

Anthony W. King

Scientist

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E-mail: kingaw@ornl.gov**Education and Training**

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| 1986 | University of Tennessee-Knoxville, Ecology, PhD |
| 1981 | Arkansas State University-Jonesboro, Biology, MS |
| 1978 | Arkansas State University-Jonesboro, Zoology, BS |

Research and Professional Experience

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| 1992-Present | Research Staff Member. Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN. |
| 1987-1992 | Research Associate. Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN. |

Publications

1. Ciais, P., J.G. Canadell, S. Luyssaert, F. Chevallier, A. Shvidenko, Z. Poussi, Matthias Jonas, P. Peylin, A.W. King, E.D.Schulze, S. Piao, C. Rödenbeck, W. Peters, and F-M Bréon. 2010. Can we reconcile atmospheric estimates of the Northern terrestrial carbon sink with land-based accounting? *Current Opinion in Environmental Sustainability* doi:10.1016/j.cosust.2010.06.008
2. Pan, F., C.D. Peters-Lidard, and A.W. King. 2010. An inverse method for estimating the spatial variability of soil particle size distribution from observed soil moisture. *Journal of Hydrologic Engineering* (in press)
3. CCSP, 2007. *The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A.W., L. Dilling, G.P. Zimmerman, D.M. Fairman, R.A. Houghton, G. Marland, A.Z. Rose, and T.J. Wilbanks (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, 242 pp.
4. Post, W. M., and A. King. 2005. Climate change and terrestrial ecosystem production. Pp 165-170. In Climate Change and Global Food Security, CRC Press, Boca Raton, Florida.
5. Hanson, P.J., J.S. Amthor, S.D. Wullschleger, K.B. Wilson, R.F. Grant, A. Hartley, D. Hui, E.R. Hunt, Jr., D.W. Johnson, J.S. Kimball, A.W. King, Y. Luo, S.G. McNulty, G. Sun, P.E. Thornton, S.S. Wang, M. Williams, and R.M. Cushman. 2004. Oak forest carbon and water simulations: model intercomparisons and evaluations against independent data. *Ecological Monographs* 74:443–489.
6. West, T.O., G. Marland, A.W. King, W.M. Post, A.K. Jain, and K. Andrasko. 2004. Carbon management response curves: estimates of temporal soil carbon dynamics. *Environmental Management* 33:507-518.
7. Amthor, J. S., J. M. Chen, J .S. Clein, S. E. Frolking, M. L. Goulden, R. F. Grant, J. S.Kimball, A. W. King, A. D. McGuire, N. T. Nikolov, C. S. Potter, S. Wang, and S. C. Wofsy. 2001. Boreal forest CO₂ and evapotranspiration predicted by nine ecosystem process models: inter-model comparisons and relationships to field measurements. *Journal of Geophysical Research* 106:33,623-33,648.
8. Potter, C. S., S. Wang, N. T. Nikolov, A. D. McGuire, J. Liu, A. W. King, J. S. Kimball, R. F. Grant, S. E. Frolking, J. Clein, J. M.Chen, and J. S. Amthor. 2001. Comparison of boreal ecosystem model sensitivity to variability in climate and forest site parameters. *Journal of Geophysical Research* 106:33,671-33,688.
9. Jager, H. I., W. W. Hargrove, C. C. Brandt, A. W. King, R. J. Olson, J. M. O. Scurlock and K. A. Rose. 2000. Constructive contrasts between modeled and measured climate responses over a regional scale. *Ecosystems* 3:396-411
10. King, A. W., W. M. Post, and S. D. Wullschleger. 1997. The potential response of terrestrial carbon storage to changes in climate and atmospheric CO₂. *Climatic Change* 35:199-227.

11. Post, W. M., A. W. King, and S. D. Wullschleger. 1997. Historical variations in terrestrial biospheric carbon storage. *Global Biogeochemical Cycles* 11:99-109.
12. King, A. W., W. R. Emanuel, S. D. Wullschleger, and W. M. Post. 1995. In search of the missing carbon sink: a model of terrestrial biospheric response to land-use change and atmospheric CO₂. *Tellus* 47B:501-519.
13. King, A. W., W. R. Emanuel, and W. M. Post. 1992. Projecting future concentrations of atmospheric CO₂ with global carbon cycle models: simulating historical changes in atmospheric CO₂. *Environmental Management* 16:91-108.

Synergistic Activities

1. Co-Chair, North American Carbon Program Scientific Steering Group (2008-present). Collaborator, iESM project, *Improving the Representations of Human-Earth System Interactions*, J. A. Edmonds, PNNL (Lead PI) J.B. Drake, ORNL, W.D. Collins, LBNL (Co-PIs).
2. Co-PI, B. Ross (Lead), *Projection and Analysis of Climate Change Impact on Defense Interests*, scientific assessment in support of US Dept of Defense 2010 Quadrennial Defense Review.
3. Co-PI, ORNL LDRD Project, T. Wilbanks PI, *Possible Impacts of Relatively Severe Climate Change*. Lead for collaboration on North India with colleagues at TERI, New Delhi
4. Co-PI, ORNL LDRD Project, W.C. Lenhardt (PI) *Enhancing Climate Impact Integrated Assessment for Water through Climate Informatics*
5. PI, ORNL LDRD Project. *Mitigation of Atmospheric CO₂ through Management of Woody Biomass*
6. PI, ORNL LDRD Project. *Scale Dependency in Dynamical Downscaling of Extreme Climate Events over Complex Topography*
7. PI, ORNL Program Development. *Translating Climate Science to Sponsor Needs: A Program Development Plan of Action*