Louise H. Kellogg
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Education

Ph. D., Geological Sciences, Cornell University, 1988
M. Engineering, Engineering Physics, Cornell University, 1985
B.S., Engineering Physics and B.A., Philosophy (Dual Degree), Cornell University, 1982

Professional Experience

1998 – present	Professor, Earth and Planetary Sciences (formerly Geology) University of California, Davis
2013-14, 2016-17	Interim Department Chair, Earth and Planetary Sciences, University of California, Davis
2000 – 08	Department Chair, Geology, University of California, Davis
2003	Visiting Professor (July) Ecole Normale Supérieure de Lyon, France
1993 – 1998	Associate Professor, Geology, University of California, Davis
1990 – 1993	Assistant Professor, Geology, University of California, Davis
1988 – 1990	Myron C. Bantrell Research Fellow in Geochemistry and Geophysics, California Institute of Technology
1983 – 1988	Graduate Student Researcher, Geological Sciences, Cornell University
1987	Visiting Graduate Student Researcher, Institut de Physique du Globe, Université de Paris VI

2010 – present, Director, Computational Infrastructure in Geodynamics (CIG)
2004 – present, Director, W. M. Keck Center for Active Visualization in the Earth Sciences (KeckCAVES),
Member of the UC Davis Graduate Groups in Applied Mathematics and Computer Science

Awards and Honors

American Academy of Arts and Sciences, elected 2013
Fellow of the American Association for the Advancement of Science, elected 2012
Fellow of the American Geophysical Union, elected 2010
Presidential Faculty Fellowship (awarded by G. H. W. Bush), 1992 – 1997
Francis Birch Lecture, American Geophysical Union, Fall 2001
UC Davis Herbert A. Young Society Fellow, 2011-2013
UC Davis Chancellor's Award in Diversity and Community, 2005
UC Presidential Chair (2006-2009) co-holder

Selected Professional Activities

NASA CORE Committee on Earth Surface and Interior, co-chair (2015-2016)
Executive Committee, Deep Carbon Observatory
Review Committee, Global Seismic Network, 2015

Program co-Chair, Evolution of Earth-like Planets, Kavli Institute for Theoretical Physics, 2015.

Executive Committee, Cooperative Institute for Dynamic Earth Research (CIDER), 2012-present

Program Committee, CSEDI workshop (2015)

National Research Council

US National Committee on Seismology and Geodynamics, 2001-2009 (Chair 2007-2009).

Board on Earth Sciences and Resources, member 2007-2009.

Consortium for Materials Properties Research in Earth Sciences (COMPRES), Advisory Council, 2007-2013.

National Science Foundation

Advisory Committee, Geosciences Directorate, 2009-2013, (Chair, 2010-2013).

Deep Earth Processes (EAR) Section Committee of Visitors, 2005.

Integrated Ocean Drilling Program (IODP) Hotspot Geodynamics Detailed Planning Group, 2007.

Los Alamos National Laboratory, Divisional Review Committee, Earth and Environmental Sciences Division, 2006.

Editorial Board, Physics of the Earth and Planetary Interiors, 1998-present.

Guest Editorial Board Member, Annual Reviews of Earth and Planetary Sciences, 1997, 2006.

Steering Committee for a New Science Plan for Cooperative Studies of Earth's Deep Interior, Chair, 2003-2004.

Studies of Earth's Deep Interior (SEDI) Steering Committee Board Member

Chair, NSF Workshop on Frontiers of Mathematical Geosciences, 2001.

Phillips/Association of Women Geoscientists Distinguished Speaker, 1995, 2001.

Editorial Board, Physics of the Earth and Planetary Interiors, 1998-present.

Guest Editorial Board Member, Annual Reviews of Earth and Planetary Sciences, 1997, 2006.

American Geophysical Union

Hess Medal Committee Member, 2000-2004, and Chair, 2004-2006.

Tectonophysics Section Secretary, 1998-2000.

Editor, Reviews of Geophysics, 2001-2004.

Nonlinear Processes in Geophysics Committee, 1998-2002.

Lehmann Medal Committee member, 1996-1998.

Studies of Earth's Deep Interior Committee, Member 1992-1994; Chair 1994-96.

Tectonophysics Editor, EOS, Trans. American Geophysical Union, 1993-95.

Associate Editor, Journal of Geophysical Research, 1992-95.

University of California, Davis

Recruitment Advisory Committee for Dean of Letters and Sciences, (committee co-chair)

Data Sciences Initiative, Advisory Committee Member, 2014-present

UC Davis ADVANCE, STEAD Committee, member, 2013-2016

Chancellor's Blue Ribbon Committee on Research, 2010 – 2011

UC Davis Research Coordinating Council, 2003 – 2008.

Advisory Committee, (chair) Center for Computational Sciences and Engineering and Institute for Data Analysis and Visualization, 2007 – 2008.

Earth and Physical Sciences Building planning committee, 2003 – 2009.

Co-Chair of Computational Science and Engineering Search Faculty Committee, 2003 – 2004.

Advisory Committee, NEAT ORU (Nanomaterials in the Environment, Agriculture, and Technology Organized Research Unit), 2002 – present.
University of California Senior Leadership Institute, participant, 2007.
UC Davis Chancellor's Fall Conference, (annual strategic planning workshop for the campus), participant, 2001 – 2004, 2006; speaker and participant – 2007.
Institute for Geophysics and Planetary Physics Advisory Committee, 1994-2000.
Member of four executive recruitment committees for UC Davis, 2000-2008.
Member of College of Letters and Science Advisory Committee (advising the university during mid-1990s reorganization of the college into Divisions of Mathematical and Physical Sciences, Social Sciences, and Humanities)

Selected Outreach and Informal Education

Augmented Reality Sandbox (ARSandbox.org)
LakeViz, Lake Visualization 3D, A Learning Collaboration to Visualize Lake Ecosystems, a partnership with Lawrence Hall of Science, CA, ECHO Lake Center, VT, and Tahoe Environmental Research Center (TERC), NV, and funded by the National Science Foundation (www.lakeviz.org).
Keynote Speaker, Incorporated Research Institutions for Seismology (IRIS) Annual meeting, June 2008
Keynote Speaker, Consortium for Materials Properties Research in Earth Sciences (COMPRES), Annual meeting, June 2008
Geoscience visualization display, California State Fair UC Davis Pavilion, 2008 (16,000 visitors over a two week period)
Arts collaboration: COLLAPSE: Suddenly Falling Down, a performance by choreographer Della Davidson featuring Art-Science-Technology collaboration, Oct.-Nov. 2007, Winner of the 2008 Isadora Duncan Award for Visual Design (the Izzies).

Publications

1. L. Hwang, L. H. Kellogg, L. Soito, M. Smith, A. Fish (2017) Software and the Scientist: Coding and Citation Practices in Geodynamics, in review in *Earth and Space Science*.
2. Puckett, E. G., D. L Turcotte, L. H. Kellogg, Y. He, J. M. Rovey, H. Lokavarapu, New numerical approaches for modeling thermal convection in a compositionally stratified fluid, arXiv preprint arXiv: 1703.02202
3. Hawkins, A., D.L. Turcotte, M.B. Yıkılmaz, L.H. Kellogg, and J.B. Rundle (2017) Statistical Studies of Induced and Triggered Seismicity at the Geysers, California, *Pure and Applied Geophysics,* doi:10.1007/s00024-017-1569-z
4. Weisfeiler, M., D. L. Turcotte, and L. H. Kellogg (2017) Modeling the early evolution of Vesta, *Meteoritics and Planetary Science*, doi:10.1111/maps.12836
5. Romanowicz, B., Hirschmann, M., Kellogg, L., Manga, M., Mukhopadhyay, S., Buffett B. (2017) Groundwork: Advancing Geoscience Research through CIDER, GSA Today, 27, pp. 60-61, July 2017, doi:10.1130/GSATG329GW.1
6. Reed, S., S. Hsi, O. Kreylos, M. B. Yikilmaz, L. H. Kellogg, S. G. Schladow, H. Segale, and L. Chan (2016), Augmented reality turns a sandbox into a geoscience lesson, *Eos*, 97, doi: 10.1029/2016EO056135.

7. Streletz, G.J., Gebbie, G.A., Kreylos, O., Hamann, B., Kellogg, L.H. and Spero, H.J. (2016), Interpolating sparse scattered data using flow information, *Journal of Computational Science* 16, pp. 156-169.
8. Matsui, H., Heien, E., Aubert, J., Aurnou, J. M., Avery, M., Brown, B., Buffett, B. A., Busse, F., Christensen, U. R., Davies, C. J., Featherstone, N., Gastine, T., Glatzmaier, G. A., Gubbins, D., Guermond, J.-L., Hayashi, Y.-Y., Hollerbach, R., Hwang, L. J., Jackson, A., Jones, C. A., Jiang, W., Kellogg, L. H., Kuang, W., Landeau, M., Marti, P. H., Olson, P., Ribeiro, A., Sasaki, Y., Schaeffer, N., Simitev, R. D., Sheyko, A., Silva, L., Stanley, S., Takahashi, F., Takehiro, S.-i., Wicht, J. and Willis, A. P. (2016), Performance benchmarks for a next generation numerical dynamo model. *Geochem. Geophys. Geosyst.* 17, 1586–1607, doi: 10.1002/2015GC006159
9. CM Cooper, Eric Mittelstaedt, Claire A Currie, Jolante Van Wijk, Louise H Kellogg, Lorraine Hwang, Ramon Arrowsmith, GROUNDWORK: Moving lithospheric modeling forward: Attributes of a community computer code (2015) *GSA Today*, v. 25, pp. 42–43, doi: 10.1130/GSATG230GW.1
10. Yıkılmaz M.B., Turcotte D.L., Beketova O., Kellogg L.H., Rundle J.B. (2015) Earthquake Cycles on the San Andreas Fault System in Northern California. In: Hashimoto M. (eds) International Symposium on Geodesy for Earthquake and Natural Hazards (GENAH). International Association of Geodesy Symposia, v. 145, pp. 55 - 61, Springer, Cham, doi: 10.1007/1345_2015_203
11. Kronenberger, M., Weber, C., Gebbie, G.A., Kreylos, O., Kellogg, L.H., Lisiecki, L.E., Peterson, C.D., Spero, H.J., Hamann, B. and Hagen, H. (2015), A novel distance measure for ocean reconstruction from sparse observations demonstrated on the Atlantic, in: Talbot, J., Keahey, A. and Wright, W., eds., Proceedings of IEEE Scientific Visualization 2015 (SciVis 2015) -Visualization in Practice, IEEE Computer Society Press, Los Alamitos, California.
12. Ruediger, P., Weber, C., Matsui, H., Heien, E., Kellogg, L.H., Hamann, B. and Hagen, H. (2015), Pre-filtering of turbulent vector fields in the geodynamo (pdf), in: Talbot, J., Keahey, A. and Wright, W., eds., Proceedings of IEEE Scientific Visualization 2015 (SciVis 2015) -- Visualization in Practice, IEEE Computer Society Press, Los Alamitos, California.
13. Mumladze, T., Forte A.M. Cowgill, E.S., Trexler, C.C., Niemi, NA, Yıkılmaz, MB, and Kellogg, L.H. (2015) Subducted, detached, and torn slabs beneath the Greater Caucasus, GeoResJ, 5, 36-46.
14. Arrial, P. A. Flyer, N. Wright, G. B. and Kellogg L.H. (2014) On the sensitivity of 3-D thermal convection codes to numerical discretization: a model intercomparison, *Geoscientific Model Development Discussions, 7*, pp. 2033-2064
15. Yıkılmaz, M. B., D. L. Turcotte, E. M. Heien, L. H. Kellogg, J. B. Rundle (2014) Critical Jump Distance for Propagating Earthquake Ruptures Across Step-Overs, Pure and Applied Geophysics, v. 33, pp. 1-7, 10.1007/s00024-014-0786-y
16. Moores, E. M., M. B. Yıkılmaz, L.H. Kellogg (2013) Tectonics: 50 years after the Revolution, Geological Society of America Special Papers 500, 321-369
17. Schroder, S., Peterson, J. A., Obermaier, H., Kellogg, L. H., Joy, K. I., and Hagen, H. (2012) Visualization of Flow Behavior in Earth Mantle Convection, IEEE Transactions on Visualization and Computer Graphics, **18**, 12, pp. 2198 - 2207,
18. Cowgill, E. S., Bernardin, T., Oskin, M. E, Bowles, C., Yikilmaz, M. B., Kreylos, O., Elliott, A. J., Bishop, S., Gold, R. D., Morelan, A., Bawden, G. W., Hamann, B., Kellogg, L. H. (2012),

Interactive terrain visualization enables virtual field work during rapid scientific response to the 2010 Haiti earthquake, *Geosphere*, **8**, no. 4, pp. 787–804.
19. Kreylos, O., Oskin, M., Cowgill, E., Gold, P., Elliott, A., Kellogg, L. (2013) Point-based computing on scanned terrain with LidarViewer, *Geosphere,* 9 (3): 546-556. doi: 10.1130/GES00705.1
20. Bawden, G. W. and Bond, S. and Podoski, J.H. and Kreylos, O. and Kellogg, L.H. (2012) Ultra-High Resolution Four Dimensional Geodetic Imaging of Engineered Structures for Stability Assessment, in GeoCongress 2012: State of the Art and Practice in Geotechnical Engineering, ASCE, pp. 2981--2990},
21. Tullis, T. E., Keith Richards−Dinger, Michael Barall, James H. Dieterich,Edward H. Field, Eric M. Heien,Louise H. Kellogg, Fred F. Pollitz, John B. Rundle,Michael K. Sachs, Donald L. Turcotte, Steven N. Ward,and M. Burak Yikilmaz (2012) Generic Earthquake Simulator, *Seismological Research Letters*, November/December 2012, v. 83, p.959-963, doi: 10.1785/0220120093
22. Sachs, Michael K., Eric M. Heien, Donald L. Turcotte, M. Burak Yikilmaz,John B. Rundle,and Louise H. Kellogg (2012) Virtual California Earthquake Simulator, *Seismological Research Letters*, November/December 2012, v. 83, p.973-978, doi:10.1785/0220120052 M. Burak Yikilmaz, E. Heien, D. L. Turcotte, J. B. Rundle, and L. H. Kellogg, (2011) A fault and seismicity based composite simulation in northern California, *Nonlinear Processes in Geoscience,* 18, 955-966 www.nonlin-processes-geophys.net/18/955/2011/ doi: 10.5194/npg-18-955-2011
23. Tullis, Terry E., Keith Richards−Dinger, Michael Barall, James H. Dieterich,Edward H. Field, Eric M. Heien, Louise H. Kellogg, Fred F. Pollitz, John B. Rundle,Michael K. Sachs, Donald L. Turcotte, Steven N. Ward, and M. Burak Yikilmaz (2012) A Comparison among Observations and Earthquake Simulator Results for the allcal2 California Fault Model, *Seismological Research Letters*, November/December 2012, v. 83, p.994-1006, doi: 10.1785/0220120094
24. Rundle, J. B., J. R. Holliday, M. Yoder, M., M. K. Sachs, A. Donnellan, D. L. Turcotte, K. F. Tiampo, W. Klein, and L. H. Kellogg, (2011), Earthquake precursors: activation or quiescence?. *Geophysical Journal International*, 187: 225–236. doi: 10.1111/j.1365-246X.2011.05134.x
25. Wilson, C. E., A. Aydin, M. Karimi-Fard, L.J. Durlofsky, A. Sagy, E.E. Brodsky, O. Kreylos, and L.H. Kellogg (2011) From outcrop to flow simulation: constructing discrete fracture network models from a LiDAR Survey:*American Association of Petroleum Geologists Bulletin,* v. 95, 1883-1905, DOI: 10.1306/03241108148.
26. Rundle, J. B., J. R. Holliday, M. Yoder, M. K. Sachs, A Donnellan, Donald L. Turcotte, K. F. Tiampo, W. Klein, and L. H. Kellogg (2011) Earthquake Precursors: Activation of Quiescence? *Geophysical Journal International,* 187, 225-236.
27. Bernardin, T., E. Cowgill, O. Kreylos, C. Bowles, P. Gold, B. Hamann and L. Kellogg, Crusta: a new Virtual Globe for Real-time Visualization of Sub-meter Digital Topography at Planetary Scales (2011), *Computers and Geosciences,* v. 37, pp. 75-85, doi:10.1016/j.cageo.2010.02.006
28. Keller, P., O. Kreylos, M. Vanco, M. Hering-Bertram, E. S. Cowgill, L. H. Kellogg, B. Hamann, Bernd, and H. Hagen (2011) Extracting and visualizing structural features in environmental point cloud LiDaR data sets, in *Topological Methods in Data Analysis and Visualization*, 179 - 192, Springer Berlin Heidelberg.

29. Keller, P., O. Kreylos, E. S. Cowgill, L. H. Kellogg, M. Hering-Bertram, B. Hamann, and H. Hagen (2011) Construction of Implicit Surfaces from Point Clouds Using a Feature-based Approach, in Hagen, H., ed., *Scientific Visualization: Advanced Concepts - Dagstuhl Seminars 2009, Dagstuhl Follow-Ups,* Schloss Dagstuhl - Leibniz Center for Informatics, Wadern, Germany, pp. 129-143.
30. Neff, M., D. Y. Sumner, G. W. Bawden, E. Bromberg, D. Davidson, S. Gilbride, L. H. Kellogg, and O. Kreylos (2010) Blending Art and Science in Collapse (suddenly falling down), *Leonardo*, v. 43, no. 3, pp. 274-281.
31. Neff, M., D. Y. Sumner, G. W. Bawden, E. Bromberg, D. Davidson, S. Gilbride, L. H. Kellogg, and O. Kreylos (2010), Blending Art and Science to Create Collapse (suddenly falling down), *Leonardo,* v. 43, no. 2, pp. 204-204.
32. Yikilmaz, M. B., D. L. Turcotte, G. Yakovlev, J. Rundle, and L. Kellogg (2010). Virtual California earthquake simulations: Simple models and their application to an observed sequence of earthquakes, *Geophysical Journal International,* **180,** 734–742.
33. Van Aalsburg, J., M. B. Yikilmaz, O. Kreylos, L. H. Kellogg, and J. B. Rundle (2010) Interactive editing of digital fault models, *Concurrency and Computation: Practice and Experience*, 22: 1720–1731, DOI: 10.1002/cpe.1525.
34. Glasscoe, M. T., R. A. Granat, J. B. Rundle, P. B. Rundle, A. Donnellan, and L. H. Kellogg (2010) Analysis of Emergent Fault Element Behavior in Virtual California, C*oncurrency and Computation: Practice and Experience*, 22: 1665–1683 DOI: 10.1002/cpe.1546
35. Natarajan Subramanian, L. H. Kellogg, and D. L. Turcotte (2009) Statistics of advective stretching in three-dimensional incompressible flows, *J. Statistical Physics,* 136: 926-944.
36. O. Kreylos, G. W. Bawden, and L. H. Kellogg, (2008) Immersive Visualization and Analysis of LiDAR Data, in: Bebis, G., et al., *4th International Symposium on Visual Computing (ISVC08), Part I,"* LNCS 5358, Springer-Verlag Berlin Heidelberg, pp. 846-855.
37. C. H. A. Cheng, L. H. Kellogg, S. Shkoller, and D. L. Turcotte (2008) A liquid-crystal model for friction, *Proceedings of the National Academy of Sciences*, 105, no. 23, pp. 7930-7935. doi / 10.1073/ pnas.0710990105,
38. M. I. Billen, O. Kreylos, B. Hamman, M. Jadamec, L. H. Kellogg, O. Staadt, D. Y. Sumner (2008) A Geoscientist's Perspective on Immersive 3D Data Visualization, *Computers and Geosciences, 34,* 1056-1072.
39. L. H. Kellogg, G. W. Bawden, T. Bernardin, M. Billen, E. Cowgill, B. Hamann, M. Jadamec, O. Kreylos, O. Staadt, D. Sumner (2008) Interactive Visualization to Advance Earthquake Simulation, *Pure and Applied Geophysics*, vol. 165, N 3/4, (March/April) 2008.
40. L. H. Kellogg and R. A. Zierenberg (2007) Introducing critical observation skills using NASA's Mars Exploration Program in a small introductory class, v. 55, no. 5, *Journal of Geoscience Education.*
41. D. M. Manaker, D. L. Turcotte, and L. H. Kellogg, (2007) Damage formation associated with bending under a constant moment, *Tectonophysics* 433, pp. 81–95, doi:10.1016/j.tecto. 2006.12.008.
42. J. B. Naliboff and L. H. Kellogg, (2007) Can large increases in viscosity and thermal conductivity preserve large-scale heterogeneity in the mantle?, *Physics of the Earth and Planetary Interiors*, 161, pp. 86-102, DOI: 10.1016/j.pepi.2007.01.009.
43. D. Manaker, D. L. Turcotte, and L. H. Kellogg, (2006) Flexure with Damage, *Geophysical Journal International*, 166, pp. 1368, doi:10.1111/j.1365-246X.2006.03067.x.

44. O. Kreylos, Bawden, G.W., Bernardin, T., Billen, M.I., Cowgill, E.S., Gold, R.D., Hamann, B., Jadamec, M., Kellogg, L.H., Staadt, O.G. and Sumner, D.Y. (2006), Enabling scientific workflows in virtual reality, in: Hong Wong, K., Baciu, G. and Bao, H., eds., Proceedings of ACM SIGGRAPH International Conference on Virtual Reality Continuum and Its Applications 2006 (VRCIA 2006), ACM Press, New York, New York, pp. 155-162.
45. J. B. Naliboff and L. H. Kellogg (2006), Dynamic effects of a step-wise increase in thermal conductivity and viscosity in the lowermost mantle," *Geophysical Research Letters*, 33, L12S09, DOI: 10.1029/2006GL025717.
46. J. B. Naliboff and L. H. Kellogg, Mixing in a convecting viscous fluid: Applications to Earth's mantle, *Proceedings of 3rd MIT Conference on Computational Fluid and Solid Mechanics,* 2005.
47. M. Charco, J. Fernandez, K. Tiampo, M. Battaglia, L. Kellogg, J. McClain and J. B. Rundle, Study of volcanic sources at Long Valley Caldera, California, using a Genetic Algorithm inversion technique and gravity data, *Pure and Applied Geophysics*, 161, 1399-1413, 2004.
48. M. T. Glasscoe, A. Donnellan, L. H. Kellogg, and G. A. Lyzenga, Evidence of strain partitioning between the Sierra Madre fault and the Los Angeles Basin, southern California from numerical models, *Pure and Applied Geophysics, 161*, 2343-2357, 2004.
49. J. B. Rundle, P. B. Rundle, W. Klein, J. de sa Martins, K. F. Tiampo, A. Donnellan, and L. H. Kellogg, GEM plate boundary simulations for the Plate Boundary Observatory: A program for understanding the physics of earthquakes on complex fault networks via observations, theory and numerical simulation, *Pure and Applied Geophysics, 159*, 2357-2381, 2002.
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51. A. Donnellan, A. Blythe, L. Kellogg, and M. Glasscoe, Strain partitioning across metropolitan Los Angeles, in M. Matsu'ura, K.Nakajima, and P. Mora, eds., ACES Cooperation for Earthquake Simulation, *2nd ACES Workshop Proceedings*, 435-438, 2001.
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53. R. Camassa, C. Jones, L. Kellogg, I. Mezic, A. Pouquet, and B. Turkington, A Rational Approach to "Earth Management", *SIAM News*, July 10, 2001 http://www.siam.org/news/news.php?id=556.
54. N. Montague and L. H. Kellogg, Numerical models of a dense layer at the base of the mantle and implications for the dynamics of D", *Journal of Geophysical Research, 105*, 11101-11114, 2000.
55. E. M. Moores, L. H. Kellogg, and Y. Dilek, Ophiolites, Tectonics, and Mantle Convection: a contribution to the "Ophiolite Conundrum", in Dilek, Y., Moores, E.M., Elthon, D., and Nicolas, A., eds., Optiolites and the Oceanic Crust: New Insights from Field Studies and the Ocean Drilling Program: Boulder, Colorado, Geological Society of America Special Paper 349, 3-12, 2000.
56. L. H. Kellogg, Earth mantle, in 2001 *McGraw-Hill Yearbook of Science and Technology*, 132-134, 2000.
57. L. H. Kellogg, B. H. Hager, and R. van der Hilst, Compositional stratification in the deep mantle, *Science, 283,* pp. 1881-1884, 1999.
58. G. W. Bawden, A. Michael, and L. H. Kellogg, Birth of a fault: Connecting the Kern County and Walker Pass, California, earthquakes, *Geology, 27*, pp. 601-604, 1999.

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61. M. E. Wysession, T. Lay, J. Revenaugh, Q. Williams, E. J. Garnero, R. Jeanloz, and L. H. Kellogg, The D" discontinuity and its implications, in the *AGU monograph on the Core-Mantle Boundary*, Geodynamics 28, pp. 273-297, 1998.
62. W. S. Kiefer and L. H. Kellogg, Geoid anomalies and dynamic topography from time-dependent, spherical axisymmetric mantle convection, *Physics of the Earth and Planetary Interiors,* 106(3-4), 239-257, 1998.
63. N. L. Montague, L. H. Kellogg, and M. Manga. High Rayleigh number thermochemical models of a dense boundary layer in D", *Geophysical Research Letters*, 25, 2345-2348, 1998. (A correction to Table 1 appears in *Geophys. Res. Lett*. 25, p. 3917, 1998.)
64. L. H. Kellogg, Growing the Earth's D'' layer: Effect of density variations at the core-mantle boundary, *Geophysical Research Letters*, 24, 2749-2752, 1997.
65. L. H. Kellogg, Mapping the core-mantle boundary, *Science*, 277, 646, August 1, 1997.
66. L.H. Kellogg and S.D. King, The effect of temperature dependent viscosity on the structure of new plumes in the mantle: Results of a finite element model in a spherical, axisymmetric shell, *Earth and Planetary Science Letters*, 148, 13- 26, 1997.
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70. L. H. Kellogg and S. D. King, Effect of mantle plumes on the growth of D" by reaction between the core and mantle, *Geophysical Research Letters*, 20, 379-382, 1993.
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75. L. H. Kellogg and G. J. Wasserburg, Helium flux constraints on entrainment and outgassing of mantle plumes, *Earth and Planetary Science Letters*, 99, 276-289, 1990.
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Reports

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