

Forrest M. Hoffman

Scientist

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Education and Training

1994	University of Tennessee-Knoxville, Physics, MS
1991	University of Tennessee-Knoxville, Physics, BS

Research and Professional Experience

1993-Present	Computational Climate Scientist. Computer Science & Mathematics Division and the Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN.
2002-2006	Contributing Editor and Columnist. "Extreme Linux" column, Linux Magazine.
1992-1993	Scientific Programmer/Analyst. Department of Geological Sciences, University of Tennessee, position at Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
1989-1992	Knowledge Engineer. Automated Sciences Group, Inc., position at Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
1988-1999	Researcher Intern. Oak Ridge Associated Universities (ORAU), position at Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.
1987-1988	Observer/Telescope Operator. High Altitude Observatory, National Center for Atmospheric Research, position at Mauna Loa Solar Observatory, Hilo, Hawaii.

Publications

1. Sylvia Kloster, Natalie M. Mahowald, James T. Randerson, Peter E. Thornton, Forrest M. Hoffman, Samuel Levis, Peter J. Lawrence, Johan J. Feddema, Keith W. Oleson, and David M. Lawrence. Fire dynamics during the 20th century simulated by the Community Land Model. *Biogeosciences*, 7(6):1877{1902, June 2010. doi:10.5194/bg-7-1877-2010.
2. Barry Baker, Henry Diaz, William Hargrove, and Forrest Hoffman. Use of the Köppen-Trewartha climate classification to evaluate climatic refugia in statistically derived ecoregions for the People's Republic of China. *Clim. Change*, 98(1{2):113{131, January 2010. doi:10.1007/s10584-009-9622-2.
3. William W. Hargrove, Joseph P. Spruce, Gerald E. Gasser, and Forrest M. Hoffman. Toward a national early warning system for forest disturbances using remotely sensed phenology. *Photogrammetric Engineering & Remote Sensing*, 75(10):1150{1156, October 2009.
4. Forrest M. Hoffman James T. Randerson, Peter E. Thornton, Natalie M. Mahowald, Gordon B. Bonan, Steven W. Running, and Inez Y. Fung. The Carbon-Land Model Intercomparison Project (C-LAMP): A model-data comparison system for evaluation of coupled biosphere-atmosphere models. In *Proceedings of the 8th International Carbon Dioxide Conference*, Jena, Germany, September 2009a.2
5. James T. Randerson, Forrest M. Hoffman, Peter E. Thornton, Natalie M. Mahowald, Keith Lindsay, Yen-Huei Lee, Cynthia D. Nevison, Scott C. Doney, Gordon Bonan, Reto Stöckli, Curtis Covey, Steven W. Running, and Inez Y. Fung. Systematic assessment of terrestrial biogeochemistry in coupled climate-carbon models. *Global Change Biol.*, 15(9):2462{2484, September 2009b. doi:10.1111/j.1365-2486.2009.01912.x.
6. Forrest M. Hoffman, James T. Randerson, Inez Y. Fung, Peter E. Thornton, Natalie M. Mahowald, Gordon B. Bonan, and Steven W. Running. The Carbon-Land Model Intercomparison Project (C-LAMP): A prototype for coupled biosphere-atmosphere model benchmarking for the IPCC Fifth Assessment Report (AR5). In Anni Reissell, Marjut Nyman, Miia Vesala, and Tyyne Viisanen, editors, *Water in a Changing Climate | Progress in Land-Atmosphere Interactions and Energy/Water Cycle Research*, volume 1 of *Proceedings of the 6th International Scientific Conference on the Global Energy and Water Cycle (GEWEX)* and 2nd International

- Land Ecosystem-Atmosphere Processes Study (iLEAPS) Science Conference, pages 126{127, Melbourne, Australia, August 2009. ISBN 978-952-5855-01-2.
7. Forrest M. Hoffman and Martial Mancip. Working group report on terrestrial biosphere model evaluation. Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS) Newsletter, (7):64, June 2009. ISSN 1796-0363. C. Ryan Johnson, Markus Glatter, Wesley Kendall, Jian Huang, and Forrest M. Hoffman. Querying for feature extraction and visualization in climate modeling. In Gabrielle Allen, Jaros law Nabrzyski, Edward Seidel, Geert Dick van Albada, Jack Dongarra, and Peter M.A. Sloot, editors, Computational Science {ICCS 2009, Part II, volume 5545 of Lecture Notes in Computer Science (LNCS), pages 416{425, Baton Rouge, Louisiana, USA, May 2009. Springer, Heidelberg. ISBN 978-3-642-01972-2.
 8. Yong Xue, Forrest M. Hoffman, and Dingsheng Liu. GeoComputation 2009. In Gabrielle Allen, Jaros law Nabrzyski, Edward Seidel, Geert Dick van Albada, Jack Dongarra, and Peter M.A. Sloot, editors, Computational Science {ICCS 2009, Part II, volume 5545 of Lecture Notes in Computer Science (LNCS), pages 345{348, Baton Rouge, Louisiana, USA, May 2009. Springer, Heidelberg. ISBN 978-3-642-01972-2.
 9. Richard T. Mills, Forrest M. Hoffman, Patrick H. Worley, Kalyan S. Perumalla, Art Mirin, Glenn E. Hammond, and Barry F. Smith. Coping at the User-Level with Resource Limitations in the Cray Message Passing Toolkit MPI at Scale: How Not to Spend Your Summer Vacation. In Proceedings of the 2009 Cray Users Group (CUG) Meeting, Atlanta, Georgia, United States, May 2009.
 10. Robert Sisneros, Markus Glatter, Brandon Langley, Jian Huang, Forrest Hoffman, and David J. Erickson III. Time-varying multivariate visualization for understanding terrestrial biogeochemistry. *J. Phys.: Conf. Ser.*, 125:012093 (6pp), 2008. doi:10.1088/1742-6596/125/1/012093.

Synergistic Activities

1. American Geophysical Union (AGU), 2002-present.
2. American Meteorological Society (AMS), Smoky Mountain Chapter, 1998-present; Chapter President, 2005.
3. Institute of Electrical and Electronics Engineers (IEEE) Computer Society, 1998-present.
4. International Environmental Modeling and Software Society (iEMSS), 2006-present.
5. Sigma Pi Sigma, Physics Honor Society, 1995-present.

Awards and Honors

1. 1st Place, People's Choice Poster Award for "A Cluster Analysis Approach to Comparing Atmospheric Radiation Measurement (ARM) Data with Global Climate Model (GCM) Results," by Forrest M. Hoffman, Salil Mahajan, William W. Hargrove, Richard T. Mills, and Anthony Del Genio. The U.S. Department of Energy, Atmospheric Radiation Measurement (ARM) Program, at the 18th Annual ARM Science Team Meeting in Norfolk, Virginia, March 10-14, 2008.
2. ORNL Outstanding Mentor Award. Oak Ridge National Laboratory and Oak Ridge Associated Universities, February 2008.
3. Significant Event Award for contribution to NSF's National Ecological Observatory Network (NEON) Design Committee. Oak Ridge National Laboratory/UT-Battelle, LLC, March 2006.
4. 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).
5. Awarded by the International Association for Landscape Ecology, U. S. Regional Chapter, April 2004.

Graduate and Postdoctoral Advisors

Graduate Advisor: Dr. William E. Blass (Department of Physics and Astronomy, University of Tennessee-Knoxville)