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<http://scholar.google.com/citations?user=f36ybskAAAAJ> (H-index: 14, Citation: 1135)

## EDUCATION AND TRAINING

2005 Ph.D., Environmental Engineering, University of California, Berkeley

2001 M.S., Environmental Engineering, University of California, Berkeley

2000 M.S., Atmospheric Sciences, Peking University

1996 B.S., Geography, Zhongshan University

## RESEARCH AND PROFESSIONAL EXPERIENCE

2010-present, **Staff Scientist**, Atmospheric Sciences and Global Change Division, Pacific Northwest National Laboratory, Richland, Washington

*Research on land model developments and applications under Earth system modeling contexts; Core developer of CLM4.5 released from NCAR in July 2013.*

2008-2009, **Research Assistant Professor**, Department of Civil, Structural, and Environmental Engineering, University of New York at Buffalo, Buffalo, New York

*Teaching in hydrologic/water resources engineering, research on tropical forest disturbances using ecosystem models and flux tower measurements.*

2005-2008, **Postdoctoral Research Associate**, Department of Global Ecology, Carnegie Institution for Science, Stanford, California

*Research on Tropical Ecology, focusing on development and applications of the ecosystem model Carnegie-Ames-Stanford Approach (CASA) for simulating tropical forest disturbances and recovery*

2000-2005, **Research and teaching Assistant**, Department of Civil and Environmental Engineering, University of California, Berkeley, Berkeley, California

*Research and teaching on surface water hydrology and land surface modeling, including the development and applications of the Variable Infiltration Capacity (VIC) land surface/hydrologic model and its coupling with the regional climate model MM5*

## SELECTED PUBLICATIONS (*h-index of 11 from 42 publications*)

Lei, H., M. Huang, L. R. Leung, D. Yang, X. Shi, J. Mao, D. J. Hayes, C. R. Schwalm, Y. Wei, and S. Liu, 2014. Sensitivity of global terrestrial gross primary production to hydrologic states simulated by the Community Land Model using two runoff parameterizations. *J. Adv. Model. Earth Syst.*, 06, doi:10.1002/2013MS000252.

Fang, Y., M. Huang, C. Liu, H. Li, and L.R. Leung. 2013. A generic biogeochemical module for Earth system models: Next Generation BioGeoChemical Module (NGBGC), version 1.0, *Geosci. Model Dev.*, 6, 1977-1988, doi:10.5194/gmd-6-1977-2013.

Leng G., M. Huang, Q. Tang, H. Gao, and L.R. Leung. 2013. Modeling the effects of groundwater-fed irrigation on terrestrial hydrology over the conterminous United States, *J. Hydrometeor.*, doi:10.1175/JHM-D-13-049.1.

Huang, M., Z. Hou, L.R. Leung, Y. Ke, Y. Liu, Z. Fang, and Y. Sun, 2013. Uncertainty Analysis of Runoff Simulations and Parameter Identifiability in the Community Land Model – Evidence from MOPEX Basins, *J. Hydrometeor.*, doi: <http://dx.doi.org/10.1175/JHM-D-12-0138.1>.

Leng, G., M. Huang, Q. Tang, W. Sacks, H. Lei, and L.R. Leung, 2013. Modeling the effects of irrigation on land surface fluxes and states over the conterminous United States: Sensitivity to input data and model parameters, *J. Geophys. Res. – Atmos.*, 118:1-15. doi:10.1002/jgrd.50792.

- Qian, Y., M Huang, B. Yang, L.K. Berg, 2013. A Modeling Study of Irrigation Effects on Surface Fluxes and Land–Air–Cloud Interactions in the Southern Great Plains. *J. Hydrometeor.*, 14, 700–721.
- Hou, Z., M. Huang, L.R. Leung, G. Lin, and D.M. Ricciuto. 2012. Sensitivity of surface flux simulations to hydrologic parameters based on an uncertainty quantification framework applied to the Community Land Model, *J Geophys. Res. – Atmos.*, 117, D15108, doi:10.1029/2012JD017521.
- Huang M. and G.P. Asner. 2010. Long-term Carbon Loss and Recovery following Selective Logging in Amazon Forests. *Global Biogeochem. Cycles*, 24, GB3028, doi:10.1029/2009GB003727.
- Leung L.R., M. Huang, Y. Qian, and X. Liang. 2010. Climate and Soil Control on Groundwater Table Dynamics and its Feedbacks in a Climate Model with Surface Water-Groundwater Interactions. *Climate Dynamics*, 36 (1-2), 57-81
- Huang M., X. Liang, and L.R. Leung. 2008. A Generalized Subsurface Flow Parameterization Considering Subgrid Spatial Variability of Topography and Recharge. *J. Hydrometeor.*, 9, 1151–1171.

### **SYNERGISTIC ACTIVITIES**

- Member, American Geophysical Union (2001-present)
- Member, American Meteorological Society (2002-present)
- Proposal reviewer for NASA-TE, NSF-CAREER, DOE-TES (2012-)
- Reviewer for *J. Geophys. Res.-Atmos./Biogeo.*, *J. Hydrology*, *J. Hydrometeorology*, *Atmosphere-Ocean*, *Advances in Atmospheric Science*, *J. Hydrologic Engineering*, *Hydrology and Earth System Sciences*, *Water Resources Res.*, *PLoS-ONE*, *Climate Dynamics*, *Regional Environmental Change*, *Water, Forests, Weather and Forecasting*, *Climate*, *Quarterly J. the Royal Meteorological Society*, *J. Applied Meteorology and Climatology*, *Computers and Geosciences* (2003-present)
- Editorial Board Member: *Climate* (2014-present)
- Convener of sessions in American Geophysical Union fall meetings (2007-2014)