

Curriculum vitae

Forrest M. Hoffman

Oak Ridge National Laboratory (ORNL)

Oak Ridge, Tennessee 37831-6016

865-576-7680

forrest@climatemodeling.org

Education

M.S., 2004. University of Tennessee, Knoxville, TN

Advisor and Department: Dr. William E. Blass, Department of Physics and Astronomy

Research Focus: Infrared spectroscopy and atmospheric spectroscopy

Thesis: *Analysis of Reflected Spectral Signatures and Detection of Geophysical Disturbance Using Hyperspectral Imagery*

B.S., 1991. University of Tennessee, Knoxville, TN

Major: Physics

Focus: Astronomical photometry research and computer software for data reduction and analysis

Employment

November 1993 – present: **Computational Scientist**, joint appointments in the Computer Science and Mathematics Division and the Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

July 1992 – November 1993: **Scientific Programmer/Analyst**, Department of Geological Sciences, University of Tennessee, position at Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

May 1989 – June 1992: **Knowledge Engineer**, Automated Sciences Group, Inc., position at Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

September 1988 – May 1989: **Researcher Intern**, Oak Ridge Associated Universities (ORAU), position at Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

1987 – September 1988: **Observer/Telescope Operator**, High Altitude Observatory, National Center for Atmospheric Research, position at Mauna Loa Solar Observatory, Hilo, Hawai'i.

Honors and Awards

ORNL Outstanding Mentor Award. Oak Ridge National Laboratory and Oak Ridge Associated Universities, February 2008.

Significant Event Award for contribution to NSF's National Ecological Observatory Network (NEON) Design Committee. Oak Ridge National Laboratory/UT-Battelle, LLC, March 2006.

Outstanding Paper in the Discipline of Landscape Ecology. W. W. Hargrove, F. M. Hoffman and P. M. Schwartz, "A fractal landscape realizer for generating synthetic maps," *Conservation Ecology* 6(1):2 (2002). Awarded by the International Association for Landscape Ecology, U. S. Regional Chapter, April 2004.

ORNL Technical Achievement Award. Oak Ridge National Laboratory/Lockheed Martin Energy Research Corp., 1996.

Selected Publications

- David J. Erickson, Richard T. Mills, Jay Gregg, T. J. Blasing, Forrest M. Hoffman, Robert J. Andres, Matthew Devries, Z. Zhu, and S. R. Kawa. An estimate of monthly global emissions of anthropogenic CO₂: Impact on the seasonal cycle of atmospheric CO₂. *J. Geophys. Res.*, 113(G01023), March 2008. doi:[10.1029/2007JG000435](https://doi.org/10.1029/2007JG000435).
- Forrest M. Hoffman, Curtis C. Covey, Inez Y. Fung, James T. Randerson, Peter E. Thornton, Yen-Huei Lee, Nan A. Rosenbloom, Reto C. Stöckli, Steven W. Running, David E. Bernholdt, and Dean N. Williams. Results from the Carbon-Land Model Intercomparison Project (C-LAMP) and availability of the data on the Earth System Grid (ESG). *J. Phys.: Conf. Ser.*, 78:012026 (8pp), December 2007. doi:[10.1088/1742-6596/78/1/012026](https://doi.org/10.1088/1742-6596/78/1/012026).
- Robert E. Dickinson, Keith W. Oleson, Gordon Bonan, Forrest Hoffman, Peter Thornton, Mariana Vertenstein, Zong-Liang Yang, and Xubin Zeng. The Community Land Model and its climate statistics as a component of the Community Climate System Model. *J. Climate*, 19(11):2302–2324, June 2006. doi:[10.1175/JCLI3742.1](https://doi.org/10.1175/JCLI3742.1).
- William W. Hargrove, Forrest M. Hoffman, and Paul F. Hessburg. Mapcurves: A quantitative method for comparing categorical maps. *Journal of Geographical Systems*, pages 1–22, May 2005a. doi:[10.1007/s10109-006-0025-x](https://doi.org/10.1007/s10109-006-0025-x).
- Forrest M. Hoffman, Mariana Vertenstein, Hideyuki Kitabata, and James B. White III. Vectorizing the Community Land Model (CLM). *International Journal of High Performance Computing Applications*, 19(3):247–260, August 2005a. ISSN 1094-3420. doi:[10.1177/1094342005056113](https://doi.org/10.1177/1094342005056113).
- Forrest M. Hoffman, William W. Hargrove, David J. Erickson, and Robert J. Oglesby. Using clustered climate regimes to analyze and compare predictions from fully coupled general circulation models. *Earth Interactions*, 9(10):1–27, August 2005b. doi:[10.1175/EI110.1](https://doi.org/10.1175/EI110.1).
- William W. Hargrove, Forrest M. Hoffman, and Rebecca A. Efroymson. A practical map-analysis tool for detecting potential dispersal corridors. *Landscape Ecology*, 20(4):361–373, May 2005b. doi:[10.1007/s10980-004-3162-y](https://doi.org/10.1007/s10980-004-3162-y).
- Michael A. White, Forrest Hoffman, William W. Hargrove, and Ramakrishna R. Nemani. A global framework for monitoring phenological responses to climate change. *Geophys. Res. Lett.*, 32(4), February 2005. doi:[10.1029/2004GL021961](https://doi.org/10.1029/2004GL021961).
- Earl Saxon, Barry Baker, William Hargrove, Forrest Hoffman, and Chris Zganjar. Mapping environments at risk under different global climate change scenarios. *Ecology Letters*, 8(1):53–60, January 2005. doi:[10.1111/j.1461-0248.2004.00694.x](https://doi.org/10.1111/j.1461-0248.2004.00694.x).
- William W. Hargrove and Forrest M. Hoffman. Potential of multivariate quantitative methods for delineation and visualization of ecoregions. *Environmental Management*, 34(5):s39–s60, 2004. doi:[10.1007/s00267-003-1084-0](https://doi.org/10.1007/s00267-003-1084-0).
- William W. Hargrove, Forrest M. Hoffman, and Paul M. Schwartz. A fractal landscape realizer for generating synthetic maps. *Conservation Ecology*, 6(1):2, January 2002. URL: <http://www.consecol.org/vol6/iss1/art2/>.
- William W. Hargrove, Forrest M. Hoffman, and Thomas Sterling. [The Do-It-Yourself Supercomputer](#). *Scientific American*, 265(2):72–79, August 2001.
- William W. Hargrove and Forrest M. Hoffman. Using multivariate clustering to characterize ecoregion borders. *Computing in Science & Engineering*, 1(4):18–25, July 1999. ISSN 1521-9615. doi:[10.1109/5992.774837](https://doi.org/10.1109/5992.774837).
- Forrest M. Hoffman and Vijay S. Tripathi. A geochemical expert system prototype using object-oriented knowledge representation and a production rule system. *Computers & Geosciences*, 19(1):53–60, January 1993. ISSN 0098-3004. doi:[10.1016/0098-3004\(93\)90042-4](https://doi.org/10.1016/0098-3004(93)90042-4).