

KELLY K. CAYLOR

Professor of Ecohydrology

Department of Geography
Bren School of Environmental Science & Management
Earth Research Institute
University of California, Santa Barbara
Santa Barbara, CA 93106

Office: 6812 Ellison Hall
4802 Bren Hall
<http://caylor.eri.ucsb.edu/>
Email: caylor@ucsb.edu
Voice: (805) 893-8446
Fax: (805) 893-2578

EDUCATION

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

PROFESSIONAL RECORD

2016 - Director, Earth Research Institute, University of California, Santa Barbara
2016 - Full Professor, Bren School of Environmental Science & Management, UCSB
2016 - Full Professor, Dept. of Geography, University of California, Santa Barbara
2014 - 2016 Director, Environmental Studies Program, Princeton University
2013 - 2016 Associate Professor, Dept. of Civil and Environmental Engineering, Princeton University
2013 - 2016 Affiliated Faculty, Dept. of Ecology and Evolutionary Biology, 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

Ecohydrological dynamics, Isotope ecohydrology, Coupled natural-human systems

AWARDS & HONORS

2018 Fellow, National Geographic Society
2015 Princeton Engineering Commendation List for Outstanding Teaching
2012 Princeton Engineering Commendation List for Outstanding Teaching
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 & COURSE INSTRUCTION

2019 - G136: *"Water, Energy, and Ecosystems"*, University of California, Santa Barbara
2018 - ESM203: *"Introduction to Earth System Science"*, University of California, Santa Barbara

TEACHING & COURSE INSTRUCTION – continued

2019	Bren MESM Project: <i>“Green infrastructure for coral reef protection in Hawaii”</i> , University of California, Santa Barbara
2018	Bren MESM Project: <i>“Determining conservation research opportunities at the TNC Point Conception Dangermond Preserve”</i> , University of California, Santa Barbara
2017	Bren MESM Project: <i>“Exploring the Return on Investment Case for Natural Infrastructure Investment in the Upper Mississippi River Basin”</i> , University of California, Santa Barbara
2017	G167/ES167: <i>“Biogeography”</i> , University of California, Santa Barbara
2016	Freshman Seminar: <i>“Science, Society, and Dinner”</i> , with Chef Craig Shelton, Princeton University
2015	Summer Course on <i>“Isotope Hydrology Training”</i> , China Agricultural University
2015	Summer Course on <i>“Using UAVs for Environmental Monitoring”</i> , U. of Basilicata
2014	Summer Course on <i>“Modeling Spatial/Temporal Heterogeneity in Ecohydrological Systems”</i> , U. of Basilicata
2015 - 2016	EEB307/CEE307/ENV307, <i>“Water, Energy, and Ecosystems”</i> , Mpala Research Center, Princeton University
2013	CEE474/ENV474, <i>“Design and Implementation of Environmental Sensor Networks”</i>
2011	CEE474/ENV474, <i>“Design and Construction of Environmental Sensors”</i> , Princeton University
2009 - 2014	CEE 307, <i>“Field Ecohydrology”</i> , Mpala Research Center, Princeton University
2010 - 2016	ENV 201, <i>“Introduction to Environmental Studies”</i> , with Prof. David Wilcove, ENV Program, Princeton University
2008-2009	CEE 599, <i>“Environmental Biophysics”</i> , Princeton University
2008	CEE 599, <i>“Research Topics in Ecohydrology”</i> , Princeton University
2007	G307, <i>“Biogeography”</i> , Indiana University
2006	G440, <i>“Topics in Env. Geography: Ecological Systems and Simulation”</i> , Indiana University
2006	G440, <i>“Topics in Env. Geography: Ecohydrology”</i> , Indiana University
2006	G405/505, <i>“Hydroclimatology”</i> , Indiana University
2005 to 2007	G107, <i>“Physical Systems of the Environment”</i> , Indiana University

INVITED SEMINARS & PRESENTATIONS

2021	Keynote Speaker,	Artificial Intelligence and Machine Learning in Earth & Environmental Science, Helmholtz Institute
2020	Invited Speaker,	2020 AGU Fall Meeting, San Francisco, CA
2019	Invited Speaker,	2019 AGU Fall Meeting, San Francisco, CA
2019	Invited Speaker,	44th New Phytologist Symposium, Accra, Ghana
2019	Keynote Speaker,	UCSB Spring Board of Trustees Meeting, May 2019
2018	Invited Speaker,	Session on “Vegetation dynamics and ecosystem resilience under global climate change”, Ecological Society of America Annual Meeting, August 2018
2018	Invited Speaker,	Workshop on Spatial Pattern Formation in Ecosystems, Princeton University, April 2017
2017	Invited Seminar,	Department of Plant Sciences, University of California, Riverside, October 2017
2017	Invited Speaker,	Session on “Hydrologic connectivity: linking land use changes and management to movement and transformations of resources within catchments”, ALSO Aquatic Sciences Meeting, Honolulu, HI, February 2017
2016	Invited Speaker,	Water for Food Global Conference, “Catalytic Collaborations: Building Public-Private Partnerships for Water and Food Security,” Water for Food Institute, University of Nebraska, April 2016

INVITED SEMINARS & PRESENTATIONS – continued

2015	Invited Speaker,	Session on “Estimation of Spatial and Temporal Variability of Land Surface Hydrological and Thermal Processes”, AGU Fall Meeting, San Francisco, CA, December 2015
2015	Invited Speaker,	Session on “African Environments Across Space and Through Time: Integration Modern and Ancient Data for Insights into Terrestrial Ecosystem Dynamics”, GSA Annual Meeting, Baltimore, MD, November 2015.
2015	Invited Speaker,	Class of 68 “Princeton and the Environment Symposium”, Princeton, NJ, October 2015
2015	Invited Seminar,	National Socio-Environmental Synthesis Center (SESYNC), Annapolis, MD, October 2015
2015	Invited Seminar,	Program in Ecology, Evolutionary Biology, and Behavior, Michigan State University, October, 2015
2015	Invited Lecturer,	Summer Course on “ <i>Using UAVs for Environmental Monitoring</i> ”, U. of Basilicata., Matera, Italy, July 2015
2015	Invited Seminar,	Chinese Academy of Agricultural Sciences, Beijing, China, June 2015.
2015	Lead Instructor,	Isotope Hydrology Training Course, Center for Agricultural and Water Research in China, China Agricultural University, June 2015.
2015	Invited Participant,	Conference on Water & Food Security Under Changing Environments, China Agricultural University
2015	Invited Seminar,	Earth Research Institute, University of California, Santa Barbara, CA, May 2015.
2015	Invited Seminar,	Department of Civil and Environmental Engineering, University of Michigan, Ann Arbor, MI, March 2015.
2015	Invited Speaker,	Symposium on “Advances in Earth Observation: Enabling New Insights into Global Environmental Change”, AAAS Annual Meeting, San Jose, CA, January 2015
2014	Invited Speaker,	Session on “Coupled Natural Human System Research Across Scales: From Emulators of Global Climate Model Output to Local-Scale Processes and Feedbacks”, AGU Fall Meeting, San Francisco, CA, December, 2014
2014	Invited Lecturer,	Summer Course on “ <i>Modeling Spatial/Temporal Heterogeneity in Ecohydrological Systems</i> ”, U. of Basilicata, Matera, Italy, July 2014
2014	Keynote Speaker,	WISNet IGERT Annual Meeting, Duke University, June 2014
2014	Invited Speaker,	Workshop on “Improving Water Use Efficiency in Agriculture”, China Agricultural University, Beijing, China, May 2014
2014	Invited Speaker,	Arid Zone Hydrology Symposium, Texas A&M University, February 2014
2013	Invited Participant,	2nd International Workshop on “ <i>Methods and Technologies for Environmental Monitoring and Modelling of Hydrologic and Hydraulic Risk</i> ”, Matera, Italy, July 2013
2013	Invited Speaker,	Symposium on Hydropedology, Soil Science Society of America Meeting, Tampa, FL, November, 2013
2012	Invited Presenter,	Session on “ <i>Catchment Similarity and Organisation</i> ”, EGU Annual Meeting, Vienna, Austria April, 2012
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 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

INVITED SEMINARS & PRESENTATIONS – continued

2011	Invited Speaker,	EcoHCC'11 International Conference on Ecohydrology and Climate Change, Tomar, Portugal, September, 2011
2011	Invited Lecturer,	1 st 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 “ <i>Landscapes in Semi-Arid and Arid Environments: A Hydrological and Ecological Perspective</i> ”, 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 “ <i>Ecosystem resilience to changing climate patterns: the role of hydrology</i> ”, AGU Fall Meeting, San Francisco, CA December, 2008
2008	Invited Presenter,	Symposium, “ <i>Seeing into the soil: Noninvasive characterization of biophysical processes in the soil critical zone</i> ”, 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, “ <i>Towards a synthetic theory of tree-grass coexistence in savannas</i> ”, 93 rd 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 “ <i>Bridging Hydrology, Soil Science and Ecology</i> ”, AGU Fall Meeting, San Francisco, CA, December 2006
2006	Invited Presenter,	Session on “ <i>Climate-soil-vegetation dynamics and their impacts on water balance and hydrological extremes</i> ”, 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 “ <i>Integrated Approaches in Hydrological Process Studies</i> ”, 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
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

2020 -	Editor,	Earth's Future
2016 -	Director,	Earth Research Institute, University of California, Santa Barbara
2020 -	Chair,	NCEAS Campus Advisory Committee, University of California, Santa Barbara

PROFESSIONAL SERVICE & MEMBERSHIP – continued

2020 -	Member,	Faculty Executive Committee, Bren School of Environmental Science & Management, University of California, Santa Barbara
2020 -	Member,	Offsite Research Committee, Office of Research, University of California, Santa Barbara
2020 -	Member,	Ellison Hall Building Committee, University of California, Santa Barbara
2019 -	Chair,	Space Committee, Department of Geography, University of California, Santa Barbara
2019 -	Member,	Space Committee, Office of Research, University of California, Santa Barbara
2019 -	Member,	Data Science Curriculum Committee, University of California, Santa Barbara
2018 -	Participating Faculty,	Interdepartmental PhD Emphasis in Environment and Society, University of California, Santa Barbara
2018 -	Member	Campus Data Science Initiative Working Group, University of California, Santa Barbara
2017 -	Member,	North Campus Open Space Administrative Advisory Group, University of California, Santa Barbara
2004 -	Member,	American Geophysical Union (AGU)
2019 - 2020	Member,	NCEAS Campus Advisory Committee, University of California, Santa Barbara
2019 - 2020	Member,	Group Project Committee, Bren School of Environmental Science and Management, University of California, Santa Barbara
2018	Co-Convenor,	AGU Fall Meeting, Session on “Indicators of Plant Water Availability and Stress in Drought-Prone Forests at a Range of Spatial and Temporal Scales”
2018 - 2020	Member,	Sustainable Water Markets (SWM) Fellowship Program Committee, Bren School of Environmental Science and Management, University of California, Santa Barbara
2018 - 2020	Member,	Sustainable Water Markets (SWM) Fellowship Program Committee, Bren School of Environmental Science and Management, University of California, Santa Barbara
2017 - 2018	Member,	Chair’s Advisory Committee, Department of Geography, UCSB
2017	Co-Convenor,	AGU Fall Meeting, Session on “ <i>Plant-Soil Interactions in the Rhizosphere: Experimental and Computational Advances</i> ”
2017	Co-Convenor,	AGU Fall Meeting, Session on “ <i>Advances in Ecohydrology of Water-Stressed Environments</i> ”
2017	Member,	Academic Program Review Committee, School of Natural Resources and Environment, University of Arizona
2017	Co-Convenor	2017 International Association of Hydrological Sciences Conference, Session on “ <i>Innovative ICT Tools for Water Management and Science</i> ”
2017 - 2018	Chair,	Environmental Data Science & Informatics Search Committee, Earth Research Institute, UC Santa Barbara
2017 - 2019	Member,	Graduate Admission Committee, Department of Geography, University of California, Santa Barbara
2015 - 2016	Member,	Sustainability Steering Council, Princeton University
2015	Chair,	Graduate and Postdoctoral Experiences Strategic Planning Subcommittee, Princeton University

PROFESSIONAL SERVICE & MEMBERSHIP – continued

2015 - 2020	Member,	Editorial Board, Environmental Research Reviews, Environmental Research Letters
2015 - 2016	Member,	Task Force on Hydrology Section Technical Committees, American Geophysical Union
2014 - 2017	Member,	Hydrology Early Career Award Committee, American Geophysical Union
2014	Co-convenor,	AGU Fall Meeting, Session on “ <i>The Influence of Changes in Farming Practices, Vegetation, and Land Use on Climate Adaptation, Mitigation, and Ecosystem and Socioeconomic Services</i> ”
2014 - 2016	Director,	Environmental Studies Program, Princeton University
2014 - 2016	Director,	Graduate Studies, Department of Civil and Environmental Engineering, Princeton University
2014 - 2016	Board Member,	Princeton in Africa, Princeton NJ
2013 - 2016	Member,	Executive Committee, Program in Africa Studies, Princeton University
2010 - 2016	Member,	Executive Committee, Princeton Environmental Institute, Princeton University
2010 - 2016	Advisor,	Freshman Engineering, Princeton University
2009 - 2016	Member,	Executive Committee, Program in Environmental Studies, Princeton University
2013 - 2014	Member,	Fellows Task Force, American Geophysical Union
2010 - 2016	Associate Editor,	Water Resources Research
2013 - 2014	Member,	Horton Medal Award Committee, American Geophysical Union
2013	Invited Participant,	2nd Annual Neureiter Science Diplomacy Roundtable, Center for Science Diplomacy, AAAS
2013	Co-convenor,	AGU Fall Meeting, Session on “ <i>Beyond changes in mean climate: the impacts of climate variabilities on terrestrial ecosystems</i> ”
2013	Co-convenor,	AGU Fall Meeting, Session on “ <i>Postmortem: 2012 Drought: Terrestrial Ecosystems</i> ”
2012	Co-convenor,	AGU Fall Meeting, Session on “ <i>Landscape System Response Under Change</i> ”
2012	Member,	AGU Hydrology Section Nominating Committee
2012	Member,	External Review Board, Science Department, Stuart Country Day School, Princeton, NJ, April 2012
2012	Organizer,	Workshop on “ <i>Predictions Under Change: Vision for understanding and managing water, earth, and biota in the Anthropocene</i> ”, Boulder, CO, July 2012
2012 - 2013	Director,	Graduate Studies, Civil and Environmental Engineering, Princeton University
2012	Member,	AAAS Science Diplomacy Delegation to Uzbekistan, Tashkent, Uzbekistan, September, 2012
2012	Member,	AAAS Science Diplomacy Delegation to Myanmar, Nay Pi Taw, Myanmar, January 2012
2011	Co-convenor,	AGU Fall Meeting, Session on “ <i>Predictive Understanding of Coupled Interactions Among Water, Life, and Landforms</i> ”
2011	Co-convenor,	AGU Fall Meeting, Session on “ <i>Water and Energy Footprints in the Anthropocene</i> ”
2011	Co-convenor,	AGU Fall Meeting, Session on “ <i>Landscape System Response Under Change</i> ”

PROFESSIONAL SERVICE & MEMBERSHIP – continued

2011	Co-convenor,	AGU Fall Meeting, Session on “ <i>Laser-Based Isotope Techniques in Biogeosciences</i> ”
2011	Co-convenor,	AGU 2011 Fall Meeting, Session on “ <i>Stable Isotope Fluxes in the Carbon and Water Cycles of Terrestrial Ecosystems</i> ”
2011 - 2013	Associate Editor,	Vadose Zone Journal
2011 - 2013	Advisor,	Undergraduate Environmental Engineering Track, CEE, Princeton University
2010 - 2012	Advisor,	Freshman, School of Engineering and Applied Science, Princeton University
2010 - 2012	Chair,	Ecohydrological Technical Subcommittee, Hydrology Section, AGU
2009 - 2012	Associate Editor,	Journal of Geophysical Research - Biogeosciences
2009	Member,	Program Committee, AGU Chapman Conference on “ <i>Examining Eco-hydrological Feedbacks of Landscape Change along Elevation Gradients in Semiarid Regions</i> ”
2009	Panelist,	National Science Foundation
2008-2010	Member,	Ecohydrology Technical Subcommittee, American Geophysical Union
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

ENTREPRENEURSHIP

2018 -	Advisor,	Princeton Climate Analytics, Princeton NJ
2015	Participant,	NSF I-Corps Entrepreneurship Program, NYC Cohort
2015	Award,	Princeton Keller Center, Innovation Forum
2015	Co-Founder,	Arable Labs, Inc. (www.arable.com)
2015-2017	Board Member,	Arable Labs, Inc. (www.arable.com)

FUNDED RESEARCH

(Total external funding as PI/Co-I: \$13.5 million)

2019-2024	NSF	“ <i>CNH2-L: Linkages and Interactions Between Urban Food Security and Rural Agricultural Systems</i> ”. Co-PI, \$1,599,627.
-----------	-----	--

FUNDED RESEARCH – continued

2019-2020	Zegar Foundation	<i>“Developing and Implementing Novel Tools for Assessing Riparian Ecosystem Resilience at the Dangermond Preserve”</i> , PI, \$321,583.
2018-2019	National Geographic	<i>“AI For Earth: Mapping irrigated crop water use using very high resolution satellite imagery”</i> , PI, \$100,000
2018-2019	Omidyar Foundation	<i>“Developing and Scaling up the Mapping Africa Active Learning Platform”</i> , Co-I, \$80,267
2018-2022	Dept. of Defense	<i>“Strategic Environmental Research & Development: Understanding and Assessing Riparian Habitat Vulnerability to Drought-Prone Climate Regimes on Department of Defense Bases in the Southwestern US”</i> , Co-I, \$1,704,236
2017-2020	NSF	<i>“Collaborative Research: Impacts of Dynamic Climate-Driven Water Availability on Tree Water Use and Health in Mediterranean Riparian Forests”</i> , Co-I, \$396,566
2017-2018	NSF	<i>“CC*Networking Infrastructure: UCSB Network Upgrade to 100 Gigabit.”</i> , PI, \$481,730
2015-2019	NSF	<i>“Hazards SEES: Understanding Cross-Scale Interactions of Trade and Food Policy to Improve Resilience to Drought Risk”</i> , Co-PI, \$1,341,113
2015	NSF	<i>“FEWS Supplemental Proposal Planning Award</i> , PI, \$200,000
2015	NSF	<i>“I-Corps: Pulsepod: Bringing the Cloud Down to Earth”</i> , PI, \$50,000
2014-2019	NSF	<i>“WSC-Category 2 Collaborative: Impacts of Agricultural Decision Making and Adaptive Management on Food Security”</i> , PI, \$1,929,565
2013-2014	JPL	Strategic University Research Partnerships, <i>“Adding precision to agricultural practice through simultaneous chlorophyll fluorescence and infrared observations”</i> , Co-PI \$100,000
2013-2014	JPL	Strategic University Research Partnerships, <i>“Rapid forest triage by sub-canopy micro air vehicle”</i> , Co-PI, \$100,000
2013-2015	Princeton U.	Grand Challenges Initiative, <i>“Drought and the global carbon cycle”</i> , Co-PI, \$200,000
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>“AÉglobal 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.

FUNDED RESEARCH – continued

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

RESEARCH MANUSCRIPTS

(Google Scholar h-index: 44, Citations: 7,991)

* indicates current or former graduate/postdoctoral group member

† indicates current or former visiting scholar

+ indicates current or former undergraduate group member

PP indicates pre-print publication or discussion

2021

120. *Tuholske, C., Caylor, K.K., Funk, C. , Verdin, A. , Sweeney, S., Grace, K., Peterson, P., Evans, T. (2021) “Global urban population exposure to extreme heat.” *Proceedings of the National Academy of Sciences*. doi:10.1073/pnas.2024792118.
119. Sabathier, R., Singer, M.B., Stella, J., Roberts, D., **Caylor, K.K.** (2021) “Vegetation responses to climatic and geologic controls on water availability in Arizona.” *Environmental Research Letters*. doi:10.5194/hess-25-1827-2021.
118. Warter, M., Singer, M., Cuthbert, M.O., Roberts, D., **Caylor, K.K.**, Sabathier, R., Stella, J. (2021) “Drought onset and propagation into soil moisture and grassland vegetation responses during the 2012–2019 major drought in Southern California.” *Hydrology and Earth System Science*. doi: 10.5194/hess-25-3713-2021.
117. Zhang, J., *Guan, K., Peng, B., Jiang, C., Zhou, W., Yang, Y., Pan, M., Franz, T., Heeren, D., Rudnick, D., Abimbola, O., Kimm. H, **Caylor, K.**, *Good, S., Khanna, M., Gates, J., Cai, Y.(2021) “Challenges and opportunities in precision irrigation decision-support systems for center pivots .” *Environmental Research Letters*. doi: 10.1088/1748-9326/abe436.
116. Vergopolan, N., Xiong, S., Estes, L., Wanders, N., Chaney, N.W., Wood, E.F., Konar, M., **Caylor, K.**, Beck, H.E., Gatti, N., Evans, T., Sheffield, J. (2020) “Field-scale soil moisture bridges the spatial-scale gap between drought monitoring and agricultural yields.” *Hydrology and Earth System Sciences Discussions*. doi: 10.5194/hess-2020-364.

115. Hannah, C., Giroux, S., *Krell, N., Lopus, S., McCann, L.E., Zimmer, A., **Caylor, K.K.**, Evans, T.P. (2021) “Has the vision of a gender quota rule been realized for community-based water management committees in Kenya?” *World Development*. doi: 10.1016/j.worlddev.2020.105154.
114. Lafia, S., Kuhn, W., **Caylor, K.K.**, Hippel, L. (2021) “Mapping research topics at multiple levels of detail”. *Patterns*. doi: 10.1016/j.patter.2021.100210.

2020

113. *Mayes, M., **Caylor, K.K.**, Singer, M.B., Stella, J.C., Roberts, D., Nagler, P. (2020) “Climate sensitivity of water use by riparian woodlands at landscape scales.” *Hydrological Processes*. doi: 10.1002/hyp.13942.
112. Zeng, Z., Wang, D., Yang, L., Wu, J., Ziegler, A.D., Liu, M., Ciais, P., Searchinger, T.D., Yang, Z., Chen, D., Chen, A., Li, L., Piao, S., Taylor, D., Cai, X., Pan, M., Peng, L., Lin, P., *Gower, D., Feng, Y., Zheng, C., Guan, K., Lian, X., Wang, T., Wang, L., Jeong, S., Wei, Z., Sheffield, S., **Caylor, K.**, Wood, E.F. (2020) “Deforestation-induced warming over tropical mountain regions regulated by elevation.” *Nature Geoscience*. doi: 10.1038/s41561-020-00666-0.
111. Zimmer, A., Guido, Z., *Tuholske, C., Pakalniskis, A., Lopus, S., **Caylor, K.**, Evans, T. (2020) “Dynamics of population growth in secondary cities across southern Africa.” *Landscape Ecology*. doi: 10.1007/s10980-020-01086-6.
110. Guido, Z., Zimmer, A., Lopus, S., Hannah, S., *Gower, D., Waldman, K., *Krell, N., Sheffield, S., **Caylor, K.**, Evans, T. (2020) “Farmer Forecasts: Impacts of Seasonal Rainfall Expectations on Agricultural Decision-Making in Sub-Saharan Africa.” *Climate Risk Management*. doi: 10.1016/j.crm.2020.100247.
109. *Krell, N.T. , Giroux, S.A., Guido, Z., Hannah, C., Lopus, SE , **Caylor, K.K.**, Evans, T.P. (2020) “Smallholder farmers’ use of mobile phone services in central Kenya.” *Climate and Development*. doi: 10.1080/17565529.2020.1748847.
108. Giroux, S.A., McCord, P., Lopus, S., *Gower, D., Dell’Angelo, J., Dickinson, S., Chen, X, **Caylor, K.K.**, Evans, T.P. (2020) “Environmental heterogeneity and commodity sharing in smallholder agroecosystems.” *PloS One*, doi: 10.1371/journal.pone.0228021.
107. *Tuholske, C., Andam, K., Blekking, J., Evans, T., **Caylor, K.** (2020) “Comparing measures of urban food security in Accra, Ghana.” *Food Security*. doi: 10.1007/s12571-020-01011-4.
106. Elmes, A., Alemohammad, H., *Avery, R., **Caylor, K.**, Eastman, R., Fishgold, L., Friedl, M.A., Jain, M., Kohli, D., Laso Bayas, J.C., Lunga, D., McCarty, J.L., Pontius, R.G., Reinmann, A.B., Rogan, J., Song, L., Stoyanova, H., Ye, S., Yi, Z.F., Estes L. (2020) “Accounting for training data error in machine learning applied to Earth observations.” *Remote Sensing*. doi: 10.3390/rs12061034.
105. *DeCarlo, K.F. and **Caylor, K.K.** (2020) “Effects of crack morphology on soil carbon flux dynamics in a dryland vertisol.” *Geoderma* doi:
104. Ribeiro, F., Roberts, D.A., Hess, L.L., Davis, F.W., **Caylor, K.K.**, Daldegan, G.A. (2020) “Geographic Object-Based Image Analysis framework for mapping vegetation physiognomic types at fine scales in Neotropical savannas.” *Remote Sensing*.

2019

103. Wei, Z., Lee, X., Aemisegger, F., Benetti, M., Berkelhammer, M., Casado, M., **Caylor, K.K.**, Christner, E., Dryoff, C., Garcia, O, Gonzalez, Y., Griffis, T., Kurita, N., Liang, J., Liang, M.C., Lin, G., Noone, D., Gribanov, K., Munksgaard, N.C., Schneider, M., Ritter, F., Steen-Larsen, H.C., Vallet-Coulonb, C., Wen, X., Wright, J.S., Xiao, W., Yoshimura, K. (2019) “A global database of water vapor isotopes measured with high temporal resolution infrared laser spectroscopy.” *Scientific Data*. doi: 10.1038/sdata.2018.302.

102. Waldman, K.B., Vergopolan, N., Attari, S.Z., Sheffield, J., Estes, L.D., **Caylor, K.K.**, Evas, T.P. (2019) "Cognitive biases about climate variability in smallholder farming systems in Zambia." *Weather, Climate, and Society*. doi: 10.1175/WCAS-D-18-0050.1
 101. Waldman, K., Attari, S.Z., *Gower, D., B. Giroux, S.A., **Caylor, K.K.**, Evans, T.P. (2018) "The salience of climate change in farmer decision making within smallholder semi-arid agroecosystems." *Climatic Change*. doi: 10.1007/s10584-019-02498-3.
 100. *Tuholske, C., **Caylor, K.**, Evans, T.P., *Avery, R. "Variability in urban population distributions across Africa." *Environmental Research Letters* doi: 10.1088/1748-9326/ab2432.
 99. *DeCarlo, K.F. and **Caylor, K.K.** (2019) "Biophysical effects on soil crack morphology in a faunally active dryland vertisol." *Geoderma*. doi: 10.1016/j.geoderma.2018.07.042.
- 2018**
98. Manfreda, S. McCabe, M., Miller, P., Lucas, R., Madrigal, V.P., Mallinis, G., Dor, E.B., Helman, D., Estes, L., Ciraolo, G., Müllerová, J., Tauro, F., De Lima, M.I., De Lima, J., Frances, F., **Caylor, K.**, Kohv, M., Maltese, M., Perks, M., Ruiz-Pérez, G., Su, Z., Vico, G., Toth, V. (2018) "On the Use of Unmanned Aerial Systems for Environmental Monitoring." *Remote Sensing*, doi:10.3390/rs10040641.
 97. Zhao, Y., Vergopolan, N., Baylis, K., Blekking, J., **Caylor, K.**, Evans, T., Giroux, S., Sheffield, J., Estes, L. (2018) "Comparing empirical and survey-based yield forecasts in a dryland agro-ecosystem." *Agricultural and Forest Meteorology*, doi: 10.1016/j.agrformet.2018.06.024
 96. Giroux, S.A., Kouper, I., Estes, L.D., Schumacher, J., Waldman, K., Greenshields, J.T., Dickinson, S.L., **Caylor, K.K.**, Evans, T.P. "A high-frequency mobile phone data collection approach for research in social-environmental systems: Applications in climate variability and food security in sub-Saharan Africa." *Environmental Modelling and Software*. doi:
 95. *Gerlein-Safdi, C., Koohafkan, M.C., Chung, M., Rockwell, F.E., Thompson, S., **Caylor, K.K.** "Dew deposition suppresses transpiration and carbon uptake in leaves." *Agricultural and Forest Meteorology*, doi:10.1016/j.agrformet.2018.05.015
 94. Estes, L., Chen, P., *Debats, S., Evans, T., Ferreira, S., ⁺Ragazzo, G., Sheffield, J., *Wolf, A., Wood, E.F., **Caylor KK** (2018) "A large-area, spatially continuous assessment of land cover map error and its impact on downstream analyses." *Global Change Biology*, 24(1), 322-337, doi: 10.1111/gcb.13904
 93. Estes, L., Elsen, P., Truer, T., Ahmed, L., **Caylor, KK**, Chang, J., ⁺Choi, J., Ellis, E. (2018) "The spatial and temporal domains of modern Ecology", *Nature Ecology & Evolution*, 10.1038/s41559-018-0524-4.
 - PP *Gerlain-Safdi, C., Gauthier, P., **Caylor, K.K.** (2018) "Dew-induced transpiration suppression impacts the water and isotope balances of *Colocasia* leaves", *bioRxiv*, doi: 10.1101/178293
 92. Tauro, F., Selker, J., van de Giesen, N., Abrate, T., Uijlenhoet, R., Porfiri, M., Manfreda, S., **Caylor, K.**, Moramarco, T., Benveniste, J., Ciraolo, G., Estes, L., Domeneghetti, A., Perks, M.T., Corbari, C., Rabiei, E., Ravazzani, G., Bogena, H., Harfouche, A., Brocca, L., Maltese, A., Wickert, A., Tarpanelli, A., *Good, S., Alcapa, J.M.L., Petroselli, A., Cudennec, C., Blume, T., Hut, R., Grimaldi, S., (2018) "Measurements and Observations in the XXI century (MOXXI): innovation and multi-disciplinarity to sense the hydrological cycle." *Hydrological Sciences Journal*, doi: 10.1080/02626667. 2017.1420191.
- 2017**
91. *Guan, K., *Good, S.P., **Caylor KK**, Medvigy, D., Ming, P., Wood, E.F., Sato, H., Biasutti, M., Chen, M., Ahlström, A., Xiangtao, X. (2017) "Simulated sensitivity of African terrestrial ecosystem photosynthesis to rainfall frequency, intensity, and rainy season length." *Environmental Research Letters*, doi: 10.1088/1748-9326/aa9f30
 90. *Gerlain-Safdi, C., Gauthier, P., ⁺Sinkler, C., **Caylor, K.K.** (2017) "Leaf water ¹⁸O and ²H maps show directional enrichment discrepancy in *Colocasia esculenta*." *Plant, Cell and Environment*, doi: 10.1111/pce.13002
 89. [†]Ruiz-Pérez, G., Kock, J., Manfreda, S., **Caylor K**, Francés, F. (2017) "Calibration of a parsimonious distributed ecohydrological daily model in a data-scarce basin by exclusively using the spatio-temporal variation of NDVI." *Hydrology and Earth System Sciences*, doi:10.5194/hess-21-6235-2017

88. Manfreda S, **Caylor K.K.**, *Good SP. (2017) “An ecohydrological framework to explain shifts in vegetation organization across climatological gradients.” *Ecohydrology*, 10: e1809. <https://doi.org/10.1002/eco.1809>
87. McCord, P., Dell’Angelo, J., *Gower, D., **Caylor, K.K.**, and Evans, T. (2017) “Household-level heterogeneity of water resources within common-pool resource systems.” *Ecology and Society*, doi:10.5751/ES-09156-220148
86. Li, Shuning, Levin, N. E., *Soderberg, K., Dennis, K.J., **Caylor, K.K.** (2017) “Triple oxygen isotope composition of leaf waters in Mpala, central Kenya”, *Earth and Planetary Science Letters*, doi:10.1016/j.epsl.2017.02.015
85. †Gong, D.Z., Mei, X.R., Hao, W.P., Wang, H.B., **Caylor, K.K.** (2017) “Comparison of multi-level water use efficiency between plastic film partially mulched and non-mulched croplands at eastern Loess Plateau of China”, *Agricultural Water Management*, doi: 10.1016/j.agwat.2016.06.006
84. †Zhou, S., Zhang, Y., Ciais, P., Xiao, X.M., Luo, Y.Q., **Caylor, K.K.**, Huang, Y.F., Wang, G.Q. (2017) “Dominant role of plant physiology in trend and variability of gross primary productivity in North America”, *Scientific Reports*, doi:10.1038/srep41366
83. †Gong, D.Z., Meia, X.R., Hao, W.P., Wang, H.B., **Caylor, K.K.** (2017) “Comparison of ET partitioning and crop coefficients between partial plastic mulched and non -mulched maize fields”, *Agricultural Water Management*, doi:10.1016/j.agwat.2016.11.016
82. Colliander, A., Jackson, T.J., Bindlish, R., Chan, S., Das, N., Kim, S.B., and 44 others, including **Caylor, K.K.** (2017) “Validation of SMAP surface soil moisture products with core validation sites”, *Remote Sensing of Environment*, doi: 10.1016/j.rse.2017.01.021
- PP *Debats, S., Estes, L.D., Thompson, D.R., **Caylor, K.K.** (2017) “Integrating active learning and crowdsourcing into large-scale supervised landcover mapping algorithms”, *PeerJ Preprints*, e3004v1. doi: 10.7287/ peerj.preprints.3004v1

2016

81. *Gower, D.B., Dell’Angelo, J., McCord, P.F., **Caylor, K.K.**, Evans, T.P. (2016) “Modeling ecohydrological dynamics of smallholder strategies for food production in dryland agricultural systems”, *Environmental Research Letters*, doi:10.1088/1748-9326/11/11/115005
80. Estes, L.D., Searchinger, T., †Spiegel, M., Tian, D., Sichinga, S., Mwale, M., Kehoe, L., Kuemmerle, T., Berven, A., Chaney, N., Sheffield, J.m Wood, E.F., **Caylor, K.K.** (2016) “Reconciling agriculture, carbon and biodiversity in a savannah transformation frontier”, *Philosophical Transactions of the Royal Society B - Biological Sciences*, doi: 10.1098/rstb.2015.0316
79. †Sha, Z., Zhang, Y., **Caylor, K.K.**, Luo, Y.Q., Xiao, X.M., Ciais, P., Huang, Y.F., Wang, G.Q. (2016) “Explaining inter-annual variability of gross primary productivity from plant phenology and physiology”, *Agricultural and Forest Meteorology*, doi: 10.1016/j.agrformet.2016.06.010
78. *Good, S.P., *Guan, K., **Caylor, K.K.** (2016), “Global patterns of the contributions of storm frequency, intensity, and seasonality to inter-annual variability of precipitation”. *Journal of Climate*, doi:10.1175/JCLI-D-14-00653.1
77. †Chang, E., *Gerlein-Safdi, C., *Wolf, A., **Caylor, K.K.** (2016) “Improved removal of VOCs for laser-based spectroscopy of water isotopes”. *Rapid Communications in Mass Spectrometry*, doi:10.1002/rcm.7497
76. *Debats, S., †Luo, D., Estes, L.D., Fuchs, T., **Caylor, K.K.** (2016) “A generalized computer vision approach to mapping agricultural fields in heterogeneous landscapes”. *Remote Sensing of Environment*, doi:10.1016/j.rse.2016.03.010
75. Estes, L., McRitchie, D., †Choi, J., *Debats, S., Evans, T., Guthe, W., †Luo, D., †Ragazzo, G., Zempleni, R., **Caylor, K.K.** (2016) “A platform for crowdsourcing the creation of representative, accurate landcover maps”, *Environmental Modelling & Software*, doi:10.1016/j.envsoft.2016.01.011
74. Dell’Angelo, J., McCord, P.F., *Gower, D., Carpenter, S. **Caylor, K.K.**, Evans, T.P. (2016) “Community-based Water Governance on Mount Kenya: An Assessment Based on Ostrom’s Design Principles of Natural Resource Management”. *Mountain Research and Development*, doi:0.1659/MRD-JOURNAL-D-15-00040.1

2015

73. Dintwe, K., Okin, G.S., D’Odorico, P., Hrast, T., Mladenov, N., Handorean, A., *Bhattachan, A., Caylor, K.K. (2015) “Soil organic C and total N pools in the Kalahari: potential impacts of climate change on C sequestration in savannas”, *Plant and Soil*, doi:10.1007/s11104-014-2292-5
 72. Bonachela, J.A., Pringle, R.M., Shefer, E., Coverdale, T.C., Guyton, J.A., **Caylor, K.K.**, Levin, S.A., Tarnita, C.E. (2015) “Termite mounds can increase the robustness of dryland ecosystems to climatic change”. *Science*, doi:10.1126/science.1261487
 71. *Guan, K., Pan, M., Li, H., *Wolf, A., Medvigy, D., **Caylor, K.K.**, Sheffield, J., Wood, E.F., Mahli, Y., Liang, M., Kimball, J.S., Saleska, S., Berry, J., Joiner, J., Lyapustin, A.I. (2015) “Photosynthetic seasonality of global tropical forests constrained by hydroclimate”, *Nature Geosciences*, doi:10.1038/ngeo2382
 70. McCauley, D.J., Dawson, T., Power, M.E., Finlay, J.C., Ogada, M., *Gower, D., **Caylor, K.K.** (2015) “Carbon stable isotopes suggest that hippopotamus-vectored nutrients subsidize aquatic consumers in an East African river”, *Ecosphere*, doi:10.1890/ES14-00514.1
 69. †Gong, D., Hao, W., Mei, X., Gao, X., **Caylor, K.K.** (2015) “Warmer and wetter soil stimulates assimilation more than respiration in rainfed agricultural ecosystem on the China Loess Plateau: the role of partially plastic film mulching tillage”, *PLOS One*, doi: 10.1371/journal.pone.0136578
 68. *Wang, L., Manzoni, S., Ravi, S., Riveros-Iregui, D., **Caylor, K.K.** (2015) “Dynamic interactions of ecohydrological and biogeochemical processes in water-limited systems”, *Ecosphere*, doi: 10.1890/ES15-00122.1
 67. *O’Donnell, F., **Caylor, K.K.**, *Bhattachan, A., Dintwe, K., D’Odorico, P., Okin, G. (2015) “A quantitative description of the interspecies diversity of belowground structure in savanna woody plants”, *Ecosphere*, doi: 10.1890/ES14-00310.1
 - PP Estes, L., McRitchie, D., †Choi, J., *Debats, S., Evans, T., Guthe, W., Luo, D., †Ragazzo, G., Zempleni, R., **Caylor, K.K.** (2015) “DIYlandcover: Crowdsourcing the creation of systematic, accurate landcover maps”, *Peer J PrePrints*, doi:10.7287/peerj.preprints.1030v1
 - PP Debats, S., †Luo, D., Estes, L.D., Fuchs, T., **Caylor, K.K.** (2015) “A generalized computer vision approach to mapping agricultural fields in heterogeneous landscapes”. *Peer J PrePrints*, 3:e1688, doi:10.7287/peerj.preprints.1367v1
- 2014**
66. *Wang, L., *Good, S.P., **Caylor, K.K.** (2014) “Global synthesis of vegetation control on evapotranspiration partitioning”, *Geophysical Research Letters*, doi:10.1002/2014GL061439
 65. *Guan, K., *Good, S.P., **Caylor, K.K.**, Sato, H., Li, H., Wood, E.F. (2014) “Continental-scale impacts of intra-seasonal rainfall variability on simulated ecosystem responses in Africa”, *Biogeosciences*, doi:10.5194/bg-11-6939-2014
 64. Estes, L.D., Chaney, N.W., Herrera-Estrada, J., Sheffield, J., **Caylor, K.K.**, Wood, E.F. (2014) “Changing water availability during the African maize-growing season, 1979-2010”, *Environmental Research Letters*, doi:10.1088/1748-9326/9/7/075005
 63. *Guan, K., Wood, E.F., Medvigy, D., Kimball, J., Pan, M., **Caylor, K.K.**, Sheffield, J., Xu, X.T., Jones, M.O. (2014) “Terrestrial hydrological controls on land surface phenology of African savannas and woodlands”, *Journal of Geophysical Research-Biogeosciences*, doi: 10.1002/2013JG002572
 62. *Good, S.P., *Soderberg, K., Guan, K., *King, E.G., Scanlon, T.M., **Caylor, K.K.** (2014) “ $\delta^2\text{H}$ Isotopic flux partitioning of evapotranspiration over a grass field following a water pulse and subsequent dry down”, *Water Resources Research*, doi:10.1002/2013WR014333
 61. *Guan, K., Medvigy, D., Wood, E.F., **Caylor, K.K.**, Li, S., Jeong, S.-J. (2014) “Deriving Vegetation Phenological Time and Trajectory Information Over Africa Using SEVIRI Daily LAI”, *IEEE Transactions on Geoscience and Remote Sensing*, doi: 10.1109/TGRS.2013.2247611

60. Meyer, T., D’Odorico, P., Okin, G.S., Shugart, H.H., **Caylor, K.K.**, *O’Donnell, F.C. , *Bhattachan, A., Dintwe, K. (2014) “An analysis of structure: biomass-structure relationships for characteristic species of the western Kalahari, Botswana”, *African Journal of Ecology*, doi: 10.1111/aje.12086

2013

59. Konar, M., **Caylor, K.K.** (2013) “Virtual water trade and development in Africa”, *Hydrology and Earth System Science*, doi:10.5194/hess-17-3969-2013
58. Manfreda, S., **Caylor, K.K.** (2013) “On the vulnerability of water limited ecosystems to climate change”, *Water*, doi:10.3390/w5020819
57. Manfreda, S., Pizzola, T., **Caylor, K.K.** (2013) “Modelling vegetation patterns in semiarid environments”, *Procedia Environmental Sciences*, 19, 168-177, doi:10.1016/j.proenv.2013.06.019
56. *Good, S.P., Rodriguez-Iturbe, I., **Caylor, K.K.** (2013) “Analytical expressions of variability in ecosystem structure and function obtained from three-dimensional stochastic vegetation modelling”, *Proceedings of the Royal Society, Series A*, doi:10.1098/rspa.2013.0003
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*, doi:10.1890/ES12-00232.1
54. *Wang, L., Okin, G.S., D’Odorico, P., **Caylor, K.K.**, Macko, S., (2013) “Ecosystem-scale spatial heterogeneity of stable isotopes of soil nitrogen in African savannas”, *Landscape Ecology*, doi:10.1007/s10980-012-9776-6
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*, doi:10.1890/ES12-00160.1
52. *Wang, L., Niu, Shuli, *Good, S.P., *Soderberg, K., McCabe, M.F., Sherry, R.A., 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*, doi:10.1016/j.gca.2012.12.047

2012

51. *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
50. *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
49. 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*, doi:10.1002/eco.265.
48. *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
47. *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
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. *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
44. *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

43. *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
42. *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
41. *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

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. 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
38. *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
37. *King, E.G., **Caylor, K.K.** (2011) "Ecohydrology in practice: Strengths, conveniences, and opportunities", *Ecohydrology*, 4(4), 608-612, doi: 10.1002/eco.248
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. *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
33. 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
32. *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
31. *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
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. Scanlon, T.M., **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
21. 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.
20. D'Odorico, P., **K.K. Caylor**, G.S. Okin, T.M. Scanlon. (2007) "On soil moisture-vegetation feedbacks and their possible effects in dryland plant ecosystems," *JGR-Biogeosciences*, Vol 112, G04010, doi:10.1029/2006JG000379.
19. Hély, C., **K.K. Caylor**, P.R. Dowty, S. Alleaume, R.J. Swap, H.H. Shugart, C.O. Justice (2007) "A temporally explicit Production Efficiency Model for fuel load allocation in southern Africa," *Ecosystems*, doi: 10.1007/s10021-007-9082-3.
18. 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.
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). "Vegetation structure 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

8. Dell'Angelo, J., McCord, P.F., Baldwin, E., Cox, M.E., Gower, D., **K.K. Caylor**, Evans, T.P. (2014) "Multilevel governance of irrigation systems and adaptation to climate change in Kenya" In: Bhaduri, A., Bogardi, J., Leentvaar, J., Marx, S. (eds.) *The Global Water System in the Anthropocene*, Springer International. pp. 323-341.
7. **K.K. Caylor**, Okin, G.S., Turnbull, L., Wainwright, J., Wiegand, T., Franz, T.E., Parsons, A.J. (2014) "Integrating short- and long-range processes into models: The emergence of pattern" In: Mueller, E.N., Wainwright, J., Parsons, A.J., Turnbull, L. (eds.) *Patterns of Land Degradation in Drylands*, Springer. pp. 141-167.
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

153. *Tuholske, C., Andam, K., Blekking, J., **Caylor, K.**, Evans, T. (2018) "Towards assessing urban food security and nutrition in West Africa". American Association of Geographers Annual Meeting, New Orleans, LA, 2018. Oral Presentation.
152. Estes, L., **Caylor, K.K.**, *Debats, S., Eastman, R., Thompson, D.R. (2018) "Integrating humans and machines to map smallholder-dominated agricultural frontiers" Association of American Geographers Annual Meeting, New Orleans, LA, 2018. Oral Presentation.
151. Manfreda, S., Ben Dor, E., **Caylor, K.K.**, Ciruolo, G., De Lima, I., De Lima, J.L.M., Estes, L., Frances, F., Helman, D., Kohv, M., Lucas, R., Madrigal, V.P., Mallinis, G., Maltese, A., McCabe, M., Miller, P., Perks, M., Ruiz-Perez, G., Tauro, F., Toth, B. HARMONIUS TEAM. (2018) "On the use of unmanned aerial systems for environmental monitoring", European Geosciences Union, General Assembly 2018. Vienna Austria, April, 201 Abstract EGU2018-9055.
150. *Mayes, M.T., **Caylor, K.K.**, Ehlmann, B.L., Greenberger, R.N., Estes, L.D. (2017) "Is deciduousness a key to climate resilience among iconic California savanna oak species? Relating phenological habits to seasonal indicators of tree physiological and water stress across field, hyperspectral, drone (UAS)-based multispectral and thermal image data", *EOS Trans AGU*, 98(52), Fall Meet. Suppl., Abstract H23B-1639.
149. *Krell, N., Evans, T.P. Estes, L.D., **Caylor, K.K.** (2017) "Real-time monitoring of smallholder farmer responses to intra-seasonal climate variability in central Kenya", *EOS Trans AGU*, 98(52), Fall Meet. Suppl. Abstract GC42B-05.
148. *Gerlein-Safdi, C., Koohafkan, M., Chung, M., Thompson, S.E., **Caylor, K.K.** (2017) "Effects of dew deposition on transpiration and carbon uptake in leaves", *EOS Trans AGU*, Fall Meet. Suppl., Abstract B21K-08.
147. Ribeiro, F., Roberts, D.A., Hess, L.L., Davis, F.W., **Caylor, K.K.**, Nackoney, J., Daldegan, G.A. (2017) "High spatial resolution mapping of land cover types in a priority area for conservation in the Brazilian savanna", *EOS Trans AGU*, 98(52), Fall Meet. Suppl., Abstract GC43D-1091.
146. Evans, T.P., Estes, L.D., **Caylor, K.K.**, McCord, F.P., *Gower, D., Konar, M., Baylis, K., Waldman, K., Blekking, J., Schlachter, T. (2016) "Harmonizing Social and Environmental Dynamics in Earth Systems Modeling (Invited)", *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract OS14A-05.
145. Estes, L.D., *Debats, S.R., **Caylor, K.K.**, Evans, T.P., *Gower, D.B., McRitchie, D., Searchinger, T., Thompson, D.R., Wood, E.F., +Zeng, L. (2016) "Combining Human and Machine Learning to Map Cropland in the 21st Century's Major Agricultural Frontier", *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract IN54A-07.

144. *Gower, D.B, McCord, P.F., **Caylor, K.K.**, Dell’Angelo, J. (2016) “An ecohydrologic framework for simulating catchment constraints on smallholder irrigation systems in drylands”, *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract H33E-1581.
143. *DeCarlo, K., **Caylor, K.K.** (2016) “Linking Carbon Flux Dynamics and Soil Structure in Dryland Soils”, *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract H13K-1573.
142. Zeng, Zhenzhong, Tian, D., Estes, L.D., Evans, T.P., Wood, E.F., **Caylor, K.K.** (2016) “Can we forecast farmers’ yields? The relationships between rainfall variability, farmers’ expectations, and actual yields in a tropical dryland”, *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract GC53E-1347.
141. Evans, T.P., **Caylor, K.K.**, Estes, L.D., Plale, B.A. , Attair, S., Waldman, K. (2016) “Rapid Monitoring of Drought Impacts on Small-Scale Farms in Africa through Integration of Farmer SMS data and Environmental Sensors (Invited)”, *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract GC52C-01.
140. *Mayes, M. T., Estes, L.D., Gago, S., *Debats, S.R., **Caylor, K.K.**, Manfreda, S., Oudemans, P., Ciraolo, G., Maltese, A., Nadal, M. (2016) “Using Small Drone (UAS) Imagery to Bridge the Gap Between Field- and Satellite-Based Measurements of Vegetation Structure and Change”, *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract B53J-05.
139. Colliander, A., Jackson, T. J., and 44 others, including **Caylor, K.K.** (2016) “Assessment of SMAP L2/L3 Soil Moisture Products using In Situ Based Core Validation Sites”, *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract B33J-04.
138. *Gerlein-Safdi, C., Frohling, S. E., **Caylor, K.K.** (2016) “Characterization of canopy dew formation in tropical forests using active microwave remote sensing” *EOS Trans AGU*, 97(52), Fall Meet. Suppl., Abstract B33F-0681.
137. *DeCarlo, K., **Caylor, K.K.** (2016) “Faunal Drivers of Soil Flux Dynamics via Alterations in Crack Structure.” *EGU General Assembly Conference Abstracts*, Vol. 18.
136. †Ruiz-Pérez, G., Manfreda, S., **Caylor, K.K.**, Francés, F. (2016). “Automatic calibration of a parsimonious ecohydrological model in a sparse basin using the spatio-temporal variation of the NDVI”. *EGU General Assembly Conference Abstracts*, Vol. 18.
135. **Caylor, K.K.**, *Wayland, H., Scanlon, T. (2015) “A dynamic, non-steady state approach for partitioning of soil evaporation and plant water use at landscape scales” *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract H54B-03.
134. †Krell, N., *DeCarlo, K., **Caylor, K.** (2015) “Analysis of Biophysical Mechanisms of Gilgai Microrelief Formation in Dryland Swelling Soils Using Ultra-High Resolution Aerial Imagery”, *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract NG23B-1782.
133. *Wang, L., Manzoni, S., Ravi, S., Riveros-Iregui, D., **Caylor, K.** (2015) “Dynamic interactions of ecohydrological and biogeochemical processes in water-stressed environments”, *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract H13B-1497
132. *DeCarlo, K., **Caylor, K.** (2015) “Faunal Influences on Fracture-Induced Carbon Flux Dynamics in Dryland Soils”, *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract H12B-06.
131. *Gerlein-Safdi, C., †Sinkler, C., **Caylor, K.** (2015) “Foliar Shielding: How Non-Meteoric Water Deposition Helps Leaves Survive Drought by Reducing Incoming Energy”, *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract A33H-0273
130. *Good, S., *Wang, L., **Caylor, K.** (2015) “Global optimum vegetation rain water use is determined by aridity”, *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract H12B-05.

129. Estes, L., Tian, D., Evans, T., **Caylor, K.**, Sheffield, J. (2015) "Impacts of intra-seasonal agricultural decision-making and forecast information on maize production in Zambia", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract GC51J-08.
128. *Debats, S., Estes, L., **Caylor, K.** (2015) "Interactively Improving Agricultural Field Mapping in Sub-Saharan Africa with Crowd-Sourcing and Active Learning", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract GC13H-1253.
127. Evans, T., **Caylor, K.**, Estes, L. (2015) "Modeling Local vs. Global Dimensions of Food Security in Sub-Saharan Africa", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract GC12A-07.
126. *Gower, D., **Caylor, K.** (2015) "Modeling the impacts of regulatory frameworks on self-organization in dryland agricultural systems", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract H13G-1615.
125. Evans, T., Attari, S., Plale, B., **Caylor, K.**, Estes, L., Sheffield, J. (2015) "New Approaches to Capture High Frequency Agricultural Dynamics in Africa through Mobile Phones", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract GC51J-07.
124. Manfreda, S., Baldwin, D., Keller, K., Smithwick, E., **Caylor, K.** (2015) "Predicting root zone soil moisture with satellite near-surface moisture data in semiarid environments", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract H12B-04.
123. ⁺Speigel, M., Estes, L., **Caylor, K.**, Searching, T. (2015) "Reconciling Agricultural Needs with Biodiversity and Carbon Conservation in a Savanna Transformation Frontier", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract GC13H-1252.
122. ⁺Chang, E., **Caylor, K.**, *Gerlein-Safdi, C., Wolf, A. (2015) "Solid Phase Extraction Using C-18 Sorbents to Treat Organics in Water and Eliminate Spectral Interference in Isotope Ratio Infrared Spectroscopy", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract PP11B-2246
121. Sheffield, J., He, X., Wanders, N., Wood, E., Ali, A., Olang, L., Estes, L., **Caylor, K.**, Evans, T. (2015) "Translating the potential of hydrological forecasts into improved decision making in African regions", *EOS Trans AGU*, 96(52), Fall Meet. Suppl., Abstract GC43E-05.
120. Colliander, A., Jackson, T. and 40 others including **Caylor, K.** (2015) "SMAP L2/L3 Soil Moisture Product Validation using In Situ Based Core Validation Sites", *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract H43H-1626
119. **Caylor, K.K.**, *Wolf, A. ⁺Siegfried, B. (2014) "Addressing critical environmental data gaps via low-cost, real-time, cellular-based environmental monitoring" *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract B11I-06.
118. *DeCarlo, K., ⁺Spiegel, M., **Caylor, K.K.** (2014) "Biological Dimensions of Crack Morphology in Dryland Soils" *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract H31D-0646.
117. *Gerlein-Safdi, C. ⁺Sinkler, C., **Caylor, K.K.** (2014) "Modeling Foliar Uptake in Colocasia Esculenta Using High Resolution Maps of Leaf Water Isotopes", *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract H31G-0684.
116. ⁺Sinkler, C. , *Gerlein-Safdi, C., **Caylor, K.K.** (2014) "Creating High-Resolution Maps of Leaf Water Isotopes Using IM-CRDS and IRMS Techniques", *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract PP31D-1177.
115. *Debats, S., ⁺Luo, D., Estes, L., Fuchs, T., **Caylor, K.K.** (2014) "Mapping Agricultural Fields in Sub-Saharan Africa with a Computer Vision Approach", *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract B44C-05.

114. **Caylor, K.K.**, Evans, T., Estes, L., Sheffield, J., Plale, E., Attari, S. (2014) “Impacts of Agricultural Decision Making and Adaptive Management on Food Security in Africa”, *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract GC53D-06. INVITED
113. *Wayland, H., **Caylor, K.K.** (2014) “Continuous Observations of Leaf Transpiration Isotopic Composition in Two Dryland Species Highlight Sensitivity to Changes in Irradiance and Soil Water Content”, *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract H51E-0661.
112. Riihimäki, C., **Caylor, K.K.**, Wilcove, D. (2014) “Planetary boundaries and environmental citizenship: enhancing environmental science through the Princeton University Science and Engineering Education Initiative”, *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract ED23D-3503.
111. Manfreda, S., **Caylor, K.K.**, *Good, S.P. (2014) “An ecohydrological framework to explain shifts in vegetation organization across climatological gradients”, *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract H33L-02.
110. *Wang, L., *Good, S.P., **Caylor, K.K.** (2014) “Global Synthesis of Vegetation Control on Evapotranspiration Partition”, *EOS Trans AGU*, 95(52), Fall Meet. Suppl., Abstract H51D-0639.
109. *Debats, S. R., Fuchs, T. J., Thompson, D.R., Estes, L.D., Evans, T.P., **Caylor, K.K.** (2013) “A machine learning approach to mapping agricultural fields across sub-Saharan Africa”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract B53E-03.
108. Sheffield, J., Wood, E.F., Chaney, N., Fisher, C.K., **Caylor, K.K.** (2013) “A seamless framework for global water cycle monitoring and prediction”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract H52C-08.
107. +Grossman, R.H., *Guan, K., Estes, L.D., **Caylor, K.K.**, Dandois, J.P. (2013) “Closing scale gaps in ecological research using unmanned aerial vehicles: A meta-data synthesis”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract B52D-08.
106. Manfreda, S., Pizzola, T., **Caylor, K.K.** (2013) “Soil water dynamics in a clumped vegetation pattern”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract H51A-1183.
105. *Gerlein, C., *Wolf, A., **Caylor, K.K.** (2013) “Stable isotopes in plant physiology: using water isotopes to study water fluxes in a temperate forest”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract H33A-1342.
104. McCord, P.F., Evans, T.P., Dell’Angelo, J., *Gower, D., McBride, L. (2013) “Water governance within Kenya’s Upper Ewaso Ng’iro Basin: Assessing the performance of water projects” *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract GC33B-1121
103. Evans, T.P., McCord, P.F., McBride, L., *Gower, D., **Caylor, K.K.** (2013) “Water governance and adaptation to disturbances in irrigated semi-arid agricultural systems”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract GC32A-06
102. Li, S., Levin, N., *Soderberg, K., Dennis, K. J., **Caylor, K.K.** (2013) “The triple oxygen isotope composition of leaf waters in Mpala, central Kenya”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract PP23C-1994
101. Estes, L., Chaney, N., Herrera-Estrada, J., **Caylor, K.K.**, Sheffield, J., Wood, E.F. (2013) “Spatial trends in evapotranspiration components over Africa between 1979 and 2012 and their relative influence on crop water use”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract GC32A-03
100. *Soderberg, K., *Gerlein, C., +Kemeny, P.C., **Caylor, K.K.** (2013) “Isotopic equilibrium between precipitation and water vapor: evidence from continental rains in central Kenya”, *EOS Trans AGU*, 94(52), Fall Meet. Suppl., Abstract GC13A-1057.

99. *O'Donnell, F.C., **Caylor, K.K.**, *Bhattachan, A., Dintwe, Kebonye, D'Odorico, P., Okin, G. (2013) "Root structure and water-use diversity of Kalahari savanna woody plant communities", *98th ESA Annual Meeting*, Minneapolis, MN.
98. *Bhattachan, A., D'Odorico, P., Tatlhago, M., Dintwe, K., *O'Donnell, F.C., **Caylor, K.K.**, Okin, G., Perrot, D., Ringrose, S. (2013) "Evaluating the patterns of below ground woody biomass along the Kalahari rainfall gradient", *98th ESA Annual Meeting*, Minneapolis, MN.
97. Scanlon, T.M., **Caylor, K.**, Saha, M., D'Odorico, P. (2013) "Vegetation Dynamics in Response to Inter-annual Rainfall Variability in Southern Africa", *Geophysical Research Abstracts*, Vol. 15, EGU2013-12554.
96. *Good, S.P., +O'Connor, M., *Soderberg, K., *Wang, L., **Caylor, K.K.** (2013) "Analysis of the distribution of the isotopic composition of evapotranspiration flux in a semi-arid savanna", *Geophysical Research Abstracts*, Vol. 15, EGU2013-9991.
95. **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
94. *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
93. 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
92. *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
91. *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
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. 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
88. *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
87. +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
86. D'Odorico, P. Bhattachan, A., Tatlhago, 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
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. Riihimäki, 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 partition 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) Sao 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.**, Tatlhego, 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 an 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, Savannah, GA, August 2003.
14. Shugart, H.H., **K.K. Caylor**, C. Hély, 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. Hély, C. **K.K. Caylor**, S. Alleaume, R.J. Swap, and H.H. Shugart (2003), "Estimating emissions of carbonaceous compounds from southern 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. Hély, 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.

GRADUATE COMMITTEES

Year	Institution	Role	Student	Degree	Current Position
-	UCSB (Bren)	Co-Advisor	Anna Boser	PhD	-
-	UCSB (Geog)	Co-Advisor	Rachel Green	PhD	-
-	UCSB (Geog)	Advisor	Bryn Morgan	PhD	-
-	UCSB (Geog)	Advisor	Natasha Krell	PhD	-
-	UCSB (EEMB)	Committee Member	Elizabeth Forbes	PhD	-
-	UCSB (Geog)	Committee Member	Chris Kibler	PhD	-
-	UCSB (Bren)	Committee Member	Christopher Heckman	PhD	-
-	UCSB (Geog)	Committee Member	Mike Johnson	PhD	-
-	UCSB (Geog)	Committee Member	Susan Meerdink	PhD	-
-	U of Florida	Committee Member	Lory Willard	PhD	-
2020	University of Copenhagen	Assessment Committee Member	Christin Abel	PhD	-
2020	UCSB (Geog)	Advisor	Cascade Tuholske	PhD	-
2020	Princeton U.	Advisor	Drew Gower	PhD	-
2020	UCSB (Geog)	Committee Member	Sara Lafia	PhD	-

GRADUATE COMMITTEES – continued

2020	UCSB (Geog)	Committee Member	Fernanda Ribeiro	PhD	-
2020	UCSB (Geog)	Advisor	Ryan Avery	MA	-
2020	Princeton U.	Advisor	Keita DeCarlo	PhD	-
2017	Princeton U.	Advisor	Stephanie Debats	PhD	Uber, Inc.
2017	Princeton U.	Advisor	Cynthia Gerlein-Safdi	PhD	LLNL
2015	Princeton U.	Advisor	Hilary Wayland	MSE	Ramboll-Environ, Inc.
2013	Princeton U.	Advisor	Stephen Good	PhD	Asst. Prof., Oregon St. U.
2013	Princeton U.	Advisor	Frances O'Donnell	PhD	Asst. Prof., Auburn U.
2013	Princeton U.	Committee Member	Kaiyu Guan	PhD	Asst. Prof., U. of Illinois, Urbana-Champaign
2012	Princeton U.	Committee Member	Megan Konar	PhD	Assoc. Prof., U. of Illinois, Urbana-Champaign
2011	Princeton U.	Advisor	Trenton Franz	PhD	Assoc. Prof., U. of Nebraska