coe, R.S., 1999. Plio-Pleistocene Magnetostratigraphy and Block Rotation in the Coso Range, CA. AGU 1999 Spring meeting, Eos, Transactions, American Geophysical Union, vol.80, no.17, Suppl., p.91.
- Pluhar**, C.J. Croteau, D., and Coe, R.S., 1998. Correlating Lavas of the Sweetwater Mountains, California with the Stanislaus Group, Table Mountain Latite Member; Paleomagnetic Constraints. AGU 1998 fall meeting, Eos, Transactions, American Geophysical Union, vol.79, no.45, Suppl., p.219.
- Pluhar**, C.J. and Coe, R.S., 1997. Preliminary Data Suggest Counter-clockwise Rotation of Waucoba Lake Sediments, Owens Valley, CA. AGU 1997 fall meeting, Eos, Transactions, American Geophysical Union, vol.78, no.46, Suppl., p.189.
- Pluhar**, C.J. and Coe, R.S., 1996. Paleomagnetism of the Stanislaus Group, Table Mountain Latite Member, Sierra Nevada, CA. AGU 1996 fall meeting, Eos, Transactions, American Geophysical Union, vol.77, no.46, Suppl., p.158.
- Downey, D.C., **Pluhar**, C.J., Dudus, L.A., et al., 1994. Remediation of Gasoline-Contaminated Soils Using Regenerative Resin Vapor Treatment and *In Situ* Bioventing. Presented at the Petroleum Hydrocarbon and Organic Chemicals in Groundwater - Prevention, Detection, and Restoration Conference, Houston, TX, November 1994.
- Dudus, L. and **Pluhar**, C.J., 1993. Basic Field Screening Techniques to Evaluate the Feasibility of Bioventing: Two Case Studies. Presented at the West Hazmat Conference, Long Beach, CA, May 1993.
- Holt, J.W., **Pluhar**, C.J., and Kirschvink, J.L., 1991. A Detailed Study of the Upper Olduvai Geomagnetic Reversal and Its Implications for Transition Field Geometry. GSA Abstracts with Programs, v. 23, no. 5, p. 92.

#### **Fellowships and Honors**

- American Geophysical Union, Geomagnetism and Paleomagnetism Section Outstanding Student Paper Award, December, 2000
- GAANN Fellowship, University of California Santa Cruz, 1998, 1999, 2000, 2001
- Aaron & Elizabeth Waters Award, 1998, for best Earth Sciences Ph.D. dissertation proposal, University of California Santa Cruz
- Regents Fellowship, University of California Santa Cruz, 1995
- California Institute of Technology, Don Shepard Award, 1990 for best undergraduate earth and planetary sciences research
- California Institute of Technology, Summer Undergraduate Research Fellowships, 1988,1989

#### **Collaborators (in alphabetical order)**

Bruce Bjornstad (Pacific Northwest National Laboratory), Cathy Busby (UC Santa Barbara), Jonathan M. G. Glen (USGS), Herve Guillou (CNRS France), Jack Hillhouse (USGS), Jonathan Lewis (Indiana University of Pennsylvania), Frank Monastero (U.S. Navy Geothermal Program Office), Sebastien Nomade (CNRS France), Keith Putirka (CSU Fresno), Steve Reidel (Pacific Northwest National Laboratory), Brad Singer (University of Wisconsin), Rob Twiss (UC Davis)