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EDUCATION

Ph.D. **Environmental Engineering,** University of California, Berkeley, 1996.

M.S. **Environmental Engineering,** University of California, Berkeley, 1993.

M.S. **Physics,** University of North Carolina, Chapel Hill, 1988.

B.S. **Aerospace Engineering,** Rensselaer Polytechnic Institute, 1984.

RESEARCH INTERESTS

Interactions between the soil, biosphere, and atmosphere that impact carbon and nutrient cycling, hydrological flows, leaching, and trace-gas fluxes important in climate change; environmental fluid mechanics and the interactions between fluid flows and biological processes that affect environmental quality; numerical modeling of coupled hydrological, biological, and atmospheric systems; use of carbon and oxygen isotopes in coupled hydrological and biological systems; and impacts of intensive agriculture; development and testing of mechanistic and probabilistic models of human exposures to environmental contaminants.

PROFESSIONAL EXPERIENCE

Scientist, Lawrence Berkeley National Laboratory. 2000 through present.
Lecturer, U.C. Berkeley, Civil and Environmental Engineering Department. 1998 – 2006.
Postdoctoral Fellow with Pamela Matson, Stanford University and University of California, Berkeley. 1996 through 1999.
Ph.D. Dissertation Research with William Nazaroff, University of California, Berkeley and Lawrence Berkeley National Laboratory. 1993 through 1996.
Physics Graduate Research Assistant, University of North Carolina at Chapel Hill. 1986 through 1988.

LECTURER POSITIONS

1. **University of California, Berkeley.** Spring, 2006. *Lecturer* for the upper division class *Climate Change Mitigation* (CEE107).
2. **University of California, Berkeley.** Spring, 2003. *Lecturer* for the upper division class *Introduction to Environmental Engineering* (CEE111).
3. **San Francisco State University.** Spring, 2001. *Lecturer* for the graduate level class *Air Quality Engineering* (ENGR 866)
4. **University of California, Berkeley.** Spring, 2000. *Lecturer* for the upper division class *Elementary Fluid Mechanics* (CEE100).
5. **University of California, Berkeley.** Fall, 1999. *Lecturer* for the lower division class *Introduction to Computer Programming for Scientists and Engineers* (E77N).
6. **University of California, Berkeley.** Spring, 1999. *Lecturer* for the upper division class *Elementary Fluid Mechanics* (CEE100).
7. **University of California, Berkeley.** Fall, 1998. *Lecturer* for the upper division class *Elementary Fluid Mechanics* (CEE100).

SYNERGISTIC AND PROFESSIONAL ACTIVITIES

External co-chair, NCAR Community Land Model Working Group, 2013 – present.
Technical lead, Terrestrial Earth-System Processes and Energy-Climate Interactions in the Climate and Earth System Modeling SFA, 2009 – present.
Technical lead, Atmospheric Systems Research SFA, 2010 – present.
Contributing author, Intergovernmental Panel on Climate Change Fifth Assessment, 2011 – Present.
Member, NSF Permafrost Research Coordination Network, 2011 – present.
Participant, International Land Model Benchmarking Project, 2011 – present.
Proposal Reviewer: DOE, NSF
Journal Reviewer: JGR-Biogeosciences, JGR-Atmospheres, Advances in Water Resources, Biogeosciences, Plant, Cell, and Environment, Global Biogeochemical Cycles, Geochemica et Cosmochimica Acta, Global Change Biology, Agricultural and Forest Meteorology, Tellus
Member: NCAR Land-Model and Biogeochemistry Working Groups, 2007 – present.
Member: ARM cloud model working group
Contributor: DOE workshop on designing "Climate Change Experiments in High-Latitude Ecosystems"

PEER-REVIEWED PUBLICATIONS

In Review or In Press

Buenning, N., D. C. Noone, J. T. Randerson, W. J. Riley, and C. J. Still (2013), The response of the $^{18}O/^{16}O$ content of atmospheric CO_2 to changes in environmental conditions, *accepted pending minor revisions JGR-Biogeosciences.*

Koven, C. D., W. J. Riley, and A. T. Stern (2013a), Analysis of permafrost thermal dynamics and response to climate change in the CMIP5 Earth System Models, *J. Climate*, 10.1175/JCLI-D-12-00228.1.

Schuur, E. A. G., B. W. Abbott, W. B. Bowden, V. Brovkin, P. Camill, J. P. Canadell, J. P. Chanton, F. S. Chapin, T. R. Christensen, P. Ciais, P. M. Crill, B. T. Crosby, C. I. Czimczik, G. Grosse, J. Harden, D. J. Hayes, G. Hugelius, J. D. Jastrow, J. B. Jones, T. Kleinen, C. D. Koven, G. Krinner, P. Kuhry, D. M. Lawrence, A. D. McGuire, S. M. Natali, J. A. o'Donnell, C. L. Ping, W. J. Riley, A. Rinke, V. E. Romanovsky, A. B. K. Sannel, C. Schadel, K. Schaefer, J. Sky, Z. M. Subin, C. Tarnocai, M. Turetsky, M. Waldrop, K. M. Walter-Anthony, K. P. Wickland, C. J. Wilson, and S. A. Zimov (2013), Expert Assessment of Vulnerability of Permafrost Carbon to Climate Change, *Accepted Climatic Change*, 10.1007/s10584-013-0730-7.

Subin, Z. M., C. D. Koven, W. J. Riley, M. S. Torn, D. M. Lawrence, and S. C. Swenson (2013), Effects of Soil Moisture on the Responses of Soil Temperatures to Climate Change in Cold Regions, *in press J. Climate*.

Koven, C. D., W. J. Riley, Z. M. Subin, J. Y. Tang, M. S. Torn, W. C. Collins, G. B. Bonan, D. M. Lawrence, and S. C. Swenson (2013b), The effect of vertically-resolved soil biogeochemistry and alternate soil C and N models on C dynamics of CLM4, *in review Biogeosciences*.

Schuur, E. A. G., B. W. Abbott, W. B. Bowden, V. Brovkin, P. Camill, J. P. Canadell, J. P. Chanton, F. S. Chapin, T. R. Christensen, P. Ciais, P. M. Crill, B. T. Crosby, C. I. Czimczik, G. Grosse, J. Harden, D. J. Hayes, G. Hugelius, J. D. Jastrow, J. B. Jones, T. Kleinen, C. D. Koven, G. Krinner, P. Kuhry, D. M. Lawrence, A. D. McGuire, S. M. Natali, J. A. o'Donnell, C. L. Ping, W. J. Riley, A. Rinke, V. E. Romanovsky, A. B. K. Sannel, C. Schadel, K. Schaefer, J. Sky, Z. M. Subin, C. Tarnocai, M. Turetsky, M. Waldrop, K. M. Walter-Anthony, K. P. Wickland, C. J. Wilson, and S. A. Zimov (2013), Expert Assessment of Vulnerability of Permafrost Carbon to Climate Change, *in press Climatic Change*, 10.1007/s10584-013-0730-7.

Shim, J. H., H. H. Powers, C. W. Meyer, A. Knohl, T. E. Dawson, W. J. Riley, X. Pockman, and N. McDowell (2013), Hydrologic control of the oxygen isotope ratio of ecosystem respiration in a semi-arid woodland, *accepted Biogeosciences*.

Stoy, P. C., M. Dietze, A. D. Richardson, R. Vargas, A. G. Barr, R. S. Anderson, M. A. Arain, I. T. Baker, T. A. Black, J. M. Chen, R. B. Cook, C. M. Gough, R. F. Grant, D. Y. Hollinger, R. C. Izaurralde, C. J. Kucharik, P. Lafleur, B. E. Law, S. Liu, E. Lokupitiya, Y. Luo, J. W. Munger, C. Peng, B. Poulter, D. T. Price, D. M. Ricciuto, W. J. Riley, A. K. Sahoo, K. Schaefer, C. R. Schwalm, H. Tian, H. Verbeeck, and E. Weng (2013), Evaluating the agreement between measurements and models of net ecosystem exchange at different times and time scales using wavelet coherence: an example using data from the North American Carbon Program Site-Level Interim Synthesis, *Biogeosciences Discussion*, *10*, doi:10.5194/bgd-10-3039-2013, 3039-3077.

Tang, J. Y., and W. J. Riley (2013b), Impacts of A New Bare-Soil Evaporation Formulation on Site, Regional, and Global Surface Energy and Water Budgets in CLM4, *submitted Journal of Advances in Modeling Earth Systems*.

Wania, R., J. R. Melton, E. L. Hodson, B. Poulter, B. Ringeval, R. Spahni, T. Bohn, C. A. Avis, G. Chen, A. V. Eliseev, P. O. Hopcroft, W. J. Riley, Z. M. Subin, H. Tian, V. Brovkin, P. M. vanBodegom, T. Kleinen, Z. C. Yu, J. S. Singarayer, S. Zurcher, D. P. Lettenmaier, D. J.

Beerling, S. N. Denisov, C. Prigent, F. Papa, and J. O. Kaplan (2013), Present state of global wetland extent and wetland methane modelling: Methodology of a model intercomparison project (WETCHIMP), *accepted pending revisions Geoscientific Model Development*.

2013

Biraud, S. C., M. S. Torn, J. R. Smith, C. Sweeney, W. J. Riley, and P. P. Tans (2013), An Eight-Year Record of Airborne CO_2 Observations in the U.S. Southern Great Plains, *Atmos Meas Tech*, *6*, 10.5194/amt-6-751-2013, 751-763.

Bouskill, N. J., J. Tang, W. J. Riley, and E. L. Brodie (2012), Trait-based representation of biological nitrification: model development, testing, and predicted community composition, *Frontiers in microbiology*, *3*, doi: 10.3389/fmicb.2012.00364, 1-17.

Luo, Y., J. T. Randerson, G. Abramowitz, C. Bacour, E. M. Blyth, N. Carvalhais, P. Ciais, D. Dalmonech, J. B. Fisher, R. A. Fisher, P. Friedlingstein, K. Hibbard, F. Hoffman, D. N. Huntzinger, C. D. Jones, C. D. Koven, D. Lawrence, D. Li, M. Mahecha, S. Niu, S. Piao, X. Qi, P. Peylin, C. Prentice, W. J. Riley, M. Reichstein, J. Famiglietti, Y. P. Wang, J. Xia, S. Zaehle, and X. Zhou (2012), A Framework of Benchmarking Land Models, *Biogeosciences*, *9*, doi:10.5194/bg-9-3857-2012, 3857-3874.

Melton, J. R., R. Wania, E. Hodson, B. Poulter, B. Ringeval, R. Spahni, T. Bohn, C. A. Avis, D. Beerling, G. Chen, A. V. Eliseeve, S. N. Denisov, P. Hopcroft, D. P. Lettenmaier, W. J. Riley, J. O. Singarayer, Z. M. Subin, H. Tian, S. Zurcher, V. Brovkin, P. M. vanBodegom, T. Kleinen, Z. C. Yu, and J. O. Kaplan (2013), Present state of global wetland extent and wetland methane modelling: Conclusions from a model inter-comparison project (WETCHIMP), *Biogeosciences*, *10*, doi:10.5194/bg-10-753-2013, 753-788.

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Mishra, U., and W. J. Riley (2012a), Alaskan soil carbon stocks: Spatial variability and dependence on environmental factors, *Biogeosciences*, *9*, doi:10.5194/bg-9-3637-2012, 3637-3645.

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Murphy, L. N., W. D. Collins, and W. J. Riley (2012), Local and remote climate impacts from expansion of woody biomass for bioenergy feedstock in the Southeastern US, *in press J. Climate*, doi: http://dx.doi.org/10.1175/JCLI-D-11-00535.1.

Riley, W. J. (2013), Using model reduction to predict the soil-surface $C^{18}OO$ flux: An example of representing complex biogeochemical dynamics in a computationally efficient manner, *Geoscientific Model Development*, *6*, doi:10.5194/gmd-6-345-2013, 345-352.

Schaefer, K., C. Schwalm, C. Williams, A. Arain, A. Barr, J. Chen, K. Davis, D. Dimitrov, N. Golaz, T. Hilton, D. Hollinger, E. Humphreys, B. Poulter, B. Raczka, A. Richardson, A. Sahoo, P. Thornton, R. Vargas, V. H, R. Anderson, I. Baker, D. Baldocchi, T. A. Black, P.

Bolstad, J. Chen, P. Curtis, A. Desai, M. Dietze, D. Dragoni, L. Flanagan, R. Grant, L. Gu, G. Katul, C. Kucharik, B. Law, S. Liu, E. Lokipitiya, H. Margolis, R. Matamala, H. McCaughey, R. Monson, J. W. Munger, W. Oechel, C. Peng, D. Price, D. Ricciuto, W. Riley, N. Roulet, T. H, C. Tonitto, M. Torn, S. Verma, and E. Weng (2012), A model-data comparison of gross primary productivity, *in press JGR-Biogeosciences*.

Tang, J. Y., and W. J. Riley (2013a), A new top boundary condition for modeling surface diffusive exchange of a generic volatile tracer: Theoretical analysis and application to soil evaporation, *Hydrology and Earth System Sciences*, *17*, doi:10.5194/hess-17-873-2013, 873-893.

Tang, J. Y., W. J. Riley, C. D. Koven, and Z. M. Subin (2013c), CLM4-BeTR, a generic biogeochemical transport and reaction module for CLM4: model development, evaluation and application, *Geoscientific Model Development*, *6*, doi:10.5194/gmd-6-127-2013, 127-140.

2012

Bonfils, C. J. W., T. J. Phillips, D. M. Lawrence, P. Cameron-Smith, W. J. Riley, and Z. M. Subin (2012), On the influence of shrub height and expansion on northern high latitude climate, *Environ Res Lett*, *7*,ISI:000302580600057, Artn 015503, Doi 10.1088/1748-9326/7/1/015503.

Subin, Z. M., L. N. Murphy, F. Y. Li, C. Bonfils, and W. J. Riley (2012a), Boreal lakes moderate seasonal and diurnal temperature variation and perturb atmospheric circulation: analyses in the Community Earth System Model 1 (CESM1), *Tellus A*, *64*,ISI:000300396900001, Artn 15639, Doi 10.3402/Tellusa.V64i0.15639.

Subin, Z. M., W. J. Riley, and D. Mironov (2012b), An improved lake model for climate simulations: Model structure, evaluation, and sensitivity analyses in CESM1, *J. Adv. Model. Earth Sys.*, *4*, 10.1029/2011MS000072.

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Schuur, E. A. G., B. W. Abbott, W. B. Bowden, P. C. V. Brovkin, J. P. Canadell, F. S. C. III, T. R. Christensen, J. P. Chanton, P. Ciais, P. M. Crill, B. T. Crosby, C. I. Czimczik, G. Grosse, J. Harden, D. J. Hayes, G. Hugelius, J. D. Jastrow, T. Kleinen, K. C.D, G. Krinner, P. Kuhry, D. M. Lawrence, A. D. McGuire, S. M. Natali, J. A. O'Donnell, C. L. Ping, A. Rinke, W. J. Riley, V. E. Romanovsky, A. B. K. Sannel, C. Schädel, K. Schaefer, Z. M. Subin, C. Tarnocai, M. Turetsky, M. Waldrop, K. M. Walter-Anthony, K. P. Wickland, C. J. Wilson, and S. A. Zimov (2011), High risk of permafrost thaw, *Nature*, *480*32-33.

Riley, W. J., Z. M. Subin, M. S. Torn, L. Meng, N. Mahowald, P. G. Hess, and D. M. Lawrence (2011), Barriers to predicting changes in global terrestrial methane fluxes: Analyses using CLM4ME, a methane biogeochemistry model integrated in CESM, *Biogeosciences Discussion*, *8*, doi:10.5194/bgd-8-1733-2011, 1733-1807.

Williams, I., W. Riley, M. Torn, J. Berry, and S. Biraud (2011), Using boundary layer equilibrium to reduce uncertainties in CO_2 flux inversions, *Atmospheric Chemistry Physics Discussions*, *11*, doi:10.5194/acpd-11-11455-2011, 11455-11495.

Buenning, N., D. C. Noone, J. T. Randerson, W. J. Riley, C. J. Still, and J. White (2011b), Influences of the hydrological cycle on observed inter-annual variations in atmosheric $CO^{18}O$, *accepted JGR-Biogeosciences*.

Macleod, M., H. vonWaldow, P. Tay, J. M. Armitage, H. Wohrnschimmel, W. Riley, T. E. McKone, and K. Hungerbuhler (2011), BETR Global - A Geographically-Explicit Global-Scale Multimedia Contaminant Fate Model, *Environmental Pollution*, *159*, 10.1016/j.envpol.2011.01.038, 1442-1445.

Torn, M. S., S. C. Biraud, C. J. Still, W. J. Riley, and J. A. Berry (2011), Seasonal and interannual variability in C-13 composition of ecosystem carbon fluxes in the U.S. Southern Great Plains, *TELLUS SERIES B-CHEMICAL AND PHYSICAL METEOROLOGY*, *63*,ISI:000288516400003, Doi 10.1111/J.1600-0889.2010.00519.X, 181-195, LBNL-4004E.

2010

Subin, Z. M., W. J. Riley, L. M. Kueppers, J. Jin, Z. M. Subin, D. S. Christianson, and M. S. Torn (2010), Ecosystem feedbacks to climate change in California: Development, testing, and analysis using a coupled regional atmosphere and land-surface model (WRF3-CLM3.5), *Earth Interactions*, 10.1175/2010EI331.1.

Schwalm, C. R., C. A. Williams, K. Schaefer, R. Anderson, M. A. Arain, I. Baker, T. A. Black, G. Chen, P. Ciais, K. J. Davis, A. R. Desai, M. Dietze, D. Dragoni, M. L. Fischer, L. B. Flanagan, R. F. Grant, L. Gu, D. Hollinger, R. C. Izaurralde, C. Kucharik, P. M. Lafleur, B. E. Law, L. Li, Z. Li, S. Liu, E. Lokupitiya, Y. Luo, S. Ma, H. Margolis, R. Matamala, H. McCaughey, R. K. Monson, W. C. Oechel, C. Peng, B. Poulter, D. T. Price, D. M. Riciutto, W. J. Riley, A. K. Sahoo, M. Sprintsin, J. Sun, H. Tian, C. Tonitto, H. Verbeeck, and S. B. Verma (2010), A model-data intercomparison of CO_2 exchange across North America: Results from the North American Carbon Program Site Synthesis, *J. Geophysical Research - Biogeosciences*, *doi:10.1029/2009JG001229*.

Parton, W. J., P. J. Hanson, C. Swanston, M. Torn, S. E. Trumbore, W. Riley, and R. Kelly (2010), ForCent model development and testing using the Enriched Background Isotope Study experiment, *Journal of Geophysical Research-Biogeosciences*, *115*,ISI:000282768500002, Doi 10.1029/2009jg001193.

Gaudinski, J. B., M. S. Torn, W. J. Riley, T. E. Dawson, J. D. Joslin, and H. Majdi (2010), Measuring and modeling the spectrum of fine-root turnover times in three forests using isotopes, minirhizotrons, and the Radix model, *Global Biogeochemical Cycles*, *24*,ISI:000282433600002, Doi 10.1029/2009gb003649.

Gu, C. H., and W. J. Riley (2010), Combined effects of short term rainfall patterns and soil texture on soil nitrogen cycling - A modeling analysis, *J Contam Hydrol*, *112*,ISI:000275735600011, Doi 10.1016/J.Jconhyd.2009.12.003, 141-154, LBNL-2959E.

Maggi, F., and W. J. Riley (2010), Mathematical treatment of isotopologue and isotopomer speciation and fractionation in biochemical kinetics, *Geochim Cosmochim Ac*, *74*,ISI:000274722200007, Doi 10.1016/J.Gca.2009.12.021, 1823-1835, LBNL-2959E.

2009

Riley, W. J., S. C. Biraud, M. S. Torn, M. L. Fischer, D. P. Billesbach, and J. A. Berry (2009a), Regional CO2 and latent heat surface fluxes in the Southern Great Plains: Measurements,

modeling, and scaling, *Journal of Geophysical Research-Biogeosciences*, *114*,ISI:000272147100002, Artn G04009, Doi 10.1029/2009jg001003.

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Maggi, F., and W. J. Riley (2009), Transient competitive complexation in biological kinetic isotope fractionation explains nonsteady isotopic effects: Theory and application to denitrification in soils, *Journal of Geophysical Research-Biogeosciences*, *114*,ISI:000272147300001, Artn G04012; Doi 10.1029/2008jg000878, -, LBNL-2963E.

Gaudinski, J. B., M. S. Torn, W. J. Riley, C. Swanston, S. E. Trumbore, J. D. Joslin, H. Majdi, T. E. Dawson, and P. J. Hanson (2009), Use of stored carbon reserves in growth of temperate tree roots and leaf buds: analyses using radiocarbon measurements and modeling, *Global Change Biology*, *doi: 10.1111/j.1365-2486.2008.01736.x*.

Gu, C. H., F. Maggi, W. J. Riley, G. M. Hornberger, T. Xu, C. M. Oldenburg, N. Spycher, N. L. Miller, R. T. Venterea, and C. Steefel (2009), Aqueous and gaseous nitrogen losses induced by fertilizer application, *Journal of Geophysical Research-Biogeosciences*, *114*,ISI:000262982700001.

Still, C. J., W. J. Riley, S. C. Biraud, D. C. Noone, N. H. Buenning, J. T. Randerson, M. S. Torn, J. Welker, J. W. C. White, R. Vachon, G. D. Farquhar, and J. A. Berry (2009), Influence of clouds and diffuse radiation on ecosystem-atmosphere CO2 and (COO)-O-18 exchanges, *Journal of Geophysical Research-Biogeosciences*, *114*,ISI:000263950400001.

2008

Maggi, F., C. Gu, W. J. Riley, G. M. Hornberger, R. T. Venterea, T. Xu, N. Spycher, C. Steefel, N. L. Miller, and C. M. Oldenburg (2008), A mechanistic treatment of the dominant soil nitrogen cycling processes: Model development, testing, and application, *Journal of Geophysical Research-Biogeosciences*, *113*,ISI:000255460200001.

Riley, W. J., D. Y. Hsueh, J. T. Randerson, M. L. Fischer, J. G. Hatch, D. E. Pataki, W. Wang, and M. L. Goulden (2008), Where do fossil fuel carbon dioxide emissions from California go? An analysis based on radiocarbon observations and an atmospheric transport model, *Journal of Geophysical Research-Biogeosciences*, *113*,ISI:000259989300001.

Fried, J. S., J. K. Gilless, W. J. Riley, T. J. Moody, C. S. de Blas, K. Hayhoe, M. Moritz, S. Stephens, and M. Torn (2008), Predicting the effect of climate change on wildfire behavior and initial attack success, *Climatic Change*, *87*,ISI:000254987600016, Doi 10.1007/S10584-007-9360-2, S251-S264.

McDowell, N., D. Baldocchi, M. Barbour, C. Bickford, M. Cuntz, D. Hanson, A. Knohl, H. Powers, T. Rahn, J. Randerson, W. Riley, C. Still, K. Tu, and A. Walcroft (2008), Understanding the stable isotope composition of biosphere atmosphere CO_2 exchange, *EOS Transactions American Geophysical Union*, *89*94-95.

2007

Fischer, M. L., D. P. Billesbach, J. A. Berry, W. J. Riley, and M. S. Torn (2007), Spatiotemporal variations in growing season exchanges of CO2, H2O, and sensible heat in agricultural fields of the Southern Great Plains, *Earth Interactions*, *11*,ISI:000251534500001, Artn 17

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Henderson-Sellers, A., M. Fischer, I. Aleinov, K. McGuffie, W. J. Riley, G. A. Schmidt, K. Sturm, K. Yoshimura, and P. Irannejad (2006), Stable water isotope simulation by current land-surface schemes: Results of iPILPS Phase 1, *Global and Planetary Change*, *51*,ISI:00023804140000434-58.

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Lai, C. T., W. Riley, C. Owensby, J. Ham, A. Schauer, and J. R. Ehleringer (2006), Seasonal and interannual variations of carbon and oxygen isotopes of respired CO_2 in a tallgrass prairie: Measurements and modeling results from 3 years with contrasting water availability, *Journal of Geophysical Research-Atmospheres*, *111*,ISI:000236730800003.

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2005

Riley, W. J., J. T. Randerson, P. N. Foster, and T. J. Lueker (2005), The influence of terrestrial ecosystems and topography on coastal CO_2 measurements: A case study at Trinidad Head, California, *JGR-Biogeosciences*, *110*.

Macleod, M., W. J. Riley, and T. E. McKone (2005), Assessing the influence of climate variability on atmospheric concentrations of polychlorinated biphenyls using a global-scale mass balance model (BETR-global), *Environmental Science & Technology*, *39*,ISI:0002317238000636749-6756.

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Cooley, H. S., W. J. Riley, M. S. Torn, and Y. He (2005), Impact of agricultural practice on regional climate in a coupled land surface mesoscale model, *Journal of Geophysical Research-Atmospheres*, *110*,ISI:000227065800002D03113.

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131. Riley, W.J. and P.A. Matson (1997) A mechanistic model of soil denitrification including microbial dynamics, trace-gas transport, and soil emission, *The Ecological Society of America, 82nd Annual Meeting*, August 7-10, Albuquerque, NM.
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HONORS AND AWARDS

American Western Universities Graduate Student Fellowship, 1996.
Air and Waste Management Association Academic Scholarship, 1995.
Sigma Pi Sigma - National Physics Honor Society, 1987.
Graduated Cum Laude from Rensselaer Polytechnic Institute, 1984.
Tau Beta Pi - National Engineering Honor Society, 1981.
Sigma Gamma Tau - National Aerospace Engineering Honor Society, 1981.

RECENT GRANTS FUNDED

1. PI: DOE, 2010-2013
2. Co-I: NASA, 2005-2008.
3. Co-I: LDRD for Berkeley Water Center, 2006-2007.
4. PI: California Energy Commission, 2005-2006.
5. Co-I: California Energy Commission, 2003-2004.
6. Co-I: U.S. Environmental Protection Agency, 2004-2005.
7. PI: LDRD LBNL, 2001-2003.
8. Co-I: National Oceanographic and Atmospheric Administration, 2002-2005.
9. Co-I: National Science Foundation, 2001-2004.
10. Co-I: Department of Energy, 2002-2005.
11. Co-I: California Energy Commission, 2003.