

Curriculum vitae
Forrest M. Hoffman
Computational Earth Sciences Group
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Education

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

Advisor: 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., Physics, 1991. University of Tennessee, Knoxville, TN

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

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

Employment

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

Contributing Editor and Columnist, “Extreme Linux” column, *Linux Magazine* (January 2002–October 2006).

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

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

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

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

Professional Organizations

American Geophysical Union (AGU), 2002–present.

American Meteorological Society (AMS), Smoky Mountain Chapter, 1998–present; Chapter President, 2005.

Institute of Electrical and Electronics Engineers (IEEE) Computer Society, 1998–present.

International Environmental Modeling and Software Society (iEMSs), 2006–present.

Sigma Pi Sigma, Physics Honor Society, 1995–present.

Honors and Awards

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.

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.

World-Class Teamwork Award. Oak Ridge National Laboratory Values Committee, October 19, 1999.

President’s Award for Continuous Improvement. Oak Ridge National Laboratory/Lockheed Martin Energy Research Corp., November 1997.

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

Distinguished Achievement Award for Operational Support. Oak Ridge National Laboratory, Environmental Sciences Division, August 1995.

Significant Event Award. Martin Marietta Energy Systems, June 1995.

Publications

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](https://doi.org/10.5194/bg-7-1877-2010).

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](https://doi.org/10.1007/s10584-009-9622-2).

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.

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.

- 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](https://doi.org/10.1111/j.1365-2486.2009.01912.x).
- 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 Tyne 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.
- 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, Jarosław 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.
- Yong Xue, Forrest M. Hoffman, and Dingsheng Liu. GeoComputation 2009. In Gabrielle Allen, Jarosław 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.
- 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.
- 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](https://doi.org/10.1088/1742-6596/125/1/012093).
- Forrest M. Hoffman, James T. Randerson, Inez Y. Fung, Peter Thornton, Curtis Covey, Gordon Bonan, Steven Running, and Richard Norby. Comparison of global model results from the Carbon-Land Model Intercomparison Project (C-LAMP) with Free-Air Carbon Dioxide Enrichment (FACE) manipulation experiments. *Eos Trans. AGU*, 89(53), December 2008a. Fall Meet. Suppl., Abstract B51E-0447.
- William W. Hargrove, Joe Spruce, Gerry Gasser, Forrest M. Hoffman, and Danny Lee. A new national MODIS-derived phenology data set every 16 days, 2002 through 2006. *Eos Trans. AGU*, 89(53), December 2008. Fall Meet. Suppl., Abstract B51B-0373.
- Richard J. Norby, J. M. Warren, C. M. Iversen, B. E. Medlyn, R. E. McMurtrie, and Forrest M. Hoffman. Nitrogen limitation is reducing the enhancement of NPP by elevated CO₂ in a deciduous forest. *Eos Trans. AGU*, 89(53), December 2008. Fall Meet. Suppl., Abstract B32B-05, Invited.
- David J. Erickson, Auroop Ganguly, Karsten Steinhaeuser, Marcia Branstetter, Robert J. Oglesby, Forrest M. Hoffman, and Lawrence Buja. Extreme climate event trends: The data mining and evaluation of the A1FI scenario for 2000-2100. *Eos Trans. AGU*, 89(53), December 2008a. Fall Meet. Suppl., Abstract H12B-03, Invited.

- Forrest M. Hoffman, James T. Randerson, Inez Y. Fung, Peter E. Thornton, Yen-Huei “Jeff” Lee, Curtis C. Covey, Gordon B. Bonan, and Steven W. Running. The Carbon-Land Model Intercomparison Project (C-LAMP): A protocol and evaluation metrics for global terrestrial biogeochemistry models. In Miquel Sànchez-Marrè, Javier Béjar, Joaquim Comas, Andrea E. Rizzoli, and Giorgio Guariso, editors, *Proceedings of the iEMSs Fourth Biennial Meeting: International Congress on Environmental Modelling and Software Society (iEMSs 2008)*, Barcelona, Catalonia, Spain, July 2008b. ISBN 978-84-7653-074-0.
- Forrest M. Hoffman, William W. Hargrove, Richard T. Mills, Salil Mahajan, David J. Erickson, and Robert J. Oglesby. Multivariate Spatio-Temporal Clustering (MSTC) as a data mining tool for environmental applications. In Miquel Sànchez-Marrè, Javier Béjar, Joaquim Comas, Andrea E. Rizzoli, and Giorgio Guariso, editors, *Proceedings of the iEMSs Fourth Biennial Meeting: International Congress on Environmental Modelling and Software Society (iEMSs 2008)*, Barcelona, Catalonia, Spain, July 2008c. ISBN 978-84-7653-074-0.
- Michael Keller, David Schimel, William Hargrove, and Forrest Hoffman. A continental strategy for the National Ecological Observatory Network. *Frontiers in Ecology and the Environment*, 6(5):282–284, June 2008. Special Issue on Continental-Scale Ecology.
- Wesley Kendall, Markus Glatzer, Jian Huang, Forrest Hoffman, and David E. Bernholdt. Web enabled collaborative climate visualization in the earth system grid. In *Proceedings of the International Symposium on Collaborative Technologies and Systems (CTS’08)*, Irvine, California, USA, May 2008.
- 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 2008b. 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 2007a. doi:[10.1088/1742-6596/78/1/012026](https://doi.org/10.1088/1742-6596/78/1/012026).
- Salil Mahajan, Forrest M. Hoffman, William W. Hargrove, Sigurd W. Christensen, and Richard T. Mills. A cluster analysis approach to comparing Atmospheric Radiation Measurement (ARM) observations with global climate model (GCM) results. *Eos Trans. AGU*, 88(52), December 2007. Fall Meet. Suppl., Abstract A41A-0010.
- Forrest M. Hoffman, James T. Randerson, Inez Y. Fung, Peter E. Thornton, Jeff Lee, and Curt Covey. Results from the Carbon-Land Model Intercomparison Project (C-LAMP). *Eos Trans. AGU*, 88(52), December 2007b. Fall Meet. Suppl., Abstract B31C-0324.
- Jasna V. Pittman, Elliot M. Weinstock, Robert J. Oglesby, David S. Sayres, Jessica B. Smith, James G. Anderson, Owen R. Cooper, Steven C. Wofsy, Irene Xueref, Cristoph Gerbig, Bruce C. Daube, Erik C. Richard, Brian A. Ridley, Andrew J. Weinheimer, Max Loewenstein, Hans-Jurg Jost, Jimena P. Lopez, Michael J. Mahoney, Thomas L. Thompson, William W. Hargrove, and Forrest M. Hoffman. Transport in the subtropical lowermost stratosphere during the cirrus regional study of tropical anvils and cirrus layersflorida area cirrus experiment. *J. Geophys. Res.*, 112(D08304), April 2007. doi:[10.1029/2006JD007851](https://doi.org/10.1029/2006JD007851).
- David Schimel, William Hargrove, Forrest Hoffman, and James McMahon. NEON: A hierarchically designed national ecological network. *Frontiers in Ecology and the Environment*, 5(2):59, March 2007.
- Charles Ehlschlaeger, James Westervelt, Harold Balbach, H. Resit Akcakaya, Tom Hocht, Crystal Goodison, William W. Hargrove, Forrest M. Hoffman, Winifred Rose, and Robert C. Lozar. Habitat fragmentation handbook for installation planners. Technical Report ERDC/CERL TR-06-36, U.S. Army Corps of Engineers, Engineer Research and Development Center, December 2006.

- Forrest M. Hoffman, Inez Y. Fung, James T. Randerson, Peter E. Thornton, Reto Stöckli, Faith Ann Heinsch, Steve Running, Kathy Hibbard, Jasmin John, Curt Covey, Jon Foley, W. Mac Post, William W. Hargrove, David J. Erickson, and Natalie Mahowald. Preliminary results from the CCSM Carbon-Land Model Intercomparison Project (C-LAMP). *Eos Trans. AGU*, 87(52), December 2006a. Fall Meet. Suppl., Abstract B51C-0316.
- William W. Hargrove and Forrest M. Hoffman. Multivariate geographic clustering as a basis for ecoregionalization in the environmental sciences. *Eos Trans. AGU*, 87(52), December 2006a. Fall Meet. Suppl., Abstract IN41C-02, Invited.
- David J. Erickson, T. J. Blasing, Forrest M. Hoffman, Richard T. Mills, Z. Zhu, and Stephan R. Kawa. Monthly global emissions of anthropogenic CO₂: Atmospheric CO₂ transport calculations based on NASA data assimilation. *Eos Trans. AGU*, 87(52), December 2006a. Fall Meet. Suppl., Abstract A41C-0044.
- Forrest M. Hoffman. [The Future of HPC](#). *Linux Magazine*, 8(10):46–48, October 2006a.
- Forrest M. Hoffman, Inez Fung, Jim Randerson, Peter Thornton, Jon Foley, Curtis Covey, Jasmin John, Samuel Levis, W. Mac Post, Mariana Vertenstein, Reto Stöckli, Steve Running, Faith Ann Heinsch, David Erickson, and John Drake. Terrestrial biogeochemistry in the Community Climate System Model (CCSM). *J. Phys.: Conf. Ser.*, 46:363–369, September 2006b. doi:[10.1088/1742-6596/46/1/051](https://doi.org/10.1088/1742-6596/46/1/051).
- Forrest M. Hoffman. [Global Arrays Toolkit, Part Three](#). *Linux Magazine*, 8(9):40–43, 53, September 2006b.
- Forrest M. Hoffman. [Global Arrays Toolkit, Part Two](#). *Linux Magazine*, 8(8):48–51, 59, August 2006c.
- Forrest M. Hoffman, Inez Fung, W. Mac Post, and David Erickson. Recent results from coupled climate/carbon-cycle models in CCSM3. In *Proceedings of the iEMSs Third Biennial Meeting: International Congress on Environmental Modelling and Software Society (iEMSs 2006), Summit on Environmental Modelling and Software*, Burlington, Vermont, USA, July 2006c.
- David Erickson, Robert Oglesby, Scott Elliott, and Forrest Hoffman. Peta-scale climate modeling: Biogeochemical and financial feedbacks. In *Proceedings of the iEMSs Third Biennial Meeting: International Congress on Environmental Modelling and Software Society (iEMSs 2006), Summit on Environmental Modelling and Software*, Burlington, Vermont, USA, July 2006b.
- Forrest M. Hoffman. [The Global Arrays Toolkit](#). *Linux Magazine*, 8(7):42–44, July 2006d.
- 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. Clim.*, 19(11):2302–2324, June 2006. doi:[10.1175/JCLI3742.1](https://doi.org/10.1175/JCLI3742.1).
- Forrest M. Hoffman. [Unified Parallel C, Part Three](#). *Linux Magazine*, 8(6):48–50, 57, June 2006e.
- William W. Hargrove, Forrest M. Hoffman, and Paul F. Hessburg. Mapcurves: A quantitative method for comparing categorical maps. *J. Geograph. Syst.*, pages 1–22, May 2005a. doi:[10.1007/s10109-006-0025-x](https://doi.org/10.1007/s10109-006-0025-x).
- Forrest M. Hoffman. [Unified Parallel C, Part Two](#). *Linux Magazine*, 8(5):48–51, May 2006f.
- Forrest M. Hoffman. [Unified Parallel C 101](#). *Linux Magazine*, 8(3):48–51, March 2006g.
- Paul Hessburg, William W. Hargrove, and Forrest M. Hoffman. A quantitative method for comparing categorical maps. In *Proceedings of the 21st Annual Symposium of the International Association for Landscape Ecology, United States Regional Association (US-IALE)*, San Diego, California, USA, March 2006.

- Barry Baker, William W. Hargrove, Forrest M. Hoffman, and Mike Heiner. Use of multivariate cluster and climate classification techniques to characterize future climate scenarios in Peoples Republic of China. In *Proceedings of the 21st Annual Symposium of the International Association for Landscape Ecology, United States Regional Association (US-IALE)*, San Diego, California, USA, March 2006.
- William W. Hargrove, Bruce Hayden, Dean Urban, James MacMahon, Jerry Franklin, and Forrest M. Hoffman. Development of a domain map for nodes of the National Ecological Observatory Network (NEON). In *Proceedings of the 21st Annual Symposium of the International Association for Landscape Ecology, United States Regional Association (US-IALE)*, San Diego, California, USA, March 2006.
- Forrest M. Hoffman and William W. Hargrove. Applying quantitative ecoregionalization to network analysis: Quantifying representativeness and determining importance values for AmeriFlux sites. In *Proceedings of the 21st Annual Symposium of the International Association for Landscape Ecology, United States Regional Association (US-IALE)*, San Diego, California, USA, March 2006.
- Forrest M. Hoffman. [A Conference for Extremophiles](#). *Linux Magazine*, 8(2):54–55, 63, February 2006h.
- Forrest M. Hoffman. [HPC Logging with syslog-ng, Part Two](#). *Linux Magazine*, 8(1):50–52, 63, January 2006i.
- Forrest M. Hoffman, Peter Thornton, Inez Fung, and W. Mac Post. Land-atmosphere interactions exhibited by coupled carbon-cycle climate models. In Anni Reissel and Asbjørn Aarflot, editors, *Proceedings of the 1st Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS) Science Conference, Boulder, Colorado*, number 79 in Report Series in Aerosol Science, page 341, Helsinki, Finland, January 2006d. ISBN 952-5027-66-X. ISSN 0784-3496.
- William W. Hargrove and Forrest M. Hoffman. Quantifying representativeness importance values for ameriflux tower locations. In Anni Reissel and Asbjørn Aarflot, editors, *Proceedings of the 1st Integrated Land Ecosystem-Atmosphere Processes Study (iLEAPS) Science Conference, Boulder, Colorado*, number 79 in Report Series in Aerosol Science, page 252, Helsinki, Finland, January 2006b. ISBN 952-5027-66-X. ISSN 0784-3496.
- Forrest M. Hoffman, Inez Fung, and Jasmin John. Preliminary results from the C⁴MIP Phase 1 simulations using the CCSM3-CLM3-CASA' coupled model. *Eos Trans. AGU*, 86(52), December 2005a. Fall Meet. Suppl., Abstract B33G-07.
- William W. Hargrove and Forrest M. Hoffman. Quantifying representativeness importance values for AmeriFlux sites. *Eos Trans. AGU*, 86(52), December 2005. Fall Meet. Suppl., Abstract B51C-0219.
- William W. Hargrove, Forrest M. Hoffman, Bruce P. Hayden, Dean L. Urban, J. A. MacMahon, and J. F. Franklin. Development of a domain map for nodes of the National Ecological Observatory Network (NEON). *Eos Trans. AGU*, 86(52), December 2005b. Fall Meet. Suppl., Abstract H33H-02.
- Forrest M. Hoffman. [HPC Logging with syslog-ng, Part One](#). *Linux Magazine*, 7(11), November 2005a.
- Robert C. Lozar, William Hargrove, and Forrest Hoffman. Use of the Corridor Tool in support of threatened and endangered species habitat fragmentation. Technical Report ERDC/CERL TR-05-23, U.S. Army Corps of Engineers, Engineer Research and Development Center, September 2005.
- Forrest M. Hoffman. [Designing a Cluster Solution](#). *Linux Magazine*, 7(9):56–57, 66, September 2005b.
- Forrest M. Hoffman, Mariana Vertenstein, Hideyuki Kitabata, and James B. White III. Vectorizing the Community Land Model (CLM). *Int. J. High Perf. Comput. Appl.*, 19(3):247–260, August 2005b. 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 Interact.*, 9(10):1–27, August 2005c. doi:[10.1175/EI110.1](https://doi.org/10.1175/EI110.1).

- Forrest M. Hoffman. [Scyld Beowulf](#). *Linux Magazine*, 7(8):52, 54, 56, 70, August 2005c.
- William W. Hargrove, Forrest M. Hoffman, and Rebecca A. Efroymson. A practical map-analysis tool for detecting potential dispersal corridors. *Landscape Ecol.*, 20(4):361–373, May 2005c. doi:[10.1007/s10980-004-3162-y](#).
- Forrest M. Hoffman. [Computing with OSCAR](#). *Linux Magazine*, 7(7):48–50, 61, July 2005d.
- George R. Carr, Matthew J. Cordery, John B. Drake, Michael W. Ham, Forrest M. Hoffman, and Patrick H. Worley. Porting and performance of the Community Climate System Model (CCSM3) on the Cray X1. In *Proceedings of the 2005 Cray Users Group Meeting*, Albuquerque, New Mexico, May 2005.
- Forrest M. Hoffman. [The Rocks Cluster Distribution](#). *Linux Magazine*, 7(5):45–57, May 2005e.
- Forrest M. Hoffman. [Clustermatic](#). *Linux Magazine*, 7(4):39–40, 42, 44–45, April 2005f.
- 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](#).
- Forrest M. Hoffman. [Building a \(Very\) Low Cost Cluster](#). *Linux Magazine*, 7(3):54–55, 63, March 2005g.
- Forrest M. Hoffman. [Using BProc](#). *Linux Magazine*, 7(2):52, 54–55, February 2005h.
- Forrest M. Hoffman. [A Very Super Computing Show](#). *Linux Magazine*, 7(1):54–56, January 2005i.
- Forrest M. Hoffman and William W. Hargrove. Quantitative flux ecoregions for AmeriFlux using MODIS. *Eos Trans. AGU*, 85(47), December 2004. Fall Meet. Suppl., Abstract B23B-07.
- Michael A. White, Forrest M. Hoffman, and William W. Hargrove. A strategy for global phenological observatories. *Eos Trans. AGU*, 85(47), December 2004. Fall Meet. Suppl., Abstract B44A-02.
- William W. Hargrove and Forrest M. Hoffman. Potential of multivariate quantitative methods for delineation and visualization of ecoregions. *Environ. Manage.*, 34(5):s39–s60, 2004a. doi:[10.1007/s00267-003-1084-0](#).
- Forrest M. Hoffman. Analysis of reflected spectral signatures and detection of geophysical disturbance using hyperspectral imagery. Master’s thesis, Department of Physics and Astronomy, University of Tennessee, Knoxville, November 2004a. URL: <http://www.climatemodeling.org/~forrest/thesis/thesis.pdf>.
- Forrest M. Hoffman. [One-Sided Communications with MPI-2](#). *Linux Magazine*, 6(11):54–58, 60, 62, November 2004b.
- Forrest M. Hoffman. [Using MPI-2](#). *Linux Magazine*, 6(9):54–57, September 2004c.
- Forrest M. Hoffman. [The Future of Message Passing](#). *Linux Magazine*, 6(8):54–56, 63, August 2004d.
- Forrest M. Hoffman. [Parallel netCDF](#). *Linux Magazine*, 6(7):55–58, July 2004e.
- Forrest Hoffman, Mariana Vertenstein, Peter Thornton, Keith Oleson, and Samuel Levis. Community Land Model version 3.0 (CLM3.0) developer’s guide. Technical Memorandum [ORNL/TM-2004/119](#), Oak Ridge National Laboratory, June 2004a.
- Mariana Vertenstein, Keith Oleson, Sam Levis, and Forrest Hoffman. [Community Land Model Version 3.0 \(CLM3.0\) User’s Guide](#). Technical report, National Center for Atmospheric Research, June 2004.
- Keith W. Oleson, Yongjiu Dai, Gordon Bonan, Mike Bosilovich, Robert Dickinson, Paul Dirmeyer, Forrest Hoffman, Paul Houser, Samuel Levis, Guo-Yue Niu, Peter Thornton, Mariana Vertenstein, Zong-Liang Yan, and Xubin Zeng. [Technical Description of the Community Land Model](#). Technical Note NCAR/TN-461+STR, National Center for Atmospheric Research, Boulder, Colorado, May 2004.

- Forrest M. Hoffman, Mariana Vertenstein, Hideyuki Kitabata, James B. White, Patrick Worley, John Drake, and Matthew Cordery. Adventures in vectorizing the Community Land Model. In *Proceedings of the 2004 Cray Users Group Meeting*, Knoxville, Tennessee, May 2004b.
- William W. Hargrove and Forrest M. Hoffman. A flux atlas for representativeness and statistical extrapolation of the AmeriFlux network. Technical Memorandum [ORNL/TM-2004/112](#), Oak Ridge National Laboratory, April 2004b.
- Forrest M. Hoffman. [64-bit Computing with SGI's Altix](#). *Linux Magazine*, 6(5):40–43, May 2004f.
- Forrest M. Hoffman. [Writing Hybrid MPI/OpenMP Code](#). *Linux Magazine*, 6(4):42–45, 63, April 2004g.
- William W. Hargrove and Forrest M. Hoffman. Developing a practical map-analysis tool for corridor detection. In *Proceedings of the 19th Annual Symposium of the International Association for Landscape Ecology, United States Regional Association (US-IALE)*, pages 93–94, Las Vegas, Nevada, March 2004c.
- Forrest M. Hoffman. [Using OpenMP, Part 3](#). *Linux Magazine*, 6(3):44–48, March 2004h.
- Forrest M. Hoffman. [OpenMP Multi-Processing, Part 2](#). *Linux Magazine*, 6(2):42–46, February 2004i.
- Forrest M. Hoffman. [Multi-Processing with OpenMP](#). *Linux Magazine*, 6(1):44–48, January 2004j.
- William W. Hargrove, Forrest M. Hoffman, and Beverly E. Law. New analysis reveals representativeness of the AmeriFlux network. *Eos Trans. AGU*, 84(48):529, 535, December 2003.
- Forrest M. Hoffman, William W. Hargrove, David J. Erickson, and Robert J. Oglesby. A novel method for analyzing and interpreting GCM results using clustered climate regimes. *Eos Trans. AGU*, 84(46), December 2003a. Fall Meet. Suppl., Abstract GC12A-0155.
- Forrest M. Hoffman. [Management with Condor, Part 3](#). *Linux Magazine*, 5(12):34–37, 59, December 2003a.
- Forrest M. Hoffman. [Management with Condor, Part 2](#). *Linux Magazine*, 5(11):42–44, November 2003b.
- Forrest M. Hoffman. [Management with Condor, Part 1](#). *Linux Magazine*, 5(10):42–44, 62, October 2003c.
- Forrest M. Hoffman. [It's All About Speed](#). *Linux Magazine*, 5(9):44–47, September 2003d.
- Forrest M. Hoffman. [Cluster Monitoring with Ganglia](#). *Linux Magazine*, 5(8):42, 44, 46–47, August 2003e.
- Forrest M. Hoffman. [Communicators & Groups, Part 2](#). *Linux Magazine*, 5(7):46, 48–51, July 2003f.
- Forrest M. Hoffman. [Coupling Parallel Models](#). *Linux Magazine*, 5(6):36, 38, 40–44, 46–47, 71, June 2003g.
- Forrest M. Hoffman. [MPI Communicators and Groups](#). *Linux Magazine*, 5(5):42–43, 46–47, 67, May 2003h.
- Forrest M. Hoffman. [Using Derived Data Types with MPI](#). *Linux Magazine*, 5(4):42, 44–47, April 2003i.
- Forrest M. Hoffman, William W. Hargrove, and Anthony D. Del Genio. Multivariate spatio-temporal clustering of time-series data: An approach for diagnosing cloud properties and understanding ARM site representativeness. In *Proceedings of the U.S. Department of Energy Atmospheric Radiation Measurement (ARM) Program Science Team Meeting*, Broomfield, Colorado, April 2003b. Extended Abstract.
- Forrest M. Hoffman. [Master/Slave Message Passing](#). *Linux Magazine*, 5(3):50, 52, 54–55, 61, March 2003j.
- Forrest M. Hoffman. [Kickstarting Compute Nodes, Part 2](#). *Linux Magazine*, 5(2):44, 46–49, 63, February 2003k.
- Forrest M. Hoffman, William W. Hargrove, David J. Erickson, and Robert J. Oglesby. Using clustered climate regimes for understanding water cycle variability. In *Proceedings of the American Meteorological Society 83rd Annual Meeting*, volume 69, Long Beach, California, February 2003c. Abstract 9.4.

- Forrest M. Hoffman. [Kickstarting Cluster Nodes, Part 1](#). *Linux Magazine*, 5(1):46–49, 63, January 2003l.
- Forrest M. Hoffman. [Running Commands on Many Nodes](#). *Linux Magazine*, 4(12):42–45, December 2002a.
- Forrest M. Hoffman, Robert J. Oglesby, William W. Hargrove, and David J. Erickson. Using clustering to establish climate regimes from PCM output. *Eos Trans. AGU*, 83(47), December 2002. Fall Meet. Suppl., Abstract A61C-0090.
- Forrest M. Hoffman. [Job Scheduling with Maui](#). *Linux Magazine*, 4(11):44–47, November 2002b.
- Forrest M. Hoffman. [Job Scheduling and Batch Systems](#). *Linux Magazine*, 4(10):40–43, October 2002c.
- Forrest M. Hoffman. [High Performance Interconnects](#). *Linux Magazine*, 4(9):46–47, September 2002d.
- Forrest M. Hoffman. [Scalable I/O on Clusters, Part 2](#). *Linux Magazine*, 4(8):48–49, 59, August 2002e.
- Forrest M. Hoffman. [Scalable I/O on Clusters, Part 1](#). *Linux Magazine*, 4(7):42–43, 59, July 2002f.
- Forrest M. Hoffman. [Using Mosix](#). *Linux Magazine*, 4(6):46–49, June 2002g.
- Forrest M. Hoffman. [Advanced Message Passing](#). *Linux Magazine*, 4(5):42–43, 62, May 2002h.
- Forrest M. Hoffman. [Message Passing with MPI and PVM](#). *Linux Magazine*, 4(4):38–41, 63, April 2002i.
- Forrest M. Hoffman. [An Introduction to Parallel Programming](#). *Linux Magazine*, 4(3):38–41, March 2002j.
- Forrest M. Hoffman. [Configuring a Beowulf Cluster](#). *Linux Magazine*, 4(2):42–45, February 2002k.
- Forrest M. Hoffman. [Concepts in Beowulfery](#). *Linux Magazine*, 4(1):40–41, January 2002l.
- 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.
- Jin-Ping Gwo, Eduardo F. D’Azevedo, Hartmut Frenzel, Melaine Mayes, Gour-Tsyh Yeh, Philip M. Jardine, Karen M. Salvage, and Forrest M. Hoffman. HBGC123D: A high performance computer model of coupled hydrogeological and biogeochemical processes. *Computers & Geosciences*, 27(10):1231–1242, December 2001. ISSN 0098-3004. doi:[10.1016/S0098-3004\(01\)00027-9](https://doi.org/10.1016/S0098-3004(01)00027-9).
- Forrest M. Hoffman and William W. Hargrove. High performance computing: An introduction to parallel programming with Beowulf. *Open Source Developers Journal*, 1(1):24–31, 2000.
- William W. Hargrove and Forrest M. Hoffman. [An Analytical Assessment Tool for Predicting Changes in a Species Distribution Map Following Changes in Environmental Conditions](#). In *Proceedings of the Fourth International Conference on Integrating GIS and Environmental Modeling (GIS/EM4): Problems, Prospects and Research Needs*, Banff, Alberta, Canada, September 2000.
- Jin-Ping Gwo, Forrest M. Hoffman, and William W. Hargrove. Mechanistic-based genetic algorithm search on a Beowulf cluster of Linux PCs. In *Proceedings of the High Performance Computing 2000 (HPC2000) Conference*, Washington, DC, April 2000.
- Gnanamanika Mahinthakumar, Forrest M. Hoffman, William W. Hargrove, and Nicolas T. Karonis. Multivariate geographic clustering in a metacomputing environment using Globus. In *Supercomputing ’99: Proceedings of the 1999 ACM/IEEE conference on Supercomputing (CDROM)*, Portland, Oregon, United States, November 1999. ACM Press. ISBN 1-58113-091-0. doi:[10.1145/331532.331537](https://doi.org/10.1145/331532.331537).
- Forrest M. Hoffman and William W. Hargrove. Parallel computing with Linux. *Crossroads*, 6(1), 1999a.

- 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 William W. Hargrove. Multivariate geographic clustering using a Beowulf-style parallel computer. In Hamid R. Arabnia, editor, *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA '99)*, volume III, pages 1292–1298, Las Vegas, Nevada, June 1999b. CSREA Press. ISBN 1-892512-11-4.
- Forrest M. Hoffman and William W. Hargrove. Cluster computing: Linux taken to the extreme. *Linux Magazine*, 1(1):56–59, 1999c.
- Forrest M. Hoffman and William W. Hargrove. Making soup from stones. *Troubleshooting Professional*, 2(5), May 1998.
- W. Mac Post, Anthony W. King, Stan D. Wullschleger, and Forrest M. Hoffman. Historical variations in terrestrial biospheric carbon storage. *DOE Research Summary*, (34), June 1997.
- K. D. Barnes, J. M. Donato, D. M. Flanagan, N. W. Grady, J. A. Green, F. M. Hoffman, J. A. Kohl, M. R. Leuze, P. M. Papadopoulos, and R. F. Sincovec. The financial automated management on-line user system (FaMOUS): A prototype interactive hypertext-based financial planning and reporting system. Technical Memorandum ORNL/TM-13139, Oak Ridge National Laboratory, November 1995.
- Daniel A. Levine, William W. Hargrove, and Forrest M. Hoffman. *Characterization of Sediments in the Clinch River, Tennessee, Using Remote Sensing and Multi-Dimensional GIS Techniques*, page 600. GIS World Books, Fort Collins, Colorado, 1995a. ISBN 1-882610-17-2.
- Daniel A. Levine, William W. Hargrove, and Forrest M. Hoffman. Characterization of sediments in the Clinch River, Tennessee, using remote sensing and multi-dimensional GIS techniques. In *Proceedings of the Ninth Annual Symposium on Geographic Information Systems*, pages 548–551, Vancouver, British Columbia, Canada, March 1995b.
- William W. Hargrove, Forrest M. Hoffman, and Daniel A. Levine. Interpolation of bottom bathymetry and potential erosion in a large Tennessee reservoir system using GRASS. In *Proceedings of the Ninth Annual Symposium on Geographic Information Systems*, pages 552–557, Vancouver, British Columbia, Canada, March 1995.
- Forrest M. Hoffman. Deployment of Internet technologies at Oak Ridge National Laboratory. In *Proceedings of WATTec '95*, Knoxville, Tennessee, February 1995.
- Forrest M. Hoffman. Converting hard copy document for electronic dissemination. In *Proceedings of the 18th Annual Practical Conference on Communication (PCOC)*, Oak Ridge, Tennessee, November 1994a.
- Forrest M. Hoffman. How do I connect to the Internet? let me count the ways. In *Proceedings of WATTec '94*, Knoxville, Tennessee, February 1994b.
- S. Y. Lee, Mark Elless, and Forrest M. Hoffman. Solubility measurement of Uranium in Uranium-contaminated soils. Technical Memorandum ORNL/TM-12401, Oak Ridge National Laboratory, August 1993.
- Michael A. Unseren and Forrest M. Hoffman. Errata report on Herbert Goldstein's *Classical Mechanics*, second edition. Technical Memorandum ORNL/TM-12176, Oak Ridge National Laboratory, January 1993.
- 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).
- Forrest M. Hoffman. A Unix print filter for controlling an HP Laserjet printer. Technical Memorandum ORNL/TM-12190, Oak Ridge National Laboratory, 1992.