

Daniel M. Ricciuto

Scientist

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Education and Training

2006 Pennsylvania State University, Meteorology, PhD

2000 Duke University, Physics, BS

Research and Professional Experience

2010-Present Research Staff Member, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN

2007-2010 Postdoctoral Associate, Environmental Sciences Division, Oak Ridge National Laboratory, Oak Ridge, TN

2006-2006 Postdoctoral Associate, Department of Meteorology, The Pennsylvania State University, University Park, PA

2000-2006 Research Assistant, Department of Meteorology, The Pennsylvania State University, University Park, PA

Publications

1. Ricciuto DM, King AW, Dragoni D, Post WM (2010). Parameter and prediction uncertainty in an optimized terrestrial carbon cycle model: Effects of constraining variables and data record length, *Journal of Geophysical Research – Biogeosciences*, in review.
2. Fox, A, Williams M, Richardson AD, Cameron D, Gove JH, Quaife T, Ricciuto DM, Reichstein M, Tomelleri E, Trudinger C, van Wijk MT (2009). Comparing different algorithms and implementations for the inversion of a terrestrial ecosystem model against eddy covariance data, *Agricultural and Forest Meteorology*, 149(10), 1597-1615.
3. Ricciuto DM, Butler MP, Davis KJ, Cook BD, Bakwin P, Andrews A, Teclaw RM (2008) Causes of interannual variability in ecosystem-atmosphere CO₂ exchange in a northern Wisconsin forest using a Bayesian model calibration. *Agricultural and Forest Meteorology* 148:309-327.
4. Ricciuto DM, Davis KJ, Keller K (2008) A Bayesian calibration of a simple carbon cycle model: The role of observations in estimating and reducing uncertainty. *Global Biogeochemical Cycles* 22(2).
5. Heinsch FA, Zhao MS, Running SW, Kimball JS, Nemani RR, Davis KJ, Bolstad PV, Cook BD, Desai AR, Ricciuto DM, Law BE, Oechel WC, Kwon H, Luo HY, Wofsy SC, Dunn AL, Munger JW, Baldocchi DD, Xu LK, Hollinger DY, Richardson AD, Stoy PC, Siqueira MBS, Monson RK, Burns SP, Flanagan LB (2006). Evaluation of remote sensing based terrestrial productivity from MODIS using regional tower eddy flux network observations. *IEEE Transactions on Geoscience and Remote Sensing*, 44:1908-1925.
6. Richardson, AD, Hollinger DY, Burba GG, Davis KJ, Flanagan LB, Katul GG, Munger JW, Ricciuto DM, Stoy PC, Suyker AE, Verma SB, Wofsy SC, 2006. A multi-site analysis of random error in tower-based measurements of carbon and energy fluxes. *Agricultural and Forest Meteorology*, 136:1-18.
7. Wang W, Davis KJ, Cook BD, Bakwin PS, Yi C, Butler MP, Ricciuto DM (2005) Surface layer CO₂ budget and advective contributions to measurements of net ecosystem-atmosphere exchange of CO₂. *Agricultural and Forest Meteorology*, 135:202.
8. Helliker, BR, Berry JA, Betts AK, Bakwin PS, Davis KJ, Denning AS, Ehleringer JR, Miller JB, Butler MP, Ricciuto DM (2004) Estimates of net CO₂ flux by application of equilibrium boundary layer concepts to CO₂ and water vapor measurements from a tall tower, *Journal of Geophysical Research-Atmospheres*, 109 (D20).
9. Hurwitz, MD, Ricciuto DM, Bakwin PS, Davis KJ, Wang WG, Yi CX, Butler MP (2004) Transport of carbon dioxide in the presence of storm systems over a Northern Wisconsin forest, *Journal of the Atmospheric Sciences*, 61 (5):607-618.

10. Yi CX, Li RZ, Bakwin PS, Desai A, Ricciuto DM, Burns SP, Turnipseed AA, Wofsy SC, Munger JW, Wilson K, Monson RK, 2004. A nonparametric method for separating photosynthesis and respiration components in CO₂ flux measurements, *Geophysical Research Letters*, 31:17.

Synergistic Activities

1. Member of biogeochemical working group in FORECAST, NSF RCN for data assimilation and ecological forecasting, 2010-present
2. Member of coordinating group for North American Carbon Program (NACP) interim site synthesis model intercomparison, 2008-present
3. Session co-chair for AGU session on NACP site interim synthesis (Biogeochemistry), 2009.
4. Participant in team meeting for the Regional Flux Estimation Experiment (REFLEX), comparison of data assimilation methodologies, 2008
5. Member, American Geophysical Union, 2001-present
6. Member, American Meteorological Society, Smoky Mountains Chapter (2009-present)

Collaborators

Kenneth Davis (Penn State), Klaus Keller (Penn State), Jason Kaye (Penn State), Scott Denning (Colorado State), Erica Smithwick (Penn State), Michael Dietze (U. Illinois)