

KELLY K. CAYLOR

Associate Professor
Department of Civil & Environmental Engineering
Princeton University
Engineering Quadrangle
Princeton, NJ 08544

Office: E-Quad, E405
<http://caylor.princeton.edu/>
Email: kcaylor@princeton.edu
Voice: (609) 258-4614
Fax: (609) 258-1436

EDUCATION

2003, Ph.D., Environmental Sciences, University of Virginia
1996, B.A. *with High Distinction*, Environmental Sciences, University of Virginia

PROFESSIONAL RECORD

2013 - Associate Professor, Dept. of Civil and Environmental Engineering, Princeton University
2007 - 2012 Assistant Professor, Dept. of Civil and Environmental Engineering, Princeton University
2007 - Adjunct Faculty, Department of Geography, Indiana University
2005 - 2007 Assistant Professor, Department of Geography, Indiana University
2004 - 2005 Postdoctoral Research Associate, National Center for Earth Dynamics, Department of Civil and Environmental Engineering, Princeton University
2003 - 2004 Postdoctoral Research Associate, Princeton Environmental Institute, Department of Civil and Environmental Engineering, Princeton University

RESEARCH INTERESTS

Ecohydrology (i.e. the interface between plant ecology and surface hydrology), surface hydrology, dryland ecology and dryland agriculture.

AWARDS & HONORS

2011 Editors' Citation for Excellence in Refereeing for Reviews of Geophysics
2009 Early Career Hydrologic Sciences Award, American Geophysical Union
2009 E. Lawrence Keyes, Jr./Emerson Electric Co. Faculty Advancement Award, Princeton University
2009 CAREER Award, National Science Foundation
2004 Postdoctoral Synthesis Fellowship, National Center for Earth Dynamics
2003 Clayton Postdoctoral Fellowship, Princeton Environmental Institute
2002 DuPont Fellowship, University of Virginia
2001 Earth System Science Fellowship, NASA
1998 Governor's Fellowship, University of Virginia
1996 Distinguished Major in Environmental Sciences, University of Virginia

TEACHING EXPERIENCE

2009- CEE 307, Field Ecohydrology, Mpala Research Center, CEE Dept., Princeton University
2010- ENV 201, Introduction to Environmental Studies, ENV Program, Princeton University
2008-2009 CEE 599, Environmental Biophysics, CEE Dept., Princeton University
2008 CEE 599, Research Topics in Ecohydrology, CEE Dept., Princeton University
2007 G307, Biogeography, Dept. of Geography, Indiana University
2006 G440, Topics in Env. Geography: Ecological Systems and Simulation, Dept. of Geography, Indiana University
2006 G440, Topics in Env. Geography: Ecohydrology, Dept. of Geography, Indiana University
2006 G405/505, Hydroclimatology, Dept. of Geography, Indiana University
2005 to 2007 G107, Physical Systems of the Environment, Dept. of Geography, Indiana University

INVITED SEMINARS & PRESENTATIONS

- 2012 Invited Speaker, Session on “Dryland Ecohydrology: Critical Issues and Technical Advances”, AGU Fall Meeting, San Francisco, CA, December, 2012
- 2012 Invited Seminar, Department of Environmental Science, Policy, and Management, University of California - Berkeley, August, 2012
- 2012 Invited Presenter, Session on “*Catchment Similarity and Organisation*”, EGU Annual Meeting, Vienna, Austria April, 2012
- 2012 Invited Seminar, STEP Seminar, Woodrow Wilson School, Princeton University, Princeton, NJ, February, 2012
- 2012 Invited Lecture, Stuart Country Day School, Princeton NJ, February, 2012
- 2011 Invited Seminar, Department of Civil and Environmental Engineering, University of Illinois, Urbana-Champaign, October, 2011
- 2011 Invited Speaker, Earthwatch Annual Board Meeting, Princeton, NJ, October, 2011
- 2011 Invited Speaker, EcoHCC’11 International Conference on Ecohydrology and Climate Change, Tomar, Portugal, September, 2011
- 2011 Invited Lecturer, 1st Summer School on Monitoring and Modeling Surface Hydrology, Marsico Nuovo, Italy, June, 2011
- 2011 Invited Panelist, New Jersey Symphony Orchestra Winter Concert, “Water: Global Challenge and Local Solutions in Developing Countries”, Princeton, NJ, January 2011
- 2010 Invited Speaker, Department of Geological, Environmental, and Marine Sciences, Rider University, March, 2010
- 2009 Invited Presenter, Session on “*Landscapes in Semi-Arid and Arid Environments: A Hydrological and Ecological Perspective*”, AGU Fall Meeting, San Francisco, CA, December 2009
- 2009 Invited Speaker, Environmental Fluid Mechanics/Hydrology Seminar Series, MIT, November, 2009
- 2009 Invited Presenter, IV CNR-Princeton Workshop “New frontiers in Hydrology”, Rome, July, 2009
- 2009 Invited Speaker, Department of Plant Sciences, Kenyatta University of Agriculture and Technology, Nairobi, April, 2009
- 2008 Invited Presenter, Session on “*Ecosystem resilience to changing climate patterns: the role of hydrology*”, AGU Fall Meeting, San Francisco, CA December, 2008
- 2008 Invited Presenter, Symposium, “*Seeing into the soil: Noninvasive characterization of biophysical processes in the soil critical zone*”, ASA-CSSA-SSSA 2008 Joint Annual Meeting, Houston, TX, October 2008
- 2008 Invited Participant, International Ecohydrology/Ecophysiology Workshop, University of Western Australia, Perth, September 2008
- 2008 Invited Presenter, Organized Oral Session, “*Towards a synthetic theory of tree-grass coexistence in savannas*”, 93rd Annual Ecological Society of America Meeting, Milwaukee, WI, August 2008
- 2007 Invited Seminar, Department of Civil and Environmental Engineering, Princeton University, March 2007
- 2007 Invited Speaker, Monroe County Drainage Board, Bloomington, IN, February, 2007
- 2006 Invited Presenter, Session on “*Bridging Hydrology, Soil Science and Ecology*”, AGU Fall Meeting, San Francisco, CA, December 2006
- 2006 Invited Presenter, Session on “*Climate-soil-vegetation dynamics and their impacts on water balance and hydrological extremes*”, European Geophysical Union Meeting, Vienna, Austria, April 2006
- 2006 Invited Seminar, School of Public and Environmental Affairs, Indiana University, February 2006
- 2005 Invited Presenter, Session on “*Integrated Approaches in Hydrological Process Studies*”, AGU Spring Meeting, New Orleans, Louisiana, May 2005
- 2005 Invited Seminar, Department of Environmental Sciences, Rutgers University, April 2005
- 2005 Invited Seminar, Colloquia Series, Department of Geography, Indiana University, January 2005
- 2004 Invited Seminar, Woods Hole Research Center, October 2004

INVITED SEMINARS & PRESENTATIONS – continued

- 2004 Invited Seminar, Forest Watershed Seminar Series, Department of Environmental Science, Policy, and Management, University of California - Berkeley, February 2004
- 2003 Invited Participant, Savanna Complexity: Different perceptions, Common Ground, Luiperdskloof Game Lodge, South Africa, January 2003
- 2002 Invited Presenter, Session on Ecohydrology, AGU Spring Meeting, Washington, D.C., April 2002

PROFESSIONAL SERVICE & MEMBERSHIP

- 2013 Member, Horton Medal Award Committee, American Geophysical Union
- 2012 - Director, Graduate Studies, Civil and Environmental Engineering, Princeton University
- 2011 - Advisor, Undergraduate Environmental Engineering Track, CEE, Princeton University
- 2010 - Advisor, Freshman, School of Engineering and Applied Science, Princeton University
- 2010 - 2012 Chair, Ecohydrological Technical Subcommittee, Hydrology Section, AGU
- 2011 - Associate Editor, Vadose Zone Journal
- 2010 - Associate Editor, Water Resources Research
- 2009 - 2012 Associate Editor, Journal of Geophysical Research - Biogeosciences
- 2010 - Member, Princeton Environmental Institute Executive Committee, Princeton University
- 2012 Co-convenor, AGU Fall Meeting, Session on *“Landscape System Response Under Change”*
- 2012 Member, AAAS Science Diplomacy Delegation to Uzbekistan, Tashkent, Uzbekistan, September, 2012
- 2012 Organizer, Workshop on Predictions Under Change: Vision for understanding and managing water, earth, and biota in the Anthropocene, Boulder, CO, July 2012
- 2012 Member, AAAS Science Diplomacy Delegation to Myanmar, Nay Pi Taw, Myanmar, January 2012
- 2012 Member, AGU Hydrology Section Nominating Committee
- 2012 Member, External Review Board, Science Department, Stuart Country Day School, Princeton, NJ, April 2012
- 2011 Co-convenor, AGU Fall Meeting, Session on *“Predictive Understanding of Coupled Interactions Among Water, Life, and Landforms”*
- 2011 Co-convenor, AGU Fall Meeting, Session on *“Water and Energy Footprints in the Anthropocene”*
- 2011 Co-convenor, AGU Fall Meeting, Session on *“Landscape System Response Under Change”*
- 2011 Co-convenor, AGU Fall Meeting, Session on *“Laser-Based Isotope Techniques in Biogeosciences”*
- 2011 Co-convenor, AGU Fall Meeting, Session on *“Stable Isotope Fluxes in the Carbon and Water Cycles of Terrestrial Ecosystems”*
- 2009 Member, Program Committee, AGU Chapman Conference on *“Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions”*
- 2009 Panelist, National Science Foundation
- 2009- Member, Environmental Studies (ENV) Executive Committee, Princeton University
- 2008-2010 Member, Ecohydrology Technical Subcommittee, American Geophysical Union

PROFESSIONAL SERVICE & MEMBERSHIP – continued

2008-2009	Interim Chair,	EEWR Graduate Program, CEE Department, Princeton University
2008-2009	Member,	SEAS Policy Committee, Princeton University
2008	Co-convenor,	AGU Fall Meeting, Session on “ <i>Hydrological Controls on Ecosystem Function</i> ”
2008	Moderator,	Princeton Colloquium on Public and International Affairs, “Eco-Friendly Development”
2007	Co-convenor,	AGU Spring Meeting, Session on “ <i>Dynamics and interaction of below-ground carbon pools in dryland ecosystems</i> ”
2007	Member,	Environmental Sciences Steering Committee, Office of Vice Provost for Research, Indiana University
2006	Panelist,	NASA Carbon Cycle Program
2005	Co-convenor,	AGU Fall Meeting, Session on “ <i>Temporal and spatial variability in coupled ecological-hydrological processes</i> ”
2005	Co-convenor,	AGU Fall Meeting, Session on “ <i>Soil-water-nutrient interactions within savanna vegetation</i> ”
2005-2006	Member,	NASA Earth System Scholars Network (ESSN)
2004	Member,	NASA Earth System Scholars Network (ESSN) Technical Committee
2004	Co-chair,	NASA ESSN Symposium, Water and Energy Session
2004-	Member,	American Geophysical Union (AGU)

FUNDED RESEARCH

2012-2015	NSF	Division of Ecological Biology, “ <i>Collaborative Research: Quantifying the ecosystem-wide impacts of a strong interactor in African watersheds</i> ”, PI, \$123,336.
2011-2014	NASA	IDS, “ <i>Multiscale effects of fire on long-term climate and precipitation</i> ”, Co-I, \$1,149,128.
2011-2014	NSF	BCS/ESE, “ <i>CNH: Institutional Dynamics of Adaptation to Climate Change: Longitudinal Analysis of Snowmelt-Dependent Agricultural Systems</i> ”, Co-PI, \$1,200,000.
2011-2014	Princeton U.	Council for International Teaching and Research, “ <i>Aglobal collaborative network for coupling hydrological forecasts and food security in Sub-Saharan Africa and China</i> ”, PI, \$225,000.
2010-2013	NSF	BCS/ESE, “ <i>ESE: Collaborative Research: Spatial Resilience of Agriculturalists to Coupled Ecological and Hydrological Variability in Rural Zambia</i> ”, PI, \$350,000.
2010-2011	Princeton U.	Grand Challenges Initiative, “ <i>The Importance of Green Feedbacks on Biodiversity Conservation and Management of Savanna Ecosystems</i> ”, PI, \$100,000.
2009-2014	NSF	Division of Earth Sciences, “ <i>CAREER: An ecohydrological framework for understanding land degradation in dryland regions</i> ”, PI, \$1,500,000.
2009-2010	NSF	OISE IRES/DDEP, “ <i>International: The impact of macropores on the spatial and temporal patterns of soil moisture in dryland ecosystems of central Kenya</i> ”, PI, \$15,000.
2009	LI-COR	LI-COR Environmental Education Fund (LEEF), “ <i>Using the LI-6400XT in the Princeton Semester in Kenya Program: From Undergraduate Education to International Impact</i> ”, PI, \$45,000.
2008-2013	NSF	Division of Ecological Biology, “ <i>LTREB: KLEE - Scaling up and out at the Kenya Long-term Exclosure Experiment</i> ”, Co-I, \$449,940.
2008-2010	NSF	Division of Ecological Biology, “ <i>Collaborative Research: Distribution and dynamics of belowground carbon in savannas</i> ”, PI, \$250,000.
2007-2009	NSF	Social, Behavioral, and Economic Sciences, “ <i>Human and Social Dynamics – Dynamics of Reforestation in Coupled Social-Ecological Systems: Modeling Land-Use Decision Making and Policy Impacts</i> ”, Co-I, \$749,150.

FUNDED RESEARCH – continued

- 2007-2008 Indiana U. Office of the Vice Provost for Research, “Quantifying organic and pharmaceutical contaminants within urbanizing streams in a central Indiana urbanizing watershed”, PI, \$51,323.
- 2007-2008 Monroe Drainage Board/Transportation Dept., “Quantifying the impacts of development on physical and chemical hydrology of central Indiana streams”, PI, \$96,000.
- 2006-2008 NSF Office of International Science and Engineering, “International Research Experience for Students – Impacts of Disturbance on Above- and Below-ground Structure of Southern African Savannas”, Co-PI, \$150,000 (administered by University of Virginia).
- 2005-2007 NASA Interdisciplinary Science in the NASA Earth Science Enterprise, “Hydrologic & Nutrient Controls on the Structure and Function of Southern African Savannas: A Multi-Scale Approach”, Co-I, \$900,000.
- 2005-2007 NASA Earth System Science Research Using Data & Products from TERRA, AQUA, & ACRIM Satellites, “Sources, Transports, and Impacts of Southern African Aerosols: Synthetic Case Studies Using Terra & Aqua Satellite Products”, Co-I, \$650,000.

PEER-REVIEWED MANUSCRIPTS

* indicates current or former graduate/postdoctoral group member

+ indicates current or former undergraduate group member

2013

56. *Guan, K., Medvigy, D., Wood, E.F., **Caylor, K.K.**, Li, S., Jeong, S. (2013) “Deriving vegetation phenological time and trajectory information over Africa using SEVIRI daily LAI”, *IEEE Transactions on Geoscience and Remote Sensing*, in press.
55. *Guan, K., Wolf, A., Medvigy, D., **Caylor, K.K.**, Pan, M., Wood, E.F., (2013) “Seasonal coupling of canopy structure and function in African tropical forests and its environmental controls”, *Ecosphere*, in press.
54. *Wang, L, Niu, Shuli, *Good, S.P., *Soderberg, K., McCabe, M., Sherry, R., Luo, Y., Xuhui, Z., Xia, J., **Caylor, K.K.**, (2013) “The effect of warming on grassland evapotranspiration partitioning using laser-based isotope monitoring techniques”, *Geochimica et Cosmochimica Acta*, in press.
53. *Soderberg, K., *Good, S.P., +O’Connor, M., *Wang, L., +Ryan, K., **Caylor, K.K.** (2013) “Using atmospheric trajectories to model the isotopic composition of rainfall in central Kenya”, *Ecosphere*, in press.

2012

52. *Wang, L., Okin, G.S., D’Odorico, P., **Caylor, K.K.**, Macko, S., (2012) “Ecosystem-scale spatial heterogeneity of stable isotopes of soil nitrogen in African savannas”, *Landscape Ecology*, doi:10.1007/s10980-012-9776-6.
51. *King, E.G., *O’Donnell, F.C., **Caylor, K.K.** (2012) “Reframing hydrology education to solve coupled human and environmental problems”, *Hydrology and Earth System Science*, doi:10.5194/hess-16-4023-2012.
50. *Wang, L., D’Odorico, P., Evans, J, Eldridge, T., McCabe, M., **Caylor, K.K.** (2012) “Dryland ecohydrology and climate change: critical issues and technical advances”, *Hydrology and Earth System Science*, 16, 2585-2603, doi:10.5194/hess-16-2585-2012.
49. *Soderberg, K., *Good, S.P., *Wang, L., **Caylor, K.K.** (2012) “Stable isotopes of water vapor in the vadose zone: A review of measurement and modeling techniques”, *Vadose Zone Journal*, doi:10.2136/vzj2011.0165.

48. *Guan, K., Wood, E.F., **Caylor, K.K.** (2012) “Characterization of dryland vegetation structure using remote sensing indices”, *Remote Sensing of Environment*, doi:10.1016/j.rse.2012.06.005.
47. *Good, S.P., *Soderberg, K., *Wang, L., **Caylor, K.K.** (2012) “Error estimates in the assessment of the isotopic composition of surface fluxes: A direct comparison of techniques using laser-based water vapor isotope analyzers”, *Journal of Geophysical Research - Atmospheres*, 117, D15301, doi:10.1029/2011JD017168.
46. *Bhattachan, A., Dintwe, K., Tathlego, M., *O’Donnell, F.C., **Caylor, K.K.**, D’Odorico, P., Okin, G.A. (2012) “Evaluating ecohydrological theories of woody root distribution in the Kalahari”, *PLoS One*, 7(3): e33996. doi:10.1371/journal.pone.0033996
45. *O’Donnell, F.C., **Caylor, K.K.**, (2012) “A model-based evaluation of woody plant encroachment impacts on coupled carbon and water cycles”, *Journal of Geophysical Research - Biogeosciences*, doi: 10.1029/2011JG001899.
44. *Franz, T.E., **Caylor, K.K.**, *King, E.G., Nordbotten, J., Celia, M.A., Rodriguez-Iturbe, I, (2012) “An ecohydrological approach to predicting hillslope-scale vegetation patterns in dryland ecosystems”, *Water Resources Research*, doi:10.1029/2011WR010524.
43. *Wang, L., *Good, S.P., **Caylor, K.K.**, Cernusak, L.A. (2012) “Direct quantification of leaf transpiration isotopic composition”, *Agricultural and Forest Meteorology*, doi:10.1016/j.agrformet.2011.10.018.
42. Turnbull, L., Wilcox, B.P., Belnap, J., Ravi, S., D’Odorico, P., Childers, D., Gwenzi, W., Okin, G., Wainwright, J., **Caylor, K.K.**, Sankey, T. (2012) “Understanding the role of ecohydrological feedbacks in ecosystem-state change in drylands”, *Ecohydrology*, 10.1002/eco.265.
41. *Wang, L., Zou, C., *O’Donnell, F., *Good, S.P., *Franz, T., Miller, G.R., **Caylor, K.K.**, Cable, J.M., Bond, B. (2012) “Characterizing ecohydrological and biogeochemical connectivity across multiple scales: a new conceptual framework,” *Ecohydrology*, doi:10.1002/eco.1187.

2011

40. *King, E.G., *Franz, T.E., **Caylor, K.K.** (2011) “Ecohydrological interactions in a two-phase mosaic dryland: implications for regime shifts, resilience, and restoration”, *Ecohydrology*, doi:10.1002/eco.260.
39. *Franz, T.E., *King, E.G., **Caylor, K.K.**, Robinson, D.A. (2011) “Coupling vegetation organization patterns to soil resource heterogeneity in a central Kenyan dryland using geophysical imagery”, *Water Resources Research*, 47, W07531, doi:10.1029/2010WR010127
38. *King, E.G., **Caylor, K.K.** (2011) “Ecohydrology in practice: Strengths, conveniences, and opportunities”, *Ecohydrology*, 4(4), 608-612, doi: 10.1002/eco.248.
37. Rodriguez-Iturbe, I., **Caylor, K.K.**, Rinaldo, A. (2011) “Metabolic principles of river basin organization,” *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1107561108.
36. *Good, S.P., **Caylor, K.K.** (2011) “Climatological determinants of woody cover in Africa,” *Proceedings of the National Academy of Sciences*, doi:10.1073/pnas.1013100108.
35. *Franz, T., Nolan, J., Nordbotten, J., **Caylor, K.K.**, Slayter, L. (2011) “Quantifying transient soil moisture dynamics using multi-point direct-current resistivity in homogeneous sand,” *Vadose Zone Journal*, vol. 10, doi:10.2136/vzj2010.0031.

2010

34. *King, E.G., **Caylor, K.K.** (2010) “Herbivores and mutualistic ants interact to modify tree photosynthesis,” *New Phytologist*, 187, p17-21, doi: 10.1111/j.1469-8137.2010.03286.x.
33. *Wang, L., **Caylor, K.K.**, Villegas, J.C., Barron-Gafford, G.A., Breshears, D.D., Huxman, T.E. (2010) “Partitioning evapotranspiration across gradients of woody plant cover: Assessment of a stable isotope technique,” *Geophys. Res. Lett.*, 37, L09401, doi:10.1029/2010GL043228.

32. *Franz, T., **Caylor, K.K.**, Rodriguez-Iturbe, I., Celia, M. (2010) “An ecohydrological approach to predicting regional species distribution patterns in dryland ecosystems,” *Advances in Water Resources*, doi:10.1016/j.advwatres.2009.12.003.
31. Manfreda, S., Scanlon, T.M., and **Caylor, K.K.** (2010) “On the importance of accurate depiction of infiltration processes on modelled soil moisture and vegetation water stress,” *Ecohydrology*, doi: 10.1002/eco.79.
30. Reis-O’Halloran, L., H.H. Shugart, *L. Wang, **Caylor, K.K.**, Ringrose, S. (2010) “Nutrient limitation on above-ground grass production in four savanna types along the Kalahari Transect,” *Journal of Arid Environments*, 74(2), p. 284-290, doi:10.1016/j.jaridenv.2009.08.012.
29. *Wang, L., P. D’Odorico, L. Ries, **Caylor, K.K.**, and S. Macko (2010) “Combined effects of soil moisture and nitrogen availability on grass productivity in African savannas,” *Plant & Soil*, doi:10.1007/s11104-009-0085-z.

2009

28. **Caylor, K.K.**, T.M. Scanlon, I. Rodriguez-Iturbge (2009) “Ecohydrological optimization of pattern and processes in water-limited ecosystems: A tradeoff-based hypothesis,” *Water Resources Research*, 45, W08407, doi:10.1029/2008WR007230.
27. *Wang, L., **Caylor, K.K.**, and D. Dragoni (2009) “On the calibration of continuous, high-precision $\delta^{18}\text{O}$ and $\delta^2\text{H}$ measurements using an off-axis integrated cavity output spectrometer,” *Rapid Communications in Mass Spectrometry*, Vol. 23(14), pp. 530-536, doi:10.1002/rcm3905.
26. **Caylor, K.K.**, D. Dragoni (2009) “On the structural and environmental determinants of sap velocity: Part I, Methodological development,” *Agricultural and Forest Meteorology*, doi:10.1016/j.agrformet.2008.10.006.
25. Dragoni, D., **Caylor, K.K.**, and H. Schmid (2009) “On the structural and environmental determinants of sap velocity: Part II, Observational application,” *Agricultural and Forest Meteorology*, doi:10.1016/j.agrformet.2008.10.010.
24. *Wang, L., G.S. Okin, **Caylor, K.K.**, and S. Macko (2009) “Spatial heterogeneity and sources of soil carbon in southern African savannas,” *Geoderma*, Vol. 149, pp. 402-408, doi:10.1016/j.geoderma.2008.12.014.

2008

23. Okin, G.S., N. Mladenov, D. Cassel, G.S. Okin, **K.K. Caylor**, and S. Ringrose (2008) “Spatial patterns of soil nutrients in two contrasting southern African savannas,” *JGR-Biogeosciences*, Vol 113, G02011, doi:10.1029/2007JG000584.

2007

22. D’Odorico, P., **K.K. Caylor**, G.S. Okin, T.M. Scanlon. (2007) “On soil moisture-vegetation feedbacks in dryland plant ecosystems,” *JGR-Biogeosciences*, Vol 112, G04010, doi:10.1029/2006JG000379.
21. Hély, C., **K.K. Caylor**, P.R. Dowty, S. Alleaume, R.J. Swap, H.H. Shugart, C.O. Justice (2007) “A temporal and spatially explicit Production Efficiency Model for fuel load allocation in southern Africa,” *Ecosystems*, doi: 10.1007/s10021-007-9082-3.
20. Scanlon, TM, **K.K. Caylor**, I. Rodriguez-Iturbe, S. Levin (2007) “Positive feedbacks promote power-law clustering of Kalahari vegetation,” *Nature*, 449:209-212, doi:10.1038/nature06060
19. Ferreira, J.N., M. Bustamante, D.C. Garcia-Montiel, **K.K. Caylor**, E. A. Davidson (2007) “Spatial variation in vegetation structure coupled to plant available water at landscape scales in a Brazilian savanna,” *Oecologia*, 153(2):417-430, doi: 10.1007/s00442-007-0747-6.

18. Sambatti, J., **K.K. Caylor** (2007) “When is breeding for drought tolerance optimal if drought is random?” *New Phytologist*, 175(1):70-80, doi: 10.1111/j.1469-8137.2007.02067.
2006
17. **Caylor, K.K.**, P. D’Odorico, I. Rodriguez-Iturbe (2006) “On the ecohydrological organization of spatially heterogeneous semi-arid landscapes.” *Water Resources Research*, 42(7), W07424, doi:10.1029/ 2005WR004683.
2005
16. **Caylor, K.K.**, S. Manfreda, I. Rodriguez-Iturbe (2005) “On the coupled geomorphological and ecohydrological organization of river basins.” *Advances in Water Resources*, 28(1):69-86.
15. Scanlon, T.M., **K.K. Caylor**, S. Manfreda, S. Levin, I. Rodriguez-Iturbe (2005) “Dynamic response of grass cover to rainfall variability: Implications for the function and persistence of savanna ecosystems” *Advances in Water Resources*, 28(3):291-301.
14. **Caylor, K.K.**, H.H. Shugart, I. Rodriguez-Iturbe (2005) “Tree canopy effects on simulated water stress in southern African savannas.” *Ecosystems*, 8(1):17-32.
13. Sankaran, M. Hanan, N., Scholes, R.J., and 24 others including **K.K. Caylor** (2005) “Determinants of woody cover in African savannas: A continental scale analysis” *Nature*, doi:10.1038/nature04070.
2004
12. **Caylor, K.K.**, P.R. Dowty, H.H. Shugart, S. Ringrose (2004). “Relationship between small-scale structural variability and simulated productivity across a regional moisture gradient in southern Africa.” *Global Change Biology*, 10(3):374-382.
11. Privette, J., Y. Tian, G. Roberts, R.J. Scholes, Y. Wang, **K.K. Caylor**, M. Mukelabai (2004). “Structural characteristics and relationships of Kalahari woodlands and savannas.” *Global Change Biology*, 10(3):281-291.
10. **Caylor, K.K.**, H.H. Shugart (2004) “Simulated productivity of heterogeneous landscape patches in southern African savanna landscapes using a canopy productivity model.” *Landscape Ecology*, 19(4):401-415.
9. **Caylor, K.K.**, T.M. Scanlon, I. Rodriguez-Iturbe (2004) “Feasible optimality of vegetation patterns in river basins.” *Geophysical Research Letters*, 31(13):L13502.
8. Pereira, J.M.C., B. Mota, J.L. Privette, **K.K. Caylor**, J.M.N. Silva, A.C.L. Sà and W. Ni-Meister (2004) “A simulation analysis of the detectability of understory burns in miombo woodlands” *Remote Sensing of Environment*, 93(3):296-310.
2003
7. **Caylor, K.K.**, H.H. Shugart, and T.M. Smith (2003). “Tree spacing along the Kalahari Transect in southern Africa.” *Journal of Arid Environments*, 54(2):281-296.
6. Hély, C., **Caylor, K.**, S. Alleume, R.J. Swap, and H.H. Shugart (2003). “Release of gaseous and particulate carbonaceous compounds from biomass burning during the SAFARI 2000 dry season field campaign.” *Journal of Geophysical Research - Atmospheres*, 108(D13):8740-8750.
5. Hély, C., P.R. Dowty, S. Alleaume, **K.K. Caylor**, S. Koronotzi, R.J. Swap, H.H. Shugart, and C.O. Justice (2003). “Regional fuel load for two climatically contrasting years in southern Africa.” *Journal of Geophysical Research - Atmospheres*, 108(D13):8475-8491.
4. Porporato, A., F. Laio, L. Ridolfi, **K.K. Caylor**, and I. Rodriguez-Iturbe (2003). “Soil moisture and plant stress dynamics along the Kalahari precipitation gradient.” *Journal of Geophysical Research - Atmospheres*, 108(D3):4127-4134.
2002

3. Otter, L.B., R.J. Scholes, P.R. Dowty, J. Privette, **K.K. Caylor**, S. Ringrose, M. Mukelabai, P. Frost, N. Hanan, O. Totolo, and E.M. Veenendaal (2002) “The Southern African Regional Science Initiative (SAFARI 2000): Wet season campaigns.” *South Africa Journal of Science*, 98(3/4):131-140.
2. Scanlon, T.M., J.D. Albertson, **K.K. Caylor** and C. Williams (2002). “Determining land surface fractional cover from NDVI and rainfall time series for a savanna ecosystem.” *Remote Sensing of Environment*, 82(2-3):376-388.
1. Scholes, R.J., P.R. Dowty, **K. Caylor**, D.A.B. Parsons, P.G.H Frost, and H.H. Shugart (2002). “Trends in savanna structure and composition on an aridity gradient in the Kalahari.” *Journal of Vegetation Science*, 13(3):419-428.

BOOK CHAPTERS

6. Dragoni, D, **K.K. Caylor** (2009) “Decoupling structural and environmental determinants of sap velocity” In: Acta Horticulturae, Proceedings of the 7th International Workshop on Sap Flow, Seville, Spain.
5. **K.K. Caylor**, T.M. Scanlon, I. Rodriguez-Iturbe (2007) “Ecohydrological optimization of patterns and processes in water-limited ecosystems” In: Water and the Environment: Proceedings of the Workshop in the Vatican Academy of Sciences, Nov. 2005. Proceedings of the Vatican Academy of Sciences, Vatican Press.
4. Shugart, H.H., **K.K. Caylor**, C. Hély, R.J. Swap, P.R. Dowty (2006) “Dynamic change in the woodland and savanna ecosystems of sub-tropical Africa.” In: W. Laurence and C. Peres (eds.) Emerging Threats to Tropical Forests. University of Chicago Press.
3. **Caylor K.K.** and H.H. Shugart (2006) “Pattern and process in savanna ecosystems.” In: P. D’Odorico and A. Porporato (eds.) Dryland Ecohydrology. Springer.
2. **Caylor, K.K.**, I. Rodriguez-Iturbe (2004) “Coupling ecohydrological patterns and processes in semi-arid landscapes.” In: Proceedings of the British Hydrological Society’s International Conference on Hydrology: Science & Practice for the 21st Century.
1. Dowty, P.R., **K. Caylor**, H.H. Shugart, W.R. Emanuel (2000) “Approaches for the estimation of primary productivity and vegetation structure in the Kalahari region.” In: Ringrose, S. and R. Chanda (eds.) Towards Sustainable Natural Resource Management in the Kalahari Region. University of Botswana Press, Gaborone, Botswana.

CONFERENCE & WORKSHOP PRESENTATIONS

* indicates current or former lab member + indicates current or former undergraduate lab member

95. *Wolf, A., +Falusi, J., **Caylor, K.K.**, Sheffield, J, Wood, E.F. (2012) “A GSM-based surface meteorology network in service of improved African hydrological data assimilation and drought forecasting”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract H13J-01
94. Evans, T., Cox, M., McCord, P., **Caylor, K.K.**, Washington-Ottombre, C., *Soderberg, K., *Sadri, S. (2012) “Water governance, agricultural development, and community-level resilience to climate change”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract H14F-02
93. *O’Donnell, F.C., *Gerlein, C., Bhattachan, A., **Caylor, K.K.** (2012) “Ground penetrating radar measurements show a spatial relationship between coarse root biomass and soil carbon abundance”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract B23A-0431

92. *Estes, L.D., **Caylor, K.K.**, +Choi, J. (2012) “Turkers in Africa: A crowdsourcing approach to improving agricultural landcover maps”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract ED24A-07
91. *Soderberg, K., *Gitonga, J.M., **Caylor, K.K.** (2012) “Establishing a water isotope framework for investigating ecosystem functioning and agricultural water use in central Kenya”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract H34B-04
90. *Debats, S.R., **Caylor, K.K.**, *Estes, L.D., Chaney, N., Sheffield, J. (2012) “Interacting effects of heat stress and soil moisture stress on crop yield losses in dryland agriculture”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract GC41B-0978
89. +O’Connor, M., *Good, S.P., **Caylor, K.K.** (2012) “A multi-year record of flux measurements in East Africa: coupling eddy covariance with high-frequency water isotope observations”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract B51B-0535
88. *Good, S.P., Rodriguez-Iturbe, I., **Caylor, K.K.** (2012) “Stochastic modeling of 3D variability in ecosystem structure and function”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract B52C-07
87. D’Odorico, P. Bhattachan, A., Tathogo, M. Dintwe, K., *O’Donnell, F.C., **Caylor, K.K.**, Okin, G.S., Perrot, D., Ringrose, S. (2012) “Hydrologic controls on patterns of below ground woody biomass in savannas”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract H52A-03
86. **Caylor, K.K.**, *Good, S.P., Guan, K. (2012) “When change is more of the same: The increasing importance of hydrological variability in drylands”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract H52A-06. INVITED
85. Guan, K., Wood, E.F., Medvigy, D., **Caylor, K.K.** (2012) “Quantifying the impacts of seasonal variability in precipitation on vegetation structure in Africa”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract B53A-0655
84. **Caylor, K.K.**, *Estes, L.D., Evans, T., Sweeney, S. (2012) “Examining Zambian farmers’ responses to drought: A remotely-sensed analysis of changes in sowing dates”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract B53F-0750
83. Riihimaki, C.A., Sealfon, C.D., Paine, E.N., *O’Donnell, F.C., **Caylor, K.K.**, Wilcove, D.S. (2012) “Princeton science and engineering education initiative: Revising undergraduate environmental sciences courses”, *EOS Trans AGU*, 93(52), Fall Meet. Suppl., Abstract ED53F-0955
82. **Caylor, K.K.**, Rodriguez-Iturbe, I. (2012) “Scale-dependent controls on the metabolic organization of river basins”, *Geophysical Research Abstracts*, Vol 14, EGU2012-11550. INVITED
81. *Soderberg, K., *Good, S.P., +O’Connor, M., *King, E.G., **Caylor, K.K.** (2012) “Evapotranspiration partitioning in a semi-arid African savanna using stable isotopes of water vapor”, *Geophysical Research Abstracts*, Vol 14., EGU2012-12493.
80. Dintwe, K., Okin, G., D’Odorico, P., **Caylor, K.K.**, *O’Donnell, F.C., *Bhattachan, A. (2011) “Soil organic carbon and nitrogen content in savannas: Potential impacts of climate change”, *EOS Trans AGU*, 92(52), Fall Meet. Suppl., Abstract B11A-0452.
79. *O’Donnell, F.C., **Caylor, K.K.** (2011) “Influence of rainfall climatology and coarse root structure on water use and carbon uptake by savanna trees”, *EOS Trans AGU*, 92(52), Fall Meet. Suppl., Abstract B11A-0467
78. *Wang, L., Niu, S., Zhou, X., Zia, J., Luo, Y., *Good, S.P., **Caylor, K.K.**, McCabe, M.F. (2011) “The effect of warming on grassland evapotranspiration partitioning using laser-based isotopic monitoring techniques”, *EOS Trans. AGU*, 92(52), Fall Meet. Suppl., Abstract B11H-08

77. Sheffield, J., +Herrera-Estrada, J.E., **Caylor, K.K.**, Wood, E.F. (2011) “Drought, climate change and potential agricultural productivity (invited)”, *EOS Trans. AGU*, 92(52), Fall Meet. Suppl., Abstract GC11C-05. INVITED
76. Manoli, G., *Chavarro-Rincon, D., Marani, M., Putti, M., Wolski, P., Murray-Hudson, M., **Caylor, K.K.** (2011) “Groundwater-vegetation interactions in the small-scale dynamics of the Okavango Delta”, *EOS Trans. AGU*, 92(52), Fall Meet. Suppl., Abstract H11E-1106
75. **Caylor, K.K.**, *Good, S.P., *Soderberg, K., *King, E. (2011), “Savanna grassland transpiration fluxes after a water pulse using stable isotope and eddy covariance techniques”, *EOS Trans. AGU*, 92(52), Fall Meet. Suppl., Abstract B23E-07
74. *Good, S.P., *Soderberg, K., *Wang, L., **Caylor, K.K.** (2011) “Uncertainty in estimates of the isotopic composition of water vapor fluxes: direct comparison of techniques using laser-based analyzers”, *EOS Trans. AGU*, 92(52), Fall Meet. Suppl., Abstract B24B-02
73. **Caylor, K.K.** (2011) “Water for sustainable ecosystems”, International Conference on Ecohydrology and Climate Change (EcoHCC’11), Tomar, Portugal.
72. *King, E.G., *Franz, T.E., and **Caylor, K.** (2011) “Ecohydrological Interactions in a Degraded Two-Phase Mosaic Dryland: Implications for Regime Shifts, Resilience, and Restoration”, Resilience International Symposium: Building Social-Ecological Resilience in a Changing World, Research Institute for Humanity and Nature, Kyoto, Japan.
71. *Soderberg, K., *Wang, L., *Good, S., and **Caylor, K.** (2011) “Measurement of soil water isotopes for evapotranspiration partitioning”, EGU General Assembly 2011, *Geophysical Research Abstracts*, vol. 13, EGU2011-12394.
70. **Caylor, K.**, *Wang, L., *Good, S., and *Soderberg, K. (2011) “Evapotranspiration dynamics in a semi-arid savanna using continuous water vapor isotopes from the eddy covariance tower at Mpala Research Centre, Kenya” 9th Annual Savanna Science Network Meeting, March 2011, Skukuza, South Africa.
69. *Good, S.P., *Soderberg, K., Guan, K., *King, E.G., **Caylor, K.K.** (2011) “Savanna grassland transpiration fluxes after water pulses assessed using stable isotope and eddy covariance techniques.”, Conference on the Roles of Stable Isotopes in Water Cycle Research, Keystone, CO.
68. *Good, S.P., *Wang, L., **Caylor, K.K.**, and Rodriguez-Iturbe, I (2010) “Stochastic Modeling of Vegetation Structure in Biologically Diverse And Sparsely Populated Heterogeneous Landscapes”, Latsis Symposium 2010: Conference on Ecohydrology, Lausanne, Switzerland.
67. *Wang, L., *Good, S.P., and **Caylor, K.K.** (2010) “Landscape-scale evapotranspiration partitioning using continuous stable isotope monitoring”, 11th Australasian Environmental Isotope Conference, Cairns, Australia.
66. Guan, K., Wood, E.F., and **Caylor, K.K.** (2010) “Multi-sensor synthesis of vegetation pattern over a large climatic gradient transect in Africa”, *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract B22E-07.
65. *Good, S.P., *Wang, L., and **Caylor, K.K.** (2010) “Isotope techniques for the partitioning of evapotranspiration into its constituent components”, *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract B23H-0487.
64. *Wang, L., *Good, S.P., and **Caylor, K.K.** (2010) “A new method to quantify the isotopic signature of leaf transpiration: Implications for landscape-scale evapotranspiration partitioning studies”, *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract B23H-0499.
63. *O’Donnell, F.C., **Caylor, K.K.**, D’Odorico, P., Okin, G.S., *Bhattachan, A., and Dintwe, K. (2010) “Coarse root structure in water-limited ecosystems: Results of large-scale tree and shrub excavations across a rainfall gradient in Southern Africa”, *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract B41A-0291.

62. Mladenov, N., Okin, G.S., *O'Donnell, F.C., D'Odorico, P., Meyer, T., Dintwe, K., **Caylor, K.K.**, Kim, S., and Ringrose, S. (2010) "Linking soil moisture with chemical quality of soil organic matter to evaluate belowground carbon storage in savannas", *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract B41E-0347.
61. *Franz, T.E., Nolan, J.T., **Caylor, K.K.**, Norbbotten, J.M., and Slater, L.D. (2010) "Measurement and modeling of lateral subsurface transient soil moisture dynamics using multi-point direct-current resistivity in homogenous sand" *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract H11E-0844.
60. **Caylor, K.K.**, *Franz, T.E., *King, E., and Robinson, D. (2010) "Drivers of emergent vegetation pattern formation at hillslope scales in a central Kenyan dryland" *EOS Trans AGU*, 91(52), Fall Meet. Suppl., Abstract H51J-01.
59. *O'Donnell, F. and **Caylor, K.** (2010) "Accounting for 'hot spots' and 'hot moments' in soil carbon models for water-limited ecosystems", EGU General Assembly 2010, *Geophysical Research Abstracts*, vol. 12, EGU2010-13765.
58. Evans, T., **Caylor, K.**, Sweeney, S., Batistella, M., Farinaci, J., Moran, E (2010) "Balancing Social and Ecological Complexity in Models of Reforestation in Indiana (USA) and So Paulo (Brazil)", AAG Annual Meeting, Washington, DC.
57. **Caylor, K.K.** (2009) "Land degradation in dryland regions: An ecohydrological framework", *EOS Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H43D-1058 INVITED.
56. *Franz, T.E., Nolan, J.T., Slater, L.D., **Caylor, K.K.** (2009) "Measurement and modeling of mass-infiltration events into macropores", *EOS Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H41H-07.
55. *Wang, L., **Caylor, K.K.**, *Good, S.P., Villegas, J.C., Breshears, D.D. (2009) "Landscape-scale observations of plant water use using continuous stable isotope monitoring", *EOS Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H41E-0945.
54. *O'Donnell, F.C., **Caylor, K.K.** (2009) "Soil CO₂ fluxes following wetting events: Field observations and modeling", *EOS Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract B51A-0302.
53. D'Odorico, P., Okin, G.S., **Caylor, K.K.**, Tatlhago, M., *O'Donnell, F.C., Perrot, D., *Bhattachan, A. (2009) "Tree root profiles along the Kalahari rainfall gradient", *AGU Chapman Conference "Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions"*.
52. *Franz, T., **Caylor, K.K.** (2009) "Prediction of regional woody species distribution patterns in the drylands of the central Kenyan highland", *AGU Chapman Conference, "Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions"*.
51. *Good, S., **Caylor K.K.** (2009) "Modeling the ecohydrology of vegetation succession patters with plant functional groups in heterogeneous landscapes", *AGU Chapman Conference, "Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions"*.
50. *O'Donnell, F.C., **Caylor, K.K.** (2009) "Soil CO₂ fluxes following wetting events: Field observations and modeling", *AGU Chapman Conference, "Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions"*
49. *Wang, L., **Caylor, K.K.**, Villegas, J.C., Breshears, D.D. "Refining the partitioning of evapotranspiration as a function of woody plant cover: Continuous stable isotope monitoring provides bridge from glasshouse to field conditions" (2009), *AGU Chapman Conference, "Examining Ecohydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions"*
48. *Wang, L., **Caylor, K.K.**, Dragoni, D. (2008) "Measuring hourly $\delta^{18}\text{O}$ and $\delta^2\text{H}$ fluxes in a mixed hardwood forest using an integrated cavity output spectrometer", *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract B23C-0448.

47. Vinukollu, R.K., **Caylor K.K.**, Wood, E.F. (2008) "Evaluation of a Global Evapotranspiration Product Using FLUXNET Data", *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract B34A-08.
46. *Franz, T.E., *King, E., *Lester, A., **Caylor, K.K.**, Nordbotten, J., Celia, M.A., Rodriguez-Iturbe, I. (2008) "Ecohydrologic modeling of hillslope scale processes in dryland ecosystems", *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract H13A-0875.
45. **Caylor, K.K.** and *Franz, T. (2008) "Impacts of climate variability on functional diversity and species distribution in dryland ecosystems", *EOS Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract H11K-05 INVITED.
44. **Caylor, K.K.** and Scanlon, T.M. (2008) "Characterizing facilitative/competitive effects of tree canopies on herbaceous productivity: A coupled energy/water balance perspective", International Ecohydrology/Ecophysiology Workshop, University of Western Australia, Perth. INVITED
43. Dragoni, D. and **Caylor, K.K.** (2008) "Decoupling structural and environmental determinants of sap velocity", VII International Workshop on Sap Flow, Seville, Spain.
42. **Caylor, K.K.** and *Franz, T. (2008) "Using geophysical measurements to infer subsurface vegetation patterns and processes", 2008 Joint Annual Meeting SSSA-ASA-CSSA, Houston, Texas, INVITED.
41. **Caylor, K.K.** and Scanlon, T.M. (2008) "Transitions between facilitative/competitive effects of tree canopies on herbaceous productivity via impacts on energy/water balance", ESA Annual Meeting, Milwaukee, Wisconsin, OOS 13-6, INVITED.
40. *Franz, T., *King, E., *Lester, A., **Caylor, K.K.**, Celia, M., Rodriguez-Iturbe, I., Rubenstein, D.I. (2008) "Differences in small-scale water balance by representative hydrologic units of central Kenya", ESA Annual Meeting, Milwaukee, Wisconsin, OOS 2-1.
39. *Bhattachan, A., **Caylor, K.K.** (2008) "Characterizing 33-year shifts in vegetation pattern of southern African savannas using high-resolution declassified satellite imagery", AAG Annual Meeting, Boston, MA.
38. *Lindner, G., **Caylor, K.K.** (2008) "Importance of spatial scaling in predicting storm runoff response", AAG Annual Meeting, Boston, MA.
37. **Caylor, K.K.**, Dragoni, D. (2007) "Decoupling structural and environmental determinants of sap velocity", *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract B23E-03.
36. *Lindner, G., **Caylor, K.K.** (2007) "Assessing the impact of spatial scaling on empirical runoff ratio models within a heterogeneous suburbanizing watershed in central Indiana", *Eos Trans. AGU*, 88(52), Fall Meet. Suppl., Abstract H43D-1610.
35. **Caylor, K.K.**, D'Odorico, P., Okin. G.S. (2007) "Evidence and implications of soil moisture-vegetation feedbacks in semiarid savannas", AGU Joint Assembly, Acapulco, Mexico.
34. Swap, R.J., **Caylor, K.K.**, Longo, K., Richardson, D.L., Freitas, S., Roy, D., Guan, H., Platnick, S., Stein-Zweers, D., Chatfield, R., Hely-Alleaume, C. (2007) "Intercomparison of ground-based, airborne, and remotely-sensed data to produce and integrated view of regional aerosol and trace gas emissions for southern Africa", AAG Annual Meeting, San Francisco, CA.
33. **Caylor, K.K.**, Scanlon, T.M., Rodriguez-Iturbe, I. (2006) "Ecohydrological optimization of pattern and process in water-limited ecosystems", *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract H12B-01 INVITED.
32. Ries, L.P., Shugart, H.H., **Caylor, K.K.**, Okin, G.S., Kgope, B. (2006) "Nutrient and light limitations on grass productivity in a southern African savanna", *EOS Trans. AGU* 87(52), Fall Meet. Suppl., Abstract B44A-07.

31. Scanlon, T.M., D’Odorico, P., Okin, G.S., **Caylor, K.K.** (2006) “Effects of mean annual rainfall on landscape-level distributions of soil moisture and soil development in a semi-arid ecosystem”, EOS Trans. AGU 87(52), Fall Meet. Suppl., Abstract H13A-1357.
30. *Wang, L., **Caylor, K.**, D’Odorico, P., Ries, L., Okin, G., Swap, R., Shugart, H., Scanlon, T., Macko, S. (2006) “Vegetation and soil responses to fertilization along the Kalahari transect”, EOS Trans. AGU 87(52), Fall Meet. Suppl., Abstract B44A-04.
29. Dragoni, D., **Caylor, K.K.**, Schmid, H. (2006) “Characterization of transpiration in a deciduous forest of the US Midwest”, EOS Trans. AGU 87(52), Fall Meet. Suppl., Abstract A13D-0947.
28. **Caylor, K.K.** (2006), “On the couplings between semi-arid vegetation pattern and landscape water balance”, EGU Annual Meeting, Vienna, Austria, INVITED.
27. Feola, A., **Caylor, K.**, Rodriguez-Iturbe, I., Paolo, C., Marani, M., Rinaldo, A. (2006) “Delta geomorphological patterns”, Geophysical Research Abstracts, Vol 8, 08630, EGU Annual Meeting, Vienna, Austria.
26. **Caylor, K.K.** (2006) “Co-organization of ecological pattern and hydrological dynamics in water-limited landscapes”, AAG Annual Meeting, Chicago, IL.
25. Mladenov, N., Okin, G.S, Cassel, D., **Caylor, K.K.**, Clausen, K.M. (2005), “Geostatistical analyses reveal nutrient-vegetation relationships in savanna soils”, EOS Trans. AGU 86(52), Fall Meet. Suppl., Abstract B52B-04 INVITED.
24. **Caylor, K.K.** and I. Rodriguez-Iturbe (2005), “Spatial variation in surface hydrological dynamics of semi-arid ecosystems”, EOS Trans. AGU, 86(18) Jt. Assem. Suppl., Abstract H13D-04 INVITED.
23. **Caylor, K.K.**, P. D’Odorico, I. Rodriguez-Iturbe (2005), “Vertical and horizontal variation in soil moisture in semi-arid ecosystems”, 3rd CNR-Princeton Workshop, Frontiers in Hydrology, Princeton University.
22. Swap, R.J., H.J. Annegarn, **K.K. Caylor**, S. Frietas, W.W. McMillan, M. Keller, and H.H. Shugart (2004), “A first look at how climatic variation in the southern hemisphere impacts aerosol and trace gas production from biomass burning”, EOS Trans. AGU, 85(47), Fall Meet. Suppl., Abstract A32B-09.
21. **Caylor, K.K.**, P. D’Odorico, I. Rodriguez-Iturbe (2004), “Horizontal and vertical variability of soil moisture in savanna ecosystems”, EOS Trans. AGU, 85(47), Fall Meet. Suppl., Abstract H54C-0.
20. **Caylor, K.K.**, T.M. Scanlon, I. Rodriguez-Iturbe (2004), “Feasible optimality of vegetation patterns in river basins”, EOS Trans. AGU, 85(17), Jt. Assem. Suppl., Abstract B41A-18.
19. Scanlon, T.M., **K.K. Caylor**, I. Rodriguez-Iturbe (2004), “Ecohydrological significance of observed power-law distribution of tree canopy cluster sizes for savanna vegetation” , EOS Trans. AGU, 85(17), Jt. Assem. Suppl., Abstract B41A-17.
18. **Caylor, K.K.**, S. Manfreda, and I. Rodriguez-Iturbe (2003), “On the coupled geomorphological and ecohydrological organization of river basins”, EOS Trans. AGU 84(46), Fall Meet. Suppl., Abstract NG12A-03.
17. Shugart, H.H., **K.K. Caylor**, T.M. Scanlon, I. Rodriguez-Iturbe (2003), “Assessing the role of spatial pattern in governing ecohydrological interactions and vegetation dynamics in semi-arid savannas”, EOS Trans. AGU 84(46), Fall Meet. Suppl., Abstract B51A-07.
16. Manfreda, S., **K. Caylor**, and I. Rodriguez-Iturbe (2003), “On the soil moisture dynamics: Does simplification alter soil moisture prediction?” EOS Trans. AGU 84(46), Fall Meet. Suppl., Abstract H42D-1109.
15. **Caylor, K.K.**, H.H. Shugart, and I. Rodriguez-Iturbe. “Tree canopy effects on simulated water stress in southern African savannas”. Oral Presentation, Ecological Society of America meeting, Savanna, GA, August 2003.

14. Shugart, H.H., **K.K. Caylor**, C. Hèly, R.J. Swap, and P.R. Dowty “Dynamic change in the woodland and savanna ecosystem of sub-tropical Africa” Oral Presentation, Association for Tropical Biology and Conservation Annual Meeting, University of Aberdeen, July 2003.
13. Hèly, C. **K.K. Caylor**, S. Alleaume, R.J. Swap, and H.H. Shugart (2003), “Estimating emissions of carbonaceous compounds from souther African fires: a re-analysis of modeling techniques” Oral Presentation, EGS-AGU-EGU Joint Assembly, Nice, France, Abstract published in EOS, April 2003.
12. **Caylor, K.K.**, and H.H. Shugart (2002), “Simulated water-use of heterogeneous vegetation patches along the Kalahari transect”, EOS Trans. AGU 83(19), Spring Meet. Suppl., Abstract B31B-03 INVITED.
11. **Caylor, K.K.**, P.R. Dowty, and H.H. Shugart (2001), “Relationship between small-scale structural heterogeneity and simulated vegetation productivity across a regional moisture gradient”, Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract A51A-0032.
10. Hèly, C. P.R. Dowty, S. Alleaume, **K.K. Caylor**, and H.H. Shugart (2001), “Regional fuel load modeled for two contrasting years in central and southern Africa”, Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract A51A-0038.
9. Porporato, A., **K.K. Caylor**, F. Laio, L. Ridolfi, and I. Rodriguez-Iturbe (2001), “Soil moisture and plant stress dynamics along the Kalahari precipitation gradient”, Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract A51A-0049.
8. Scanlon, T.M., J.D. Albertson, **K.K. Caylor**, and C.A. Williams (2001), “Assessing fractional tree, grass, and bare soil cover from NDVI and rainfall time series along the Kalahari Transect”, Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract A51A-0016.
7. Shugart, H.H., **K.K. Caylor**, and P.R. Dowty (2001), “Ecological scale issues in land/atmosphere coupling - Examples from SAFARI 2000.” Eos Trans. AGU, 82(47), Fall Meet. Suppl., Abstract A41C-04.
6. **Caylor, K.K.** and H.H. Shugart (2001), “Vegetation patterns along the Kalahari transect”, Oral Presentation, Ecological Society of America meeting, Madison, WI.
5. **Caylor, K.K.** and H.H. Shugart (2001), “Vegetation structure and productivity along the Kalahari transect”. Poster Presentation, GCTE/LUCC Open Science Meeting, Amsterdam, Netherlands.
4. **Caylor, K.K.** and H.H. Shugart (2001), “Variation in vegetation structure along a large moisture gradient”, Oral Presentation, American Geophysical Union meeting, Boston, MA, May, 2001. Published in EOS, April 2001. Abstract B52B-04.
3. **Caylor, K.K.** and H.H. Shugart, “Structural dynamics of southern African savannas assessing change through declassified satellite photos”, Poster presentation, Ecological Society of America meeting, Spokane, WA, August 1999.
2. **Caylor, K.K.**, H.H. Shugart, and T.M. Smith, “The role of functional diversity in community dynamics”, Poster Presentation, Ecological Society of America meeting, Baltimore, MD, August 1998.
1. **Caylor, K.K.**, H.H. Shugart, and T.M. Smith. “The use of plant functional types to assess the role of diversity in community dynamics”. Poster Presentation, GCTE/LUCC Open Science Meeting, Barcelona, Spain, May 1998.