

Curriculum vitae

Jinyun Tang

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Education

Ph.D. Atmospheric Sciences, Purdue University, 2011

M.A. Atmospheric Sciences, Nanjing University, P. R. China, 2006

B.S. Atmospheric Sciences, Nanjing University, P. R. China, 2003

Professional Appointments/Employment

Career-track Research Scientist, Lawrence Berkeley National Laboratory 2013 – Present

Postdoc Fellow, Lawrence Berkeley National Laboratory 2011 – 2013

Publications

Peer Reviewed Publications

2016

1. Xavier LE ROUX, N. Bouskill, A. Niboyet, L. Barthes, P. Dijkstra, C. Field, B. A. Hungate, C. Lerondelle, T. Pommier, **J.Y. Tang**, A. Terada, M. Tourna, F. Poly: Predicting the responses of soil nitrite-oxidizers to multi-factorial global change: a trait-based approach, *Frontiers in Microbiology*, 2016.
2. **Tang, J. Y.** and W.J. Riley: Technique Note: A generic law-of-the-minimum flux limiter for simulating substrate limitation in biogeochemical models, *Biogeosciences*, 2016.
3. Zhu Q., W. J. Riley, **J. Y. Tang** and C. D. Koven: Multiple soil nutrient competition between plants, microbes, and mineral surfaces: Model development, parameterization, and example applications in several tropical forests, *Biogeosciences*, 2016.

2015

4. **Tang, J. Y.:** On the relationships between Michaelis-Menten kinetics, reverse Michaelis-Menten kinetics, Equilibrium Chemistry Approximation kinetics and quadratic kinetics, *Geoscientific Model Development*, 2015.

5. **Tang, J. Y.**, W. J. Riley, and J. Niu: Incorporating root hydraulic redistribution in CLM4.5: Effects on predicted site and global evapotranspiration, soil moisture, and water storage. *J. Adv. Model. Earth Syst.*, 07, doi:10.1002/2015MS000484, 2015.
6. **Tang, J. Y.** and W. J. Riley: Weaker soil carbon-climate feedbacks resulting from microbial and abiotic interactions, *Nature Climate Change*, 2015.

2014

7. Bouskill, N., W. J. Riley and **J. Y. Tang**: meta-analysis of high-latitude nitrogen-addition and warming studies imply ecological mechanisms overlooked by land models, *Biogeosciences*, 2014.
8. **Tang, J. Y.** and W. J. Riley: Technical Note: Simple formulations and solutions of the dual-phase diffusive transport for biogeochemical modeling, *Biogeosciences*, 11, 3721-3728, doi:10.5194/bg-11-3721-2014, 2014.
9. Riley, W. J., F. Maggi, M. Kleber, M. S. Torn, **J. Y. Tang**, D. Dwivedi, and N. Guerry: Long residence times of rapidly decomposable soil organic matter: application of a multi-phase, multi-component, and vertically resolved model (BAMS1) to soil carbon dynamics, *Geosci. Model Dev.*, 7, 1335-1355, doi:10.5194/gmd-7-1335-2014, 2014.

2013

10. **Tang, J. Y.** and W. J. Riley: A total quasi-steady-state formulation of substrate uptake kinetics in complex networks and an example application to microbial litter decomposition, *Biogeosciences*, 10, 8329-8351, doi:10.5194/bg-10-8329-2013, 2013. (**Awarded honorable mention for the Gene E. Likens award by the Ecological Society of America**)
11. Koven, C. D., W. J. Riley, Z. M. Subin, **J. Y. Tang**, M. S. Torn, W. D. Collins, G. B. Bonan, D. M. Lawrence, and S. C. Swenson: The effect of vertically-resolved soil biogeochemistry and alternate soil C and N models on C dynamics of CLM4, *Biogeosciences*, 10, 7109-7131, doi:10.5194/bg-10-7109-2013, 2013.
12. Zhuang Q., M. Chen, K. Xu, **J. Y. Tang** and et al.: Responses of global soil consumption of atmospheric methane to changes in atmospheric climate, methane concentration and Nitrogen deposition, *Global Biogeochem. Cycles*, 27, doi:10.1002/gbc.20057, 2013.
13. **Tang, J. Y.** and W. J. Riley: Impacts of A New Bare-Soil Evaporation Formulation on Site, Regional, and Global Surface Energy and Water Budgets in CLM4, *J. Adv. Model. Earth Syst.*, 5, doi:10.1002/jame.20034, 2013.
14. **Tang, J. Y.** and W. J. Riley: A new top boundary condition for modeling surface diffusive exchange of a generic volatile tracer: theoretical analysis and application to soil evaporation, <http://www.hydrol-earth-syst-sci.net/17/873/2013/hess-17-873-2013.html>, 2013.
15. **Tang, J. Y.**, W. J. Riley, C. D. Koven and Z. M. Subin: CLM4-BeTR, A generic biogeochemical transport and reaction module for CLM4: theoretical developments and a site- level evaluation, *Geosci. Model Dev.*, 6, 127-140, 2013.

2012

16. Bouskill N, **J. Y. Tang**, W. J. Riley and E. L. Brodie: Trait-based representation of biological nitrification: Model development, testing, and predicted community composition. *Front. Microbio.* 3:364. doi: 10.3389/fmicb.2012.00364, 2012.

2011

17. **Tang, J. Y.** and Q. Zhuang: Technical Note: Propagating correlations in atmospheric inversions using different Kalman update smoothers, *Atmos. Chem. Phys.*, 11, 921-929, doi:10.5194/acp-11-921-2011, 2011.

2010

18. **Tang, J. Y.**, Q. Zhuang, R. D. Shannon, and J. R. White: Quantifying wetland methane emissions with process-based models of different complexities, *Biogeosciences*, 7, 3817-3837, doi:10.5194/bg-7-3817-2010, 2010.
19. **Tang, J. Y.** and Q. Zhuang: Modeling soil thermal and hydrological dynamics and changes of growing season in Alaskan terrestrial ecosystems, *Climatic Change*, DOI 10.1007/s10584-010-9988-1, 2010.

2009

20. **Tang, J. Y.** and Q. Zhuang: A global sensitivity analysis and Bayesian inference framework for improving the parameter estimation and prediction of a process-based Terrestrial Ecosystem Model, *J. Geophys. Res.*, 114, D15303, doi:10.1029/2009JD011724, 2009.

2008

21. **Tang, J. Y.** and Q. Zhuang: Equifinality in Parameterization of Process-Based Biogeochemistry Models: A Significant Uncertainty Source to the Estimation of Regional Carbon Dynamics. *J. Geophys. Res. - Biogeos.*, doi:10.1029/2008JG000757, 2008.

2007

22. Wang Y., **J. Y. Tang**, and R. Wu: A two-wave scheme for orographic gravity wave parameterization. *Acta Meteorologica Sinica (Chinese)* Vol.65, No.5, 2007.
23. **Tang, J. Y.**, J. Tang and Y. Wang: Analytical Investigation on the 3D Non-Boussinesq Mountain Wave Drag for Wind Profiles With Vertical Variations. *Applied Mathematics and Mechanics (English Edition)*, 28(3), 327-335, 2007.

Manuscripts Under review

24. Zhu, Q., W. J. Riley, and **J. Y. Tang**: A new theory of plant and microbe nutrient competition resolves inconsistencies between observations and Earth System Models, in revision.
25. Zhu X., **J. Y. Tang**, W. J. Riley, M. Wallenstein, and F. Cotrufo: Soil priming efficiencies inferred from laboratory measurements incorrectly represent field conditions: Insights from a model-experiment approach, in revision.
26. Dwivedi, D., W.J. Riley, M.S. Torn, N. Spycher, F. Maggi, and **J.Y. Tang**: Mineralogy, microbes, transport, and plant-input profiles control vertical distribution and age of soil carbon stocks, in revision.
27. **Tang J.Y.** and W.J. Riley: Potentially large uncertainty in ecosystem carbon dynamics resulting from ambiguous numerical coupling of carbon and nitrogen biogeochemistry: A demonstration with the ACME land model, Biogeosciences.
28. Abramoff, R.Z., K. Georgiou, **J.Y. Tang**, M.S. Torn, and W.J. Riley: Minerals and MAT determine soil carbon stock response to global change: A combined modeling and observational analysis, GCB.

Others publications

29. Keith W. Oleson, David M. Lawrence, Gordon B. Bonan, Beth Drewniak, Maoyi Huang, Charles D. Koven, Samuel Levis, Fang Li, William J. Riley, Zachary M. Subin, Sean C. Swenson, Peter E. Thornton, Anil Bozbiyik, Rosie Fisher, Colette L. Heald, Erik Kluzek, Jean- Francois Lamarque, Peter J. Lawrence, L. Ruby Leung, William Lipscomb, Stefan Muszala, Daniel M. Ricciuto, William Sacks, Ying Sun, **Jinyun Tang**, Zong-Liang Yang, 2013, Technical Description of version 4.5 of the Community Land Model (CLM), http://www.cesm.ucar.edu/models/cesm1.2/clm/CLM45_Tech_Note.pdf
30. **Tang J. Y.**, and Q. Zhuang (2010), Technical Note: Methods for interval constrained atmospheric inversion of methane, Atmos. Chem. Phys. Discuss. 10, 1998120004, www.atmos-chem-phys-discuss.net-10-19981-2010, doi:10.5194-acpd-10-19981-2010.

Published software

BeTR for Biogeochemical transport and Reactive modeling in large-scale land surface models. (<https://github.com/BeTR-biogeochemistry-modeling/sbetr.git>)

Honors and Awards

DOE ACME Outstanding Contribution Award for Earth System Model Development	2016
Honorable Mention for the Gene E. Likens Award	2014
Bilsland Dissertation Fellowship	2010 - 2011

NASA Earth System Science (ESS) Fellowship	2007 - 2010
PCCRC fellowship	2006 - 2007

Projects & Grants

Funded

1. Understanding litter input controls on soil organic matter turnover and formation are essential for improving carbon-climate feedback predictions for Arctic Tundra System, DOE-TES, DE-FOA-0000749, Co-I with Matthew Wallenstein, Rich Conant, M. Francesca Cotrufo, Eldor Paul and Bill Riley, funded, 150K out of 1500K for 2013-2015.
2. ESD Early Career Development Grant, PI, 40K, 2014.
3. LDRD 2014, Co-I with Bill Riley and Jeff Chambers, funded
4. Improving a process-based biogeochemistry model using an atmospheric transport chemistry model and in-situ and remotely sensed terrestrial and atmospheric data, PI, 84K, 2007-2011.

Other currently affiliated projects

1. The Next Generation Ecosystem Experiment-Arctic, PI, Stan Wullschleger. Role: task leader
2. The Accelerated Climate Model for Energy, PI, David Bader. Role: task leader
3. Quantifying feedbacks and uncertainties of biogeochemical processes in earth system models, PI, Forrest Hoffman. Role: task leader

Invited talks

2016

1. **Tang J.Y.:** Seeking for a robust land biogeochemical modeling, Pacific Northwest National Laboratory, July 2016.
2. **Tang J.Y.:** Biogeochemical scaling using the Equilibrium Chemistry Approximation: theory and applications, BioEpic seminar series, Lawrence Berkeley National Laboratory, June, 2016
3. **Tang J.Y.** and Riley, W.J., Huge divergence in land-atmosphere carbon exchange resulting from ambiguous numerical coupling between carbon and nitrogen dynamics, ACME all hands meeting, June, 2016.

2015

4. **Tang J. Y.:** Mathematical scaling of biotic and abiotic interactions in biogeochemical modeling for climate-biogeochemistry interactions, China University of Geosciences, China, October 2015.

5. **Tang J.Y.:** Carbon and nitrogen coupling in land surface models, Nanjing University, China, October 2015.
6. **Tang J. Y.:** Tracking ET bias in CLM4.X models, Nanjing University, China, June, 2015.

2014

7. **Tang J. Y.** and W.J. Riley: Another Inconvenient Truth: Evidence That Q_{10} Is Not a Static Parameter. SSSA Fall meeting, Long Beach Island, November 2014.

2013

8. **Tang J. Y.** and W.J. Riley, The emergent temperature sensitivity of decomposition from interactions between microbes, substrates, and the soil environment, AGU Fall meeting, SF, Dec. 2013.
9. **Tang J. Y.,** W.J. Riley, N. Bouskill and E. Brodie: Let the microbes explicitly carry out the reactions: a new paradigm to the modeling of soil carbon-nutrient dynamics, AGU Fall meeting, SF, Dec. 2013.
10. **Tang J. Y.,** W. J. Riley, C. D. Koven and Z. M. Subin: A Reactive Transport Module of Land Biogeochemistry in the Community Land Model: Description, Evaluation, and Application, SSSA, Tampa, November 2013.

2012

11. **Tang J. Y.,** N. J. Bouskill, W. J. Riley and E. L. Brodie, Incorporating enzyme and microbial dynamics into the global land model CLM4: Plans, progress and preliminary results, Colorado State University, Fort Collins CO, May, 2012.

2011

12. **Tang J. Y.,** W. J. Riley, Z. Subin, C. D. Koven and M. Torn: Biogeochemical transport and reaction modeling for CLM4: developing the CLM4-BeTR, University of Alaska, August 2011.

Conference Activity/Participation (part of 2011-2016)**2016**

1. **Tang J.Y.** and W.J. Riley, Non-robust numerical implementations impact global carbon and water cycle simulations: a demonstration with two ESM land models, AGU Fall meeting, San Francisco, CA, December 12-16.
2. **Tang J.Y.:** Three examples of poor land model performances resulting from asynchronous coupling of tightly coupled processes, PDC 16 workshop, Pacific Northwest National Laboratory, September, 2016.

2015

3. **Tang J.Y.** and W. J. Riley, Implementation ambiguity: The fifth element long lost in uncertainty budgets for land biogeochemical modeling, AGU Fall meeting, San Francisco, CA, December 14-18.
4. Abramoff R.Z., **J.Y. Tang**, K. Georgiou et al., Modelling the effect of substrate stoichiometry on microbial use efficiency and soil C cycling, AGU Fall meeting, San Francisco, CA, December 14-18.
5. Zhu X., **J.Y. Tang**, W.J. Riley et al., Explicit representation of microbes, enzymes, mineral surfaces, and isotopic tracers helps explain soil organic carbon decomposition and priming, AGU Fall meeting, San Francisco, CA, December 14-18.
6. Zhu Q., W.J. Riley, **J.Y. Tang**, and C.D. Koven, Soil nutrient competition in earth system models: an important but underappreciated driver of plant responses to nutrient fertilization, AGU Fall meeting, San Francisco, CA, December 14-18.

2014

7. Bouskill N. J., W. J. Riley, Y. Cheng and **J.Y. Tang**, A Microbial Model of Nitrous Oxide Production That Differentiates Nitrification and Denitrification Production Across Spatial and Temporal Scales, AGU Fall meeting, San Francisco, CA, December 15-19.
8. Bouskill N. J., W. J. Riley, Y. Cheng and **J. Y. Tang**, A Microbial Model of Nitrous Oxide Production That Differentiates Nitrification and Denitrification Production Across Spatial and Temporal Scales, AGU Fall meeting, San Francisco, CA, December 15-19.
9. Georgiou K., **J. Y. Tang**, W. J. Riley and M. S. Torn, Characterizing Feedback Control Mechanisms in Nonlinear Microbial Models of Soil Organic Matter Decomposition by Stability Analysis, AGU Fall meeting, San Francisco, CA, December 15-19.
10. Riley, W. J. and **J. Y. Tang**, Interactions Between Mineral Surfaces, Substrates, Enzymes, and Microbes Result in Hysteretic Temperature Sensitivities and Microbial Carbon Use Efficiencies and Weaker Predicted Carbon-Climate Feedbacks, AGU Fall meeting, San Francisco, CA, December 15-19.
11. Zhu Q., W. J. Riley, J. Q. Chambers and **J. Y. Tang**, Modeling plant, microorganisms, and mineral surface competition for soil nitrogen and phosphorus: Competition representations and ecological significance, AGU Fall meeting, San Francisco, CA, December 15-19.
12. Riley W. J., **J. Y. Tang** and D. Dwivedi, M. S. Torn, F. Maggi and M. Kleber, Emergent SOM Dynamics Considering Interactions Between Microbial Physiology, Microbial Competition, Mineral Interactions, Vertical Transport, and Temperature, AGU Fall meeting, San Francisco, CA, December 15-19.
13. Zhu X., **J. Y. Tang**, W. J. Riley, M. D. Wallenstein, M. F. Cotrufo, M. B. Machmuller and L. Lynch, Evaluation of a Thermodynamically Based Soil Microbial Decomposition Model Based on a ¹³C Tracer Study in Arctic Tundra Soils, AGU Fall meeting, San Francisco, CA, December 15-19.
14. **Tang J. Y.** and W. J. Riley, Explicit representation of microbe-mineral interactions improves soil carbon cycle modeling, Biosciences strategic implementation retreat, Berkeley, CA, October 28-29.

15. **Tang J. Y.** and W. J. Riley, Predicting the emergent response of soil carbon decomposition to temperature change using a model of microbes, mineral surfaces and thermodynamics, SOM-6 workshop, Kiawah island, SC, October 5-9.
16. Bouskill N. J., Y. Cheng, **J. Y. Tang** and W.J. Riley, A biogeographically emergent model of nitrogen fixation: Coupling nitrogen availability to organic matter cycling, SOM-6 workshop, Kiawah island, SC, October 5-9.
17. Riley, W. J. and **J. Y. Tang**, Mechanistic treatment of soil organic matter and litter dynamics in the global land model CLM4.5, SOM-6 workshop, Kiawah Island, SC, October 5-9.
18. Riley, W. J., M. S. Torn, **J. Y. Tang**, D. Dwivedi, F. M. Maggi and M. Kleber, Mineral Interactions, Microbial Processes, and Transport Explain Long Residence Times of Rapidly Decomposable Deep Soil Organic Matter, Complex Soil Systems Conference, Berkeley, CA.
19. **Tang J. Y.** and W. J. Riley, A Zero-Sum-Game-Based Model for Litter Decomposition Dynamics, Complex Soil Systems Conference, Berkeley, CA.
20. Bouskill N. J., X. Le Roux, and **J. Y. Tang**, Predicting Soil Bacterial Responses to Multi-factor Global Change with Trait-based Modeling, Complex Soil Systems Conference, Berkeley, CA.
21. Cheng Y., W. J. Riley, **J. Y. Tang** and N. J. Bouskill, A Trait-based Model for Understanding Rates, Patterns, and Ecological Consequences of Microbial Nitrogen Fixation in High-Latitude Terrestrial Ecosystems, Complex Soil Systems Conference, Berkeley, CA.
22. Riley, W. J. and **J. Y. Tang**, Impacts of root hydraulic redistribution on global evapotranspiration in a climate-scale land model, 99th ESA Annual Meeting, Sacramento, CA, August 10-15.
23. Riley, W. J., M. S. Torn, **J. Y. Tang**, D. Dwivedi, F. Maggi and M. Kleber, Long Residence Times of Rapidly Decomposable Soil Organic Matter: A Mechanistic Modeling Study, Goldschmidt, June 8-13.
24. **J. Y. Tang** and W. J. Riley, Thermodynamically regulated interactions between microbial community dynamics and abiotic minerals control the emergent temperature response of soil organic matter decomposition, Climate Modeling Principal Investigator Meeting, Potomac, MD, May 12-14.
25. Brodie E.L., E. King, **J. Y. Tang**, U. Karaoz, S. Molins, W. J. Riley and N. J. Bouskill, Genome informed trait-based models for improved prediction of microbial dynamics and biogeochemical rates, 99th ESA Annual Meeting, Sacramento, CA, August 10-15.
26. Riley, W. J., M. S. Torn, **J. Y. Tang**, D. Dwivedi, F. Maggi and M. Kleber, Long Residence Times of Rapidly Decomposable Soil Organic Matter: A Mechanistic Modeling Study, Goldschmidt, Sacramento, CA.
27. King E., U. Karaoz, Y. Cheng, **J. Y. Tang**, W. J. Riley, N. J. Bouskill and E. L. Brodie, Trait-Based Approaches to Modeling the Microbial Biogeochemistry from Terrestrial to Aquatic Ecosystems, Sacramento, CA.
28. Riley, W. J., **J. Y. Tang**, G. Bisht, C. D. Koven, B. Ghimire and G. Pau, Integrating fine-scale microbial dynamics, transport, and abiotic interactions into the global land model CLM4.5, 27th ACS National Meeting and Exposition, Dallas, Texas, March.

2013

29. Bouskill N. J., **J. Y. Tang**, W. J. Riley and E. L. Brodie, Developing a high-latitude soil carbon cycle model with a focus on trait-based representation of decomposition, Minneapolis, MN, August.
30. Peter Thornton, Gautam Bisht, Bob Bolton, Marcia Branstetter, Dipankar Dwivedi, Eugenie Euskirchen, Chandana Gangodagamage, Santonu Goswami, Glenn Hammond, Dan Hayes, Larry Hinzman, Forrest Hoffman, Eunmo Koo, Charlie Koven, Jitendra Kumar, Anna Liljedahl, Dave McGuire, Richard Mills, Scott Painter, Bill Riley, Linn Rodman, Joel Rowland, Guoping Tang, **Jinyun Tang**, Bryan Travis, Haruko Wainwright, Cathy Wilson, Stan Wullschlegler, Chonggang Xu, Xiaofeng Xu, and Fengming Yuan. Next-generation ecosystem experiments (NGEE Arctic): Connections to CLM. CESM Land Model Working Group Meeting, Boulder, CO, February 20-22.

2012

31. Bouskill N., **J. Y. Tang**, W.J. Riley, E.L. Brodie, Developing a high-latitude soil carbon cycle model with a focus on trait-based representation of decomposition, AGU Fall Meeting, December.
32. Koven C. D., W.J. Riley, M.S. Torn, Z.M. Subin, **J. Y. Tang**, D.M. Lawrence, S.C. Swenson, G.B. Bonan, Development, testing, and dynamics of a vertically- C and N model in CLM4, AGU Fall meeting, December.
33. Zhuang Q., Q. Zhu, M. Chen, **J. Y. Tang**, Y. Jiang, X. Lu, Constrained terrestrial ecosystem carbon fluxes of North America with eddy flux and satellite during the MODIS era, AGU Fall meeting, December.
34. **Tang J. Y.**, W.J. Riley, C.D. Koven and M.S. Torn, Characterizing the Measurements Necessary to Constrain Soil Biogeochemistry Structural Uncertainty in CLM4: a Measurement-Oriented Modeling Approach, AGU Fall meeting.
35. **Tang J. Y.** and Bill Riley, A new physics-based of soil evaporation in CLM4, 17th annual CESM workshop, Breckenridge, CO, June.
36. Riley W. J., C. D. Koven, Z. Subin and **J. Y. Tang**, Progress toward a mechanistic belowground N cycle in CLM, NCAR, Boulder, CO, March.
37. Bouskill N. J., **J. Y. Tang**, W. J. Riley, E. L. Brodie, Developing a high-latitude soil carbon and nitrogen cycle model with a focus on trait-based modeling of the biological nitrogen cycle, American Society of Microbiology, SF, CA, June.
38. Koven C. D., W. J. Riley, M. Torn, Z. Subin and **J. Y. Tang**, D. Lawrence, G. Bonan, S. Swenson, Soil BGC developments in CLM4, NCAR, Boulder, CO, March.
39. **Tang J. Y.**, W. J. Riley, C. D. Koven and Z. Subin, Progress in developing CLM4 -BeTR: tool for incorporating and evaluating different formulations of below ground biogeochemistry, NCAR, Boulder, CO, March.

2011

40. Koven C. D., William J. Riley, Zachary M. Subin, **J. Y. Tang**, Margaret Torn, Jennifer Harden, David Lawrence, Gordon Bonan, Sean Swenson. Permafrost C and N Dynamics in CLM4. Department of Energy Climate and Earth System Modeling Principal Investigators Meeting, Washington, DC, September 20.
41. Koven C. D., W. J. Riley, Z. M. Subin, **J. Y. Tang**, M. S. Torn, D. M. Lawrence, G. B. Bonan, S. C. Swenson. Permafrost carbon and nitrogen dynamics in CLM4. American Geophysical Union Fall Meeting, San Francisco, CA, December 5 - 9.
42. Subin Z. M., **J. Y. Tang**, W. J. Riley, C. D. Koven, and M. Torn, Modeling Carbon Cycling High-Latitude Ecosystems to Understand Interactions with Climate Change. International Arctic Research Center, Fairbanks, AK, August 24.
43. **Tang J. Y.**, W. Riley, Z. Subin, C. D. Koven and M. Torn, Developing CLM4 -BeTR: Biogeochemical Transport and Reaction modeling in CLM4, Lawrence Berkeley National Lab, October 24.
44. **Tang J. Y.**, W. Riley, Z. Subin, C. D. Koven and M. Torn, Developing a generic reactive transport module for CLM: the CLM4-BeTR, Washington D.C., September.

Teaching Experience

- Guest lecture for EAS 591 W & AGRY 598A, Purdue University 2011
- TA for undergraduate fluid mechanics, Nanjing University 2005

Professional Service**Proposal Reviewer/Panel Member**

European Research Council, Department of Energy, NASA

Journal Reviewer

Climate, Global Change Biology, Journal of the Royal Society Interface, Ecology and Evolution, Tellus B, JAMES, Biogeosciences, Environmental Modeling & Software, Remote Sensing of Environment, Geoscientific model development, Environmental Earth Sciences, JGR-Biogeoscience, Vadose Zone Journal, Surveys in Geophysics, Science of the Total Environment, J. of Remote Sensing.

Workshop/Conference Sessions

- Session Chair, with Gustaf Hugelius, ILAMB2016, Soil Carbon and Nutrient Biogeochemistry 2016

Session Chair, with P. S. Nico, N. J. Hess, Soil organic matter dynamics: Novel techniques, big data and functional models III 2014

Session Chair, with N. Bouskill, W.J. Riley and E. Brodie, B038. Integrating microbial processes into ecosystem models of carbon and nitrogen cycling, AGU Fall Meeting 2012

Advisees

Postdocs

Xudong Zhu, Qing Zhu, Rose Abramoff, Zelalem Mekonnen, Xitian Cai (co-advised with W.J. Riley), Yiwei Cheng (co-advised with N.J. Bouskill)

Students

Katerina Georgiou (U of Berkeley, co-advised with W.J. Riley, M. Torn).

Affiliations/Memberships

- American Geophysical Union 2006 - Now
- Soil Science Society of America 2013 - Now
- Ecological Society of America 2014 - Now