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### Education

1998-2002 Boston University, Ph.D. in Geography  
1995-1997 University of Connecticut, M.S. in Physics  
1989-1993 Fachhochschule Weingarten, B.S. in Physics-Engineering

### Employment

November 2007 Adjunct Assistant Professor, Institute of the Environment and Dept. of Atmospheric and Oceanic Sciences, UCLA  
2005-2007 Postdoc, Center for Tropical Research, Institute of the Environment, UCLA  
2002-2005 Postdoc, Climate-Carbon Interactions Group, Earth and Planetary Sciences, UC Berkeley

### Current and Past Research Topics

**UNIVERSITY OF CALIFORNIA, LOS ANGELES    LOS ANGELES, CA**  
*Center for Tropical Research (2005-present)*

Research in improving the understanding of how current pattern of biodiversity are linked to contemporary environmental gradients and historical processes; assessing of how these current pattern of biodiversity may change in a changing environment

**UNIVERSITY OF CALIFORNIA, BERKELEY    BERKELEY, CA**  
*Carbon-Climate Interaction Group (2002-2005)*

Postdoctoral research to characterize the terrestrial sinks and sources for atmospheric CO<sub>2</sub> through integrating remotely-sensed and surface-based observations with terrestrial ecosystem and atmospheric transport models

**BOSTON UNIVERSITY    BOSTON, MA**  
*Climate and Vegetation Group (1998-2002)*

Ph.D. thesis in improving the understanding of the interaction between climate and vegetation using observational data and general circulation model simulations; research involved validation of remotely-sensed global vegetation data sets and exploration of their utility for climate simulations, assessment of the strength of a vegetation feedback on near-surface climate, isolation of coupled spatio-temporal modes in global temperature and vegetation data sets and assessment of their relationship to large-scale atmospheric circulation anomalies (El Niño)

**UNIVERSITY OF CONNECTICUT**  
*Physics Department (1995-1997)*

**STORRS, CT**

M.S. research in the area of speciation of contaminants in soils; determined the first nearest atomic neighbors of heavy metals in soils that gave insight into the strength of their fixation; evaluated the utility of novel x-ray detectors for synchrotron applications; projects funded by the Department of Energy

**INSTITUTE OF APPLIED RESEARCH WEINGARTEN, GERMANY**  
*Radiometry Lab (1993-1994)*

Research about the fate of radioactive cesium, as a result of the Chernobyl fallout and global nuclear weapons testing, in southern German ecosystems; estimated the vertical migration of cesium in soils; as project leader, designed and oversaw field experiments, supervised students and managed group budgets; project funded by the Ministry of Environment of the state Baden-Württemberg, Germany

**Honors**

NASA Graduate Student Fellowship in Earth System Science, Boston  
Outstanding Graduate Student Paper Award – American Geophysical Union Spring Meeting, Boston (2001)  
Boston University Scholarship Recipient (1998-2001)

**Reviewer**

Tellus, Geophysical Research Letters, and Remote Sensing of the Environment

**Teaching**

EPS 181: Atmospheric Physics and Dynamics (spring/04), UC Berkeley, guest lecturer  
GGR100: Weather and Climate (fall/99, spring/00), Salem State College, lab instructor  
GG101: Physical Geography (fall/98), Boston University, teaching assistant  
PY354: Modern Physics (spring/98), Boston University, teaching assistant

**Field Work**

Participated in several field campaigns to validate satellite data (MODIS/MISR) in Finland (Ruokolathi), Sweden (Flakaliden), USA (Massachusetts) and southern Africa (Safari 2000: Southern African Regional Science Initiative)

**Public**

Consulting scientist in NASA's Earth Observatory Features article: 'Seeing Leaves in a New Light' (<http://earthobservatory.nasa.gov/Study/LAI/LAI.html>)

**List of Selected Publications**

**Buermann, W., S. Saatchi, B.R. Zutta, J. Chaves, B. Mila, C. Graham, and T. Smith,** Modelling the distribution of species across the Andean and Amazonian regions using remote sensing data, *J. Biogeography.*, 2008 (in press).

Saatchi, S., **W. Buermann,** H. ter Steege, S. Mori, and T. Smith, Modeling Distribution of Amazonian Tree Species and Diversity Using Remote Sensing Measurements, *Remote Sens. Environ.*, 2008 (in press).

Smith, T.B., B. Mila, G.F. Grether, H. Slabbekoorn, I. Sepil, **W. Buermann,** S. Saatchi, J.P. Pollinger (2008), Evolutionary consequences of human disturbance in a rainforest bird species from Central Africa, *Molecular Ecology*, 17, 58–71, 2008.

**Buermann, W.,** B. Lintner, C. Koven, A. Angert, J.E. Pinzon, C.J. Tucker, and I. Fung, The changing carbon cycle at the Mauna Loa Observatory, *Proc. Nat. Acad. Sci.*, 104, 4249-4254 2007.

Lintner, B., **W. Buermann,** C. Koven, and I. Fung, Seasonal circulation and Mauna Loa CO<sub>2</sub> variability, *J. Geophys. Res.*, 111, doi:10.1029/2005JD006535, 2006.

- Buermann, W.**, B. Lintner, and C. Bonfils, A wintertime Arctic Oscillation signature on early season Indian Ocean Monsoon intensity, *J. Climate*, 18, 2247-2269, 2005.
- Angert, A., S. Biraud, C. Bonfils, C. C. Henning, **W. Buermann**, J. Pinzon, C. J. Tucker, and I. Fung, Drier summers cancel out the CO<sub>2</sub> uptake enhancement induced by warmer springs, *Proc. Nat. Acad. Sci.*, 102, doi/10.1073/pnas.0501647102, 2005.
- Angert, A., S. Biraud, C. Bonfils, **W. Buermann**, and I. Fung, CO<sub>2</sub> seasonality indicates origins of post-Pinatubo sink, *Geophys. Res. Lett.*, 31, doi:10.1029/2004GL019760, 2004.
- Wang, Y.J., C.E. Woodcock, **W. Buermann**, P. Stenberg, P. Voipio, H. Smolander, T. Häme, Y.H. Tian, J.N. Hu, Y. Knyazikhin, and R.B. Myneni, Evaluation of the MODIS LAI algorithm at a coniferous forest site in Finland, *Remote Sens. Environ.*, 91, 114-127, 2004.
- Buermann, W.**, B. Anderson, R.E. Dickinson, W. Lucht, C.S. Potter, and R.B. Myneni, Interannual covariability in Northern Hemisphere air temperatures and greenness associated with El Niño-Southern Oscillation and the Arctic Oscillation, *J. Geophys. Res.*, 108, 4396, doi:10.1029/2002JD002630, 2003.
- Dong, J., R.K. Kaufmann, R.B. Myneni, C.J. Tucker, P.E. Kauppi, J. Liski, **W. Buermann**, V. Alexeyev, and M.K. Hughes, Remote sensing estimates of boreal and temperate forest woody biomass: Carbon pools, sources, and sinks, *Remote Sens. Environ.*, 84, 393-410, 2003.
- Wang, Y.J., **W. Buermann**, P. Stenberg, H. Smolander, T. Häme, Y. Tian, J. Hu, Y. Knyazikhin, and R.B. Myneni, A new parameterization of canopy spectral response to incident solar radiation: Case study with hyperspectral data from pine dominant forest, *Remote Sens. Environ.*, 85, 304-315, 2003.
- Shabanov, N.V., Y. Wang, **W. Buermann**, J. Dong, S. Hoffman, G.R. Smith, Y. Tian, Y. Knyazikhin, and R.B. Myneni, The effect of spatial heterogeneity in validation of the MODIS LAI and FPAR algorithm over broadleaf forests, *Remote Sens. Environ.*, 85, 410-423, 2003.
- Buermann, W.**, Y. Wang, J. Dong, L. Zhou, X. Zeng, R.E. Dickinson, C.S. Potter, and R.B. Myneni, Analysis of a multiyear global vegetation leaf area index data set, *J. Geophys. Res.*, 107, 4646, doi:10.1029/2001JD000975, 2002.
- Lucht, W., I.C. Prentice, R.B. Myneni, S. Sitch, P. Friedlingstein, W. Cramer, **W. Buermann**, and B. Smith, Climatic control of the high-latitude vegetation greening trend and Pinatubo effect, *Science*, 296, 1687-1688, 2002.
- Tian, Y., C.E. Woodcock, Y. Wang, J.L. Privette, N.V. Shabanov, L. Zhou, **W. Buermann**, J. Dong, B. Veikkanen, T. Häme, M. Ozdogan, Y. Knyazikhin, and R.B. Myneni, Multiscale analysis and validation of the MODIS LAI product – I. Uncertainty assessment, *Remote Sens. Environ.*, 83, 414-430, 2002.
- Tian, Y., C.E. Woodcock, Y. Wang, J.L. Privette, N.V. Shabanov, L. Zhou, **W. Buermann**, J. Dong, B. Veikkanen, T. Häme, M. Ozdogan, Y. Knyazikhin, and R.B. Myneni, Multiscale analysis and validation of the MODIS LAI product – II. Sampling strategy, *Remote Sens. Environ.*, 83, 431-441, 2002.

- Buermann, W.**, J. Dong, X. Zeng, R.B. Myneni, and R.E. Dickinson, Evaluation of the utility of satellite based vegetation leaf area index data for climate simulations, *J. Climate*, 14, 3536-3550, 2001.
- Drissner, J., **W. Buermann**, F. Enslin, R. Heider, E. Klemt, R. Miller, G. Schick, and G. Zibold, Availability of caesium radionuclides to plants - Classification of soils and role of mycorrhiza, *J. Env. Radioact.*, 41, 19-32, 1998.
- Davies G., A. Fataftah, A. Cherkassky, E. Ghabbour, A. Radwan, S. Jansen, S. Kolla, L. Sein, **W. Buermann**, M. Balasubramanian, J. Budnick and B. Xing, Tight metal binding by humic acids and its role in biomineralization, *J. Chemic. Soc.-Dalton*, 4047-4060, 1997.
- Buermann, W.**, J. Drissner, R. Miller, R. Heider, G. Lindner, and G. Zibold, Migration of  $^{134},^{137}\text{Cs}$  radionuclides in the soil and uptake by plants in German spruce forests, *Radioch. Acta*, 66/67, 373-80, 1994.
- Buermann, W.**, Distribution and Transfer of Cesium Radionuclides in Forest Soils of Southern Germany, Proc. 3rd International Summer School on 'Low Level Measurements of Radioactivity in the Environment: Techniques and Applications', Huelva-Spain, 20 Sept.-6 Oct. 1993, *World Scientific Publishing Co.*, Singapore, p. 299-314, 1994.