

LOUISE H. KELLOGG

Professional Preparation:

Cornell University	Engineering Physics, Philosophy	BS and BA, 1982 (Dual Degree)
Cornell University	Engineering Physics	M Engineering, 1985
Cornell University	Geological Sciences	PhD, 1988

Appointments:

1998-present Professor, Department of Earth and Planetary Sciences (formerly Geology), UC Davis
2013-2014; 2016-2017 Interim Chair, Department of Earth and Planetary Sciences
2000-2008 Chair, Department of Geology, UC Davis
July 2003 Visiting Professor, Ecole Normale Supérieure de Lyon, France
1993-1998 Associate Professor, Geology, UC Davis
1990-1993 Assistant Professor, Geology, UC Davis
1988-1990 Myron C. Bantrell Research Fellow in Geochemistry and Geophysics, Caltech
1987 Visiting Researcher, Institut de Physique du Globe, Université de Paris VI

Publications (from more than 75):

Five most closely related to the proposed project –

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.

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.

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

Cooper, C. M., E. Mittelstaedt, C. A. Currie, J. Van Wijk, **L. H. Kellogg**, L. Hwang, R. 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

Arrial P.A., Flyer N., Wright G. B., **Kellogg L. H.** On the sensitivity of 3-D thermal convection codes to numerical discretization: a model intercomparison. *Geoscientific Model Development Discussions*, 7: 2033-2064, 2014.

Five additional significant products –

Moore, E. M., Yikilmaz, M. B., **Kellogg L. H.** Tectonics: 50 years after the revolution, *Geological Society of America Special Papers* 500. 321-369. 2013

Kreylos, O., Oskin, M., Cowgill E., Gold P., Elliott A., **Kellogg L.** Point-based computing on scanned terrain with LidaViewer. *Geosphere*, Geological Society of America, 9: 546-556, 2013. doi:10.1130/GES00705.1

Cowgill E., Bernardin T. S., 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.** Interactive terrain visualization enables virtual field work during rapid scientific response to the 2010 Haiti earthquake. *Geosphere*, Geological Society of America, 8: 787-804, 2012. doi:10.1130/GES00687.1

Subramanian N., **Kellogg L. H.**, Turcotte D. L. Statistics of advective stretching in three-dimensional incompressible flows. *J Statistical Physics*, 136: 926-944, 2009.

Kellogg L. H., Hager B. H., van der Hilst R. Compositional stratification in the deep mantle. *Science*, 283: 1881-1884, 1999.

Synergistic Activities:

- **Leadership:** Director, Computational Infrastructure for Geodynamics; Director, W. M. Keck Center for Active Visualization in the Earth Sciences; former Department Chair, Member, UC Davis Graduate Groups in Applied Mathematics and in Computer Science.
- **Professional Society Memberships:** American Geophysical Union (Fellow), American Academy of Arts and Sciences (Fellow), Society for Industrial and Applied Mathematics (SIAM), American Association for the Advancement of Science (Fellow), Geological Society of America, Sigma Xi, Geochemical Society, Seismological Society of America
- **Professional Activities (past decade only):** GEO Advisory Committee, NSF, 2009-2014 (Chair 2010-14); Committee on Seismology and Geodynamics, National Research Council, 2001-2009 (Chair 2007-2009); Board on Earth Sciences and Resources, National Research Council, member 2007-2009, Steering Committee, Cooperative Institute for Deep Earth Research (CIDER); Editorial Board, Physics of the Earth and Planetary Interiors, 1998-present.
- **Outreach and Diversity Activities (selected examples):**
 - Augmented Reality Sandbox (AR Sandbox) and LakeViz: Open source, informal science education developing and disseminating 3-D visualization and augmented reality in museums, science centers, and classrooms to increase understanding of freshwater lake watersheds and geomorphological (with Tahoe Environmental Research Center, Lawrence Hall of Science, and ECHO Lake Center, Burlington VT). More than 200 AR Sandboxes have been constructed around the world.
 - Arts-Science-Technology Collaboration: COLLAPSE: Suddenly Falling Down, a performance by Della Davidson featuring Art-Science-Technology collaboration, October-November 2007 (received the 2008 Isadora Duncan Award for Visual Design)
 - UC Davis Chancellor's Award in Diversity and Community, 2005 (for recruiting and retaining excellent faculty from diverse backgrounds to the Earth and Planetary Sciences Department). Participant in UC Davis ADVANCE program's STEAD program, providing training for faculty search committees on recruiting for excellence and diversity.