

## **Christopher John Kucharik**

Professor

Department of Agronomy and

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Center for Sustainability and the Global Environment (SAGE)

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### **Formal Education and Positions Held:**

#### *Formal Education:*

5/1997: Ph. D., Department of Atmospheric and Oceanic Sciences (minor: Soil science), University of Wisconsin-Madison, Madison, WI. Title: “Characterizing the radiation regime in nonrandom forest canopies”. Advisor: John M. Norman (emeritus, UW-Madison Soil Science)

12/1992: B.S., Atmospheric and Oceanic Sciences (with Distinction), University of Wisconsin-Madison, Madison, WI.

#### *Positions Held:*

9/2015 – present: Professor, Department of Agronomy and Nelson Institute for Environmental Studies, University of Wisconsin – Madison. Madison, WI.

9/2011 – 8/2015: Associate Professor, Department of Agronomy and Nelson Institute for Environmental Studies, University of Wisconsin – Madison. Madison, WI.

1/2009 – 8/2011: Assistant Professor, Department of Agronomy and Nelson Institute for Environmental Studies, University of Wisconsin – Madison. Madison, WI.

5/2008 – 12/2008: Senior Scientist, Nelson Institute Center for Sustainability and the Global Environment, University of Wisconsin-Madison. Madison, WI.

12/2003 – 4/2008: Associate Scientist, Nelson Institute Center for Sustainability and the Global Environment, University of Wisconsin-Madison. Madison, WI.

1/2001 – 11/2003: Assistant Scientist, Nelson Institute Center for Sustainability and the Global Environment, University of Wisconsin-Madison. Madison, WI.

4/1999 – 12/2000: Assistant Scientist, Nelson Institute Climate, People, and Environment Program – Center for Climatic Research (CCR), University of Wisconsin-Madison. Madison, WI.

6/1997 – 3/1999: Research Associate, Department of Soil Science and Center for Climatic Research, University of Wisconsin-Madison. Madison, WI.

1/1993 – 5/1997: Research Assistant, Department of Soil Science, University of Wisconsin-Madison. Madison, WI.

### **Special Information**

#### *Additional Affiliations:*

Affiliated faculty: Agroecology, Atmospheric and Oceanic Sciences, and Freshwater and Marine Science, Great Lakes Bioenergy Research Center (GLBRC); Wisconsin Bioenergy Initiative (WBI); Wisconsin Energy Institute; Nelson Institute Center for Climatic Research (CCR); Wisconsin Initiative on Climate Change Impacts (WICCI); Wisconsin Ecology; Center for Integrated Agricultural Systems (CIAS); Water @ UW-Madison

*Awards and Honors:*

2014 UW-Madison High Demand faculty  
2013 EPA STAR Fellowship (Mallika Nocco)  
2013 Selected as *Badger Bioneer* by Sustain Dane and UW-Madison Office of Sustainability  
2012 UW-Madison Climate, People and Environment Program (CPEP) Pilot Award  
2012 UW-Madison High Demand faculty  
2010 NSF CHANGE-IGERT Fellowship (Melissa Motew)  
2008 Office of Academic Initiatives, University Housing Honored Instructor Award  
2008 University of Wisconsin Residence Halls Favorite Instructor Award  
2006 Trewartha Undergraduate Honors Research Grant (Anne Drehfal)  
2002 Holstrom Award for Undergraduate Research (Erica Grimm)  
2000 Holstrom Award for Undergraduate Research (Paul Stoy)

**Professional Service**

*National / international service*

Editorial Advisory Board – *Global Change Biology* (2007-2010)

Organizer and co-chair of conference session on “Carbon and Water Cycling in Agroecosystems; American Geophysical Union, 2006 Fall Meeting, San Francisco, CA.

Co-chair of conference session on “Earth System Modeling and Land-use” American Geophysical Union, 2008 Fall Meeting, San Francisco, CA.

Co-chair of conference session “Forest water and carbon exchange with the atmosphere” American Meteorological Society 28th Conference on Agricultural and Forest Meteorology, Orlando FL, April 2008;

Organizer and co-chair of conference session on “Linking Land Use and Land Management to Models of the Earth System” American Geophysical Union, 2008 Fall Meeting, San Francisco, CA.

Session Chair, “Soil Sustainability and Climate Change” at Organization for Economic Cooperation and Development (OECD) International Conference on Sustaining Soil Productivity in Response to Global Climate Change: Science, Policy, and Ethics. June 29-July 1, 2009; Madison, Wisconsin.

*Local / State Committees and service:*

Wisconsin Governor’s Task Force on Global Warming; committee member for the work group on Forestry and Agriculture (2007-2008)

Wisconsin Initiative on Climate Change Impacts (WICCI): Ad-hoc committee member responsible for developing the organizational structure for WICCI (June, 2007); Member, Science Council (2008-2013); Member, Science Advisory Board (2013-present); Co-Chair, Agriculture Working Group (2009-present); Co-Chair, Climate Working Group (2008-Present); Member, Central Sands Hydrology Working Group (2009-present).

*UW-Madison Committees:*

UW-Madison Arboretum Director Search, Chair (2016-present)  
 Co-chair tenure committee for Holly Gibbs (Geography/Nelson Institute) (2012-present)  
 Blobaum Fellowship review committee (2015-present)  
 UW-Madison Ad-hoc committee for 5-year review of the UW Arboretum (2015)  
 CALS Ecoinformatics co-chair (2015-present)  
 CALS Changing Climate Priority Theme co-chair (2014-2015)  
 Faculty Senate, Department of Agronomy District 4 Representative (2009-2012)  
 Department of Agronomy Self Study Committee for 10-year review (2015-16)  
 Department of Agronomy Graduate Studies Committee (2009-present; chair, Fall 2011-2015)  
 Department of Agronomy Curriculum Committee (2009-present)  
 Department of Agronomy Building Committee (2011-present)  
 Department of Agronomy Ad-hoc IT Committee (2011-present)  
 UW-Madison Alternative Energy Ad-hoc Curriculum Committee (2010-present)  
 The Nelson Institute director Search and Screen Committee (Fall 2011)  
 The Nelson Institute Academic Planning Council (2009-2011)  
 The Nelson Institute Environment and Resources Program Committee (2010-present)  
 The Nelson Institute Personnel Committee ad-hoc member (2006)  
 The Nelson Institute Governance Faculty (2006-present)  
 The Nelson Institute Executive Governance Faculty (2011-present)  
 The Nelson Institute Outreach Committee (2006-2013)  
 The Nelson Institute Environment and Resources Admissions Committee (2009-present)  
 The Nelson Institute Weston Fellowship Selection Committee (2006-present)  
 Center for Sustainability and the Global Environment (SAGE) Investigators Council (2009-present)  
 Academic Staff Assembly Representative (alternate – District 156; 2006-2008)  
 Civil and Environmental Engineering Sustainable Water Faculty Search Committee (2013)  
 Wisconsin Ecology – Activities Chair (2013-2014)

### *Paper / Proposal Reviews*

Proposal Reviews (80 total): National Aeronautics and Space Administration (NASA) – 6;  
 National Science Foundation (NSF) – 10; the U.S. Department of Energy (DOE) National  
 Institute for Climate Change Research - 12; UW-Madison Arboretum Garden Club of  
 America Fellowships – 30; U.S. Department of Agriculture Hatch – 3; University of  
 Minnesota Agricultural Experiment Station – 2; Michigan State University Global Center for  
 Food Systems Innovation Grants (2013) – 13, (2014) - 12

Paper Reviews: Agronomy Journal (3); Climatic Change (4); Global Change Biology (19);  
 Global Change Biology-Bioenergy (3); Global Biogeochemical Cycles (5); Agriculture,  
 Ecosystems, and Environment (5); Frontiers in Ecology and Environment (1); Canadian  
 Journal of Forest Research (1); Soil and Tillage Research (1); J. Climate (1); The American  
 Midland Naturalist (2); Agricultural and Forest Meteorology (4); J. of Hydrometeorology (1);  
 Ecological Modelling (2); Tree Physiology (1); Soil Science Society of America Journal (4);  
 Environmental Research Letters (2); Ecology and Society (1); Earth Interactions (6); J.  
 Geophysical Research-Atmospheres (2); J. Geophysical Research-Biogeosciences (4); J. Soil  
 and Water Conservation (1); Nature (10); Proceedings of National Academy of Sciences (12)

Peer Reviewer for U.S. Climate Change Science Program (CCSP) Synthesis and Assessment Product (SAP) 2.2: The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle.

## Teaching Activities

Term	Course	Credits	Students	Grade Distribution
Spring 2009	AGRONOMY 299: Independent Study (Biology 152 - Nicole Caine): <i>Quantifying soil respiration using incubation chambers: the necessity of small fans in preventing CO<sub>2</sub> stratification</i>	2	1	A(1)
	ZOOLOGY 955: Seminar: Ecosystem Services	2	23	A(23)
	BOTANY 681: Senior Honors Thesis (Brianna Laube – Prof. Joy Zedler)	2	1	A(1)
Fall 2009	AGRONOMY 875: Agroecosystems and Global Change	3	23	A(15), AB(7), BC(1)
	AGROECOL 699: Special Problems (Brianna Laube): <i>Environmental and temporal effects on soil respiration in bioenergy cropping systems</i>	2	1	A(1)
	AGRONOMY 699: Special Problems (Emily Phelps): <i>U.S. Produce Regulation</i>	4	1	A(1)
Spring 2010	AGRONOMY 299: Directed Study (Caitlin Moore): <i>Non-hydrolyzable carbon in soils experiencing varied land management</i>	2	1	A(1)
	BOTANY 682: Senior Honors Thesis (Brianna Laube – Prof. Joy Zedler): <i>Environmental and temporal effects on soil respiration in bioenergy cropping systems</i>	4	1	A(1)
Fall 2010	ATM OCN/SOIL SCI/AGRONOMY 532: Environmental Biophysics	3	17	A(14), AB(2), B(1)
	Alisha David: Fellow in Undergraduate Research and Mentoring (URM) Program	N/A		
Spring 2011	AGRONOMY 920 / HORTICULTURE 910: Graduate Seminar	1	9	A(5), AB(3), B(1)
	Alisha David: Fellow in Undergraduate Research and Mentoring (URM) Program	N/A		
Fall 2011	AGRONOMY/ENVIR ST/AGROECOL 724: Agroecosystems and Global Change	3	23	A(19), AB(1), B(2), BC(1)
	Alisha David: Fellow in Undergraduate Research and Mentoring (URM) Program	N/A		
Spring 2012	Alisha David: Fellow in Undergraduate Research and Mentoring Program	N/A		
Fall 2012	ATM OCN/SOIL SCI/AGRONOMY 532: Environmental Biophysics	3	26	A(17), AB(5), B(4)
Fall 2013	AGRONOMY/ENVIR ST/AGROECOL 724: Agroecosystems and Global Change	3	23	A(16), AB(6), B(1)
	AGRONOMY 699/ Independent Study Rachel Bergmans, Population Health Sciences	1	1	A
Fall 2014	ATM OCN/SOIL SCI/AGRONOMY 532: Environmental Biophysics	3	13	A(5), AB(6), B(1), C(1)
	AGRONOMY 299/ Independent Study Clare Rebman, Biology 152	2	1	A

<b>Fall 2015</b>	AGRONOMY/ENVIR ST/AGROECOL 724: Agroecosystems and Global Change	3	20	A(11), AB(5), B(4)
<b>Fall 2016</b>	ATM OCN/SOIL SCI/AGRONOMY 532: Environmental Biophysics	3	22	A(12), AB(7), B(3)
	Zoology 955/956: Abrupt change in ecological systems	2	14	A(14)
	Agronomy 299 (Cadan Cummings) Agronomy 699 (Kayla Edwards) ATM OCN 691 (Meirah Williamson)	2 2 3	1 1 1	A A Progress

## Summary of Grants and Contracts

<b>KUCHARIK CURRENT FUNDING AND PROJECTS</b>						
#	Title	Agency	PIs	Contribution	Award	Duration
1	Creating a safe operating space for resilient food-energy-water (FEW) systems in the Upper Midwest	UW-Madison Bridge to the Future Program	Kucharik, CJ Turner, MG Carpenter, SR Rissman, AR Lohiede, SP	75%	\$132,000	7/1/2016-8/31/2017
2	Simulating the effects of early agriculture on Holocene climate	NSF	Vavrus, S., J. Kutzbach, W. Ruddiman, C.J. Kucharik	10%	\$444,971	6/1/2016-5/31/2019
3	Anticipating abrupt ecological change in the 21 <sup>st</sup> century	UW-Madison and Wisconsin Alumni Research Foundation: UW2020 program	Turner, M.G., J.W. Williams, T. Ives, C.J. Kucharik, S.R. Carpenter	20%	\$334,530	7/1/2016-6/30/2018
4	LTER: A Comparative study of a suite of Lakes in WI	NSF	E. Stanley (PI) S. Carpenter M. Turner C. Kucharik (one of 10+ co-PIs)	5%	\$8,010,000	11/2014-10/2020
5	Assessing the long run sustainability of US agriculture in an integrated global economy	USDA AFRI	T. Hertel (Purdue) C. Kucharik (UW) N. Ramankutty (UBC)	25%	\$500,000	1/1/2016-12/31/2017
6	Quantifying the effectiveness of irrigation management strategies to increase crop water use efficiency in the Wisconsin Central Sands	USDA Hatch	C. Kucharik	100%	\$122,000	10/1/2016-9/30/2020

**KUCHARIK COMPLETED PROJECTS**

<b>#</b>	<b>Title</b>	<b>Funding Source</b>	<b>PIs</b>	<b>Kucharik contribution towards procurement</b>	<b>Award Amount</b>	<b>Award Duration</b>
1	Wisconsin Initiative on Climate Change Impacts (WICCI)	UW-Madison Nelson Institute	P. Nowak C. Kucharik D. Vimont	50%	\$25,000	4/2008-3/2009
2	Impacts of Past and Future Changes in Climate and Atmospheric CO <sub>2</sub> on Wisconsin Agriculture	Wisconsin Focus on Energy	C. Kucharik (PI)	100%	\$80,134	1/2007-6/2008
3	Agricultural Land Use and the Transformation of Planet Earth: Investigating the Effects of Land Use Practices on the Ecological, Biogeochemical, and Hydrological Systems of the Planet	NASA	J. Foley (PI) M. Coe C. Barford N. Ramankutty C. Kucharik	25%	\$902,434	7/2004-6/2008
4	Improving and evaluating dynamic models of natural and managed ecosystems over the central and southern U.S. using AmeriFlux and MODIS data	DOE NICCR	C. Kucharik (PI) T. Twine	60%	\$212,915	9/2005-8/2007
5	Promoting Carbon Sequestration and Land Conservation	Madison Gas and Electric	C. Kucharik (PI)	100%	\$180,000	1/2002-12/2005
6	Examining the influence of land management on soil organic matter in southern Wisconsin ecosystems	UW CALS Barker Fund	C. Kucharik (PI)	100%	\$267,093	7/2000-6/2004
7	Evaluating integrated models of natural and managed ecosystems over the central and southeastern US	DOE NIGEC	C. Kucharik (PI) M. Coe N. Ramankutty J. Foley	75%	\$448,191	7/2001-6/2004
8	Human activity and a changing biosphere	NASA	J. Foley (PI) C. Kucharik M. Coe J. Norman	30%	\$894,000	5/2000-4/2003
9	Riparian vegetation impacts on water quantity, quality, and stream ecology	Nebraska Environmental Trust	J. Lenters (PI) E. Istanbuluoglu D. Scott C. Kucharik	25%	\$433,960 (\$50,000 to UW)	10/2007-10/2010
10	Climate in Wisconsin	Wisconsin Focus on Energy	D. Vimont (PI) C. Kucharik M. Notaro S. Vavrus D. Lorenz	10%	\$179,684	6/2008-10/2010
11	Assessing greenhouse gas fluxes from prairie and switchgrass bioenergy crops receiving varied amounts of N fertilizer	UW-Madison Grad School	C. Kucharik (PI)	100%	\$27,814 (not used)	7/2010-6/2011
12	Quantifying carbon sequestration in bioenergy cropping systems: scaling CO <sub>2</sub> fluxes from leaf level to landscapes	USDA Hatch	C. Kucharik	100%	\$55,616	10/2009-9/2011
13	Impacts of historical and future changes in climate and atmospheric CO <sub>2</sub> on	DOE NICCR	C. Kucharik (PI) J. Lenters	75%	\$373,926	7/2008-6/2011

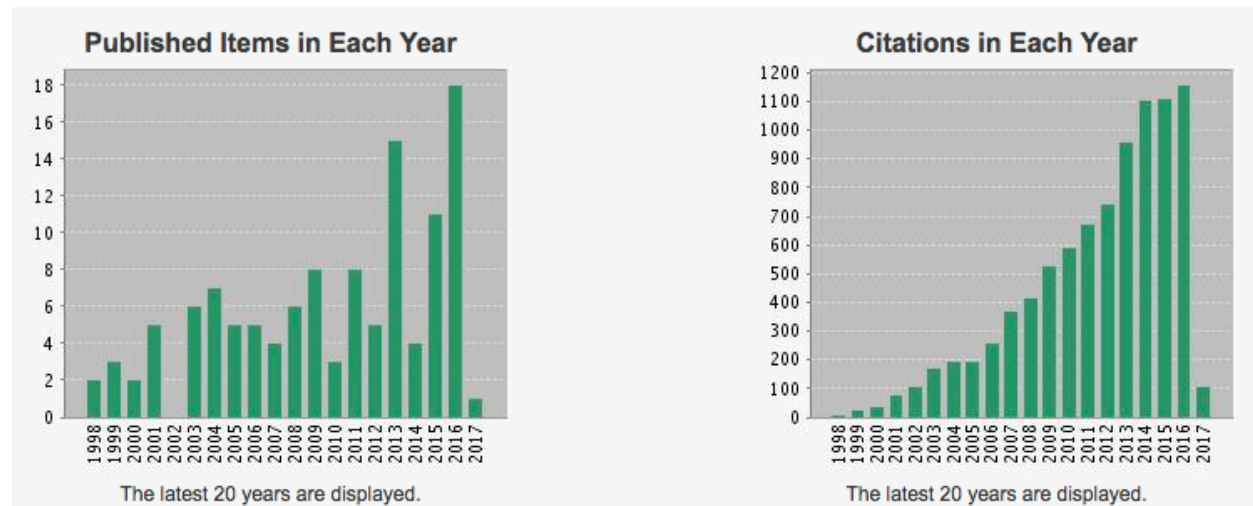
terrestrial ecosystem structure and functioning

14	Water quantity and water quality of the Central Sand areas of Wisconsin under the influence of climate change	Wisconsin Institute for Sustainable Agriculture	B. Lowery (PI), S. Kung, B. Bland, M Ruark, F. Madison, C. Kucharik, A. Thompson, J. Panuska, R. Groves, A.J. Bussan	3%	\$97,426	4/2010-3/2011
15	Against the grain: the effects of widespread, intensifying agriculture on the biosphere and climate system	NASA	J. Foley (PI) C. Kucharik C. Barford N. Ramankutty M. Coe	30%	\$700,610	7/2007-6/2011
16	An integrated terrestrial carbon model (ITCM) for North America	DOE	M. Post (PI), T. King, D. Erickson , C. Kucharik W. Parton	10%	\$80,783	10/2007-9/2012
17	Projecting future demographic trends for populations vulnerable to climate variability and land use change in the Yahara watershed	NSF	K. Curtis (PI) A. Schneider C. Kucharik	5%	\$20,000	9/2010-8/2011
18	Adapting the design and management of stormwater-related infrastructure to climate change	NOAA	K. Potter (PI) D. Liebl C. Kucharik S. Vavrus	2%	\$247,828	7/2008-6/2012
19	Carbon and nitrogen retention and loss from alternative cellulosic biofuels cropping systems	DOE	R. Jackson (PI) C. Kucharik K Karthikeyan	30%	\$499,000	11/2009-10/2012
20	Impacts of crop management and climate change on groundwater recharge across the Central Sands	CERANR	C. Kucharik G. Kraft (UWSP)	5%	\$36,000	7/1/2012-6/30/14
21	Impacts of crop management and climate change on groundwater recharge across the Central Sands	DNR-GWCC	C. Kucharik G. Kraft (UWSP) S. Loheide	10%	\$132,606	7/1/2012-6/30/15
22	Quantifying carbon sequestration in Midwest U.S. bioenergy cropping systems: scaling CO2 fluxes from leaf-level to landscapes (Submitted September, 2010)	USDA Hatch	C. Kucharik (PI)	100%	\$162,000	10/2011-9/2015
23	Impacts of crop management and climate change on groundwater recharge across the Central Sands	NCR-SARE	C. Kucharik Grad student: Mallika Nocco	50%	\$9,999	9/1/2013-9/30/2015
24	Landscape structure and natural pest-suppression services in bioenergy landscapes: implications for regional food and fuel production	USDA AFRI	C. Gratton (PI) C. Kucharik P. Townsend T. Meehan	35%	\$997,390	1/2011-1/2016
25	Irrigated agriculture and climate affects on surface water quantity and quality in the Wisconsin Central Sands	EPA STAR Graduate Fellowship	C. Kucharik M. Nocco (grad student supported)	10%	\$84,000	9/2014-8/2016
26	Climate change, shifting land use, and urbanization in a Midwestern agricultural landscape: challenges for water quality and quantity	NSF	C. Kucharik (PI) S. Loheide A. Rissman S. Carpenter M. Turner	66%	\$4,991,000	4/2011-9/2016



## Publications

The following data are taken from Google Scholar and ISI Web of Knowledge on March 14, 2017.



Sum of the times articles have been cited: 11,195

Average citations per article: 73

*h*-index: 36

*i10*-index: 65

The following convention is used for distinguishing authorship in the following list of publications:

<b>Bold:</b>	<b>Christopher J. Kucharik</b>
<u>Underline:</u>	<u>Graduate student research advised by C. Kucharik</u>
<u><i>Underline italic:</i></u>	<u><i>Postdoctoral research advised by C. Kucharik</i></u>
<u><b>Underline italic:</b></u>	<u><b><i>Undergraduate research advised by C. Kucharik</i></b></u>
<i>Italic:</i>	<i>Kucharik's thesis advisor (John M. Norman)</i>
Regular text:	All other collaborators

The contribution to each publication is specified in terms of *Concept*, *Implementation*, and *Writing*. *Concept* refers to the approximate percentage of originality in forming the idea for the research. *Implementation* refers to what percentage I was responsible for in terms of executing the core research tasks. *Writing* pertains to the percentage of manuscript preparation and revisions performed by myself.

***Papers published or in press in refereed archival publication venues***

98. Zipper, S.C., J. Schatz, **C.J. Kucharik** and S.P. Loheide II. 2017. Urban heat island-induced increases in evapotranspirative demand. *Geophysical Research Letters*, 44: 873–881. doi:10.1002/2016GL072190.
97. Motew, M.M., X. Chen, E.G. Booth, S.R. Carpenter, P. Pinkas, S.C. Zipper, S.P. Loheide II, S.D. Donner, K. Tsuruta, P. Vadas, and **C.J. Kucharik**. 2017. The influence of legacy P on lake water quality in a Midwestern agricultural watershed. *Ecosystems*, DOI: 10.1007/s10021-017-0125-0.
96. Lacasella F., S Marta, A. Singh, K. Stack Whitney, P. Townsend, **C. Kucharik**, T. Meehan, C. Gratton. 2017. From invasive species data to abundance-based risk maps combining physiology, weather and habitat variability. *Ecological Applications* 27(2): 575-588..
95. Booth EG, J Qiu, SR Carpenter, J Schatz, X Chen, **CJ Kucharik**, SP Loheide II, MM Motew; JM Seifert; MG Turner. 2016. From qualitative to quantitative environmental scenarios: Translating storylines into biophysical modeling inputs at the watershed scale. *Environmental Modelling and Software*, 85: 80-97. DOI: <http://dx.doi.org/10.1016/j.envsoft.2016.08.008>.  
*Concept: 10%; Implementation: 10%; Writing: 5%*
94. Duran BEL, Duncan DS, Oates LG, **Kucharik CJ**, Jackson RD (2016) Nitrogen Fertilization Effects on Productivity and Nitrogen Loss in Three Grass-Based Perennial Bioenergy Cropping Systems. *PLoS ONE* 11(3): e0151919. doi:10.1371/journal.pone.0151919.  
*Concept: 10%; Implementation: 10%; Writing: 10%*
93. Gaillard, R., B. Duval, W. Osterholz, and **C.J. Kucharik**. 2016. Simulated effects of soil texture on N<sub>2</sub>O emission factors from corn and soybean agroecosystems in Wisconsin. *Journal of Environmental Quality*, 45, 1540-1548. DOI: doi:10.2134/jeq2016.03.0112.  
*Concept: 50%; Implementation: 10%; Writing: 25%*
92. **Kucharik, C.J.**, A.C. Mork, T. Meehan, S.P. Serbin, A. Singh, P. Townsend, K. Stack Whitney, and C. Gratton. 2016. Evidence for compensatory photosynthetic and yield response of soybeans to aphid herbivory. *Journal of Economic Entomology*.  
<http://dx.doi.org/10.1093/jee/tow066>.  
*Concept: 80%; Implementation: 50%; Writing: 75%*
91. Lokupitiya, E. et al. 2016. Carbon and energy fluxes in cropland ecosystems - A model-data comparison. *Biochemistry*, 129: 53-76.  
*Concept: 10%; Implementation: 10%; Writing: 5%*
90. Mykleby, P.M., J.D. Lenters, G.J. Cutrell, K.S. Herrman, E. Istanbuluoglu, D.T. Scott, T.E. Twine, **C.J. Kucharik**, T. Awada, M.E. Soylyu, and B. Dong. 2016. Water and energy balance response of a riparian wetland to herbicide treatment of invasive phragmites australis. *Journal of Hydrology*, 539: 290-303.  
*Concept: 20%; Implementation: 10%; Writing: 5%*

89. Schatz, J. and C.J. Kucharik. 2016. Urban heat island effects on meteorological growing seasons and heating and cooling degree days in Madison, Wisconsin, USA. *International Journal of Climatology*. DOI: 10.1002/joc.4675.  
*Concept: 50%; Implementation: 20%; Writing: 10%*
88. Stack Whitney K., T.D. Meehan, **C.J. Kucharik**, J. Zhu, P.A. Townsend, K. Hamilton, and C. Gratton. 2016. Explicit modeling of abiotic and landscape factors reveals precipitation and forests associated with aphid abundance. *Ecological Applications*. DOI: 10.1002/eap.1418.  
*Concept: 20%; Implementation: 10%; Writing: 5%*
87. VanLoocke A., T. Twine, **C.J. Kucharik**, and C. Bernacchi. 2016. Assessing the Potential to Decrease the Gulf of Mexico Hypoxic Zone with Midwest US Perennial Cellulosic Feedstock Production. *Global Change Biology-Bioenergy*. DOI: doi: 10.1111/gcbb.12385.  
*Concept: 10%; Implementation: 10%; Writing: 5%*
86. Zipper, S., J. Schatz, A. Singh, **C.J. Kucharik**, P. Townsend and S.P. Loheide. 2016. Urban heat island impacts on plant phenology: Intra-urban variability and response to land cover. *Environmental Research Letters*, 11, 054023. DOI: doi:10.1088/1748-9326/11/5/054023.  
*Concept: 20%; Implementation: 20%; Writing: 5%*
85. Zipper, S.C., J. Qiu, and **C.J. Kucharik**. 2016. Drought effects on US maize and soybean production: Spatiotemporal patterns and historical changes. *Environmental Research Letters*, 11, 094021. DOI: doi:10.1088/1748-9326/11/9/094021.  
*Concept: 10%; Implementation: 10%; Writing: 10%*
84. Booth EG, SC Zipper, SP Loheide II, **CJ Kucharik**. Is Groundwater Recharge Always Serving Us Well? Water Supply Provisioning, Crop Production, and Flood Attenuation in Conflict in Wisconsin, USA. *Ecosystem Services*, 21(A), 153-165.  
<http://dx.doi.org/10.1016/j.ecoser.2016.08.007>.  
*Concept: 10%; Implementation: 10%; Writing: 5%*
83. Bailey, R., T. Butts, J. Lauer, C. Laboski, **C. Kucharik**, and V. Davis (2015). Effect of weed management strategy and row width on nitrous oxide (N<sub>2</sub>O) emissions in soybean. *Weed Science*, 63: 962-971. DOI: <http://dx.doi.org/10.1614/WS-D-15-00010.1>.  
*Concept: 10%; Implementation: 10%; Writing: 5%*
82. Schatz, J. and **C.J. Kucharik** (2015). Urban climate effects on extreme temperatures in Madison, Wisconsin, USA. *Environmental Research Letters*, 10, doi:10.1088/1748-9326/10/9/094024.  
*Concept: 50%; Implementation: 30%; Writing: 25%*

81. Perillo, A.C., **C.J. Kucharik**, T. Meehan, S. Serbin, P. Townsend, A. Singh, K. Stack-Whitney, and C. Gratton (2015). Use of insect exclusion cages in soybean creates an altered microclimate and differential crop response. *Agricultural and Forest Meteorology*, 208: 50-61.  
*Concept: 90%; Implementation: 50%; Writing: 75%*
80. Carpenter, S.R., E.G. Booth, S. Gillon, **C.J. Kucharik**, S. Loheide, A. Mase, M. Motew, J. Qiu, A. Rissman, J. Seifert, E. Soylu, M.G. Turner, C.B. Wardropper (2015). Changing Drivers and Plausible Futures of a Social-Ecological System: Yahara Watershed, Wisconsin, USA. *Ecology and Society*, 20 (2) 10.  
*Concept: 20%; Implementation: 10%; Writing: 10%*
79. Cruse, M.J., **C.J. Kucharik**, and J.M. Norman (2015). Using a simple apparatus to measure direct and diffuse photosynthetically active radiation at remote locations. *PLoS One*, DOI: 10.1371/journal.pone.0115633.  
*Concept: 50%; Implementation: 25%; Writing: 20%*
78. Gray, J.M., S. Frohking, E.A. Kort, D. Ray, **C.J. Kucharik**, N. Ramankutty, and M.A. Friedl (2014). Direct human influence on atmospheric CO<sub>2</sub> seasonality from increased cropland activity. *Nature*, 515: 398–401. doi:10.1038/nature13957.  
*Concept: 10%; Implementation: 10%; Writing: 10%*
77. Schatz, J. and **C.J. Kucharik** (2014). Seasonality of the urban heat island effect in Madison, Wisconsin USA. *Journal of Applied Meteorology and Climatology*, 53: 2371-2386.  
*Concept: 75%; Implementation: 25%; Writing: 10%*
76. Osterholz, W., **C.J. Kucharik**, J. Hedtcke, and J. Posner (2014). Seasonal Nitrous Oxide and Methane Fluxes from Grain- and Forage-Based Production Systems in Wisconsin USA. *Journal of Environmental Quality*, 43:1833-1843 doi:10.2134/jeq2014.02.0077.  
*Concept: 25%; Implementation: 15%; Writing: 10%*
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2. **Kucharik, C.J., J.M. Norman, L.M. Murdock, and S.T. Gower, 1997.** Characterizing canopy nonrandomness with a Multiband Vegetation Imager (MVI). *Journal of Geophysical Research*, 102(D24): 29,455-29,473.  
*Concept: 50%; Implementation: 80%; Writing: 70%; Times cited: 44*
1. Norman, J.M., **C.J. Kucharik**, S.T. Gower, D.D. Baldocchi, P.M. Crill, M. Rayment, K. Savage, and R.G. Striegl, 1997. A comparison of six methods for measuring soil surface carbon dioxide fluxes. *Journal of Geophysical Research*, 102(D24): 28,771-28,778.  
*Concept: 30%; Implementation: 40%; Writing: 30%; Times cited: 117*

***Papers submitted to refereed archival publication venues but not yet accepted***

1. Soylu, M.E., S.P. Loheide, and **C.J. Kucharik**. Effects of root distribution and root water compensation on simulated water use in maize influenced by shallow groundwater, Submitted to *Agricultural and Forest Meteorology* (in revision).
2. von Haden, A.C. and C.J. Kucharik. Implementation of the root regression approach for partitioning soil respiration: theoretical and methodological considerations. Submitted to *Soil Biology and Biochemistry* (February 8, 2017).
3. Kontgis, C., A. Schneider, M. Ozdogan, **C.J. Kucharik**, V. Pham Dang Tri, D. Nguyen, and J. Schatz. Climate change impacts on rice productivity in the Mekong River Delta. Submitted to *Agriculture, Ecosystems and Environment* (July 2016).
4. Schatz, J. and **C.J. Kucharik**. The importance of replication in urban heat island studies: a case study in Madison, Wisconsin USA. Submitted to the *International Journal of Climatology* (May, 2016).
5. Zipper, S.C., M.E. Soylu, C.J. Kucharik, and S.P. Loheide II. Quantifying indirect groundwater-mediated effects of urbanization on agroecosystem productivity using

MODFLOW-AgroIBIS (MAGI), a complete critical zone model. Submitted to Ecological Modelling (January 21, 2017).

6. Nocco, M.A., G.J. Kraft, S.P. Loheide II, and **C.J. Kucharik**. Drivers of potential recharge from irrigated agroecosystems in the Wisconsin Central Sands. Submitted to Vadose Zone Journal Special Issue, *Lysimeters in Vadose Zone Research* (January 13, 2017).

### ***Monographs or jointly authored books***

None

### ***Books or conference proceedings edited***

None

### ***Invited book chapters***

1. **Kucharik, C.J.**, 2008. Soil Response to Re-establishment of Prairie Communities in Southern Wisconsin (portion of chapter entitled "Savanna and Prairie: Requiem for the Past, Hope for the future, written by M.K. Leach), in *The Vanishing Present: Wisconsin's Changing Lands, Waters, and Wildlife*, Edited by Donald M. Waller and Thomas P. Rooney. The University of Chicago Press, Chicago, IL.  
*Concept: 100%; Implementation: 100%; Writing: 100%*
2. Foley, J.A., **C.J. Kucharik**, T.E. Twine, M.T. Coe, and S.D. Donner, 2004. Land use, land cover and climate change across the Mississippi basin: Impacts on selected land and water resources In "Ecosystems and Land Use Change", R. DeFries, G. Asner, and R. Houghton, eds., Geophysical Monograph Series, 153: 249-261. (refereed)  
*Concept: 30%; Implementation: 40%; Writing: 30%*

### ***Items at national and international conferences*** († denotes keynote presentation)

For each of the following contributed talks, the lead author is also the presenter.

1. Nocco, M., M.D. Ruark, and **C.J. Kucharik**. Could precision irrigation conserve groundwater in the humid, sandy aquifers of the northern Great Lakes states? 2016 ASA/CSSA/SSSA annual meeting, Phoenix, AZ, November 6-9, 2016.
2. Nocco, M., S.C. Zipper, S. Loheide, and **C.J. Kucharik**. Using high-resolution remote sensing, lysimetry, and big leaf modeling to infer crop water use in the Wisconsin Central Sands. 2016 ASA/CSSA/SSSA annual meeting, Phoenix, AZ, November 6-9, 2016.
3. Von Haden, A., R.D. Jackson, E.M. Spiotta, and **C.J. Kucharik**. Diurnal patterns of heterotrophic and autotrophic soil respiration in maize and switchgrass bioenergy cropping systems. 2016 Annual meeting of the American Geophysical Union, 12-16 December, San Francisco, CA.

4. Qiu, J. E.G. Booth, M.M. Motew, X. Chen, S. Zipper, S.R. Carpenter, **C. Kucharik**, and M.G. Turner. Spatial-temporal dynamics of future ecosystem services in an urbanizing agricultural landscape. Ecological Society of America annual meeting, Fort Lauderdale, FL, August 7-14, 2016.
5. Carpenter, S.R., E.G. Booth, X. Chen, **C. Kucharik**, and M. Motew. Climate, land use, and land management effects on lake total phosphorus: scenarios for the Yahara watershed. Annual meeting of Association for the Sciences of Limnology and Oceanography, Santa Fe, New Mexico, 5-10 June, 2016.
6. Stack Whitney, K., et al. Ecoinformatics for agroecosystems: modeling land-use and climate to help farmers and policymakers manage future crop insect pest populations. Annual meeting of Conservation Biology Society, Madison, WI, July 2016.
7. Soylu, M.E., S. Zipper, S.P. Loheide, and **C. Kucharik**. A New Coupled Earth's Critical Zone Model: AgroIBIS – MODFLOW (AIM). Annual meeting of European Geophysical Union, 22-27 April 2016, Vienna, Austria.
8. Booth, E.G., X. Chen, M. Motew, J. Qiu, S. Zipper, S. Carpenter, **C. Kucharik**, S. Loheide. From provocative narrative scenarios to quantitative biophysical model results: Simulating plausible futures to 2070 in an urbanizing agricultural watershed in Wisconsin, USA. 2015 Annual meeting of the American Geophysical Union, 14-18 December, San Francisco, CA.
9. X. Chen, M. Motew, E.G. Booth, S. Carpenter, S. Loheide, **C. J. Kucharik**. Simulating water and nutrient transport in an urbanizing agricultural watershed with lake-level regulation using a coupled modeling approach. 2015 Annual meeting of the American Geophysical Union, 14-18 December, San Francisco, CA.
10. Twine, T., P.K. Snyder, **C. Kucharik**, and J. Schatz. The benefits of using dense temperature sensor networks to monitor urban warming. 2015 Annual meeting of the American Geophysical Union, 14-18 December, San Francisco, CA.
11. **Kucharik, C.J.** and W. Sacks. Impact of trends in planting date and phenology on central USA corn productivity. 2015 ASA/CSSA/SSSA annual meeting, Minneapolis MN, November 15-18, 2015.
12. Von Haden, A., E. Marin-Spiotta, and **C. Kucharik**. Short-Term Stability of Soil Organic Carbon in Biofuel Cropping Systems Established on Contrasting Soil Textures. 2015 ASA/CSSA/SSSA annual meeting, Minneapolis MN, November 15-18, 2015.
13. Leytem, P., **C.J. Kucharik**, and M. Nocco. Phenology, Productivity, and Water Use of Pearl Millet in the Wisconsin Central Sands. 2015 ASA/CSSA/SSSA annual meeting, Minneapolis MN, November 15-18, 2015.
14. Qiu, J., S. Zipper, and **C.J. Kucharik**. Influence of Drought on U.S. Crop Production: Variability and Sensitivity of Response. 2015 ASA/CSSA/SSSA annual meeting, Minneapolis MN, November 15-18, 2015.
15. Nocco, M., **C.J. Kucharik**, G. Kraft, S.P. Loheide II. Drivers of Spatiotemporal Variability in Evapotranspiration and Recharge from Irrigated Agroecosystems in the Wisconsin Central Sands. 2015 ASA/CSSA/SSSA annual meeting, Minneapolis MN, November 15-18, 2015.
16. Stack Whitney, K., T.D. Meehan, **C.J. Kucharik**, P.A. Townsend, and C. Gratton. Evidence for grassland and agriculture in the landscape suppressing soybean aphid (*Aphis glycines*) abundance and improving field-scale soybean yields. 2015

- Entomological Society of America annual meeting, Minneapolis MN, November 15-18, 2015.
17. Lacasella, F., K. Stack Whitney, K. Hamilton, A. Singh, P. Townsend, **C. Kucharik**, T.D. Meehan, and C. Gratton. Soybean aphid responses to climate and habitat variability explored using multi-year, ecoinformatics data. 2015 Entomological Society of America annual meeting, Minneapolis MN, November 15-18, 2015.
  18. Motew, M.M., E.G. Booth, **C.J. Kucharik**, X. Chen, and S.R. Carpenter. Upstream phosphorus reductions and the downstream effects in a midwestern agricultural watershed. 2015 Ecological Society of America annual meeting, Baltimore MD, August 9-14, 2015.
  19. Stack Whitney, K., T.D. Meehan, **C.J. Kucharik**, P.A. Townsend, and C. Gratton. No evidence for landscape composition effects on biological control in Wisconsin soy agroecosystems despite evidence of effects on natural enemy abundance. 2015 Ecological Society of America annual meeting, Baltimore MD, August 9-14, 2015.
  20. Motew, M.M., X. Chen, E.G. Booth, S.R. Carpenter, **C.J. Kucharik**. Factors affecting phosphorus loads to surface waters: comparing the roles of precipitation and land management practices. 2015 AWRA Wisconsin Annual Meeting, March 5-6, Oconomowoc, Wisconsin.
  21. Nocco, M. and **C.J. Kucharik**. Historical reconstruction of evaporative demand in the Wisconsin Central Sands and implications for irrigated agriculture. 2015 AWRA Wisconsin Annual Meeting, March 5-6, Oconomowoc, Wisconsin.
  22. Chen, X., M.M. Motew, E.G. Booth, S.R. Carpenter, S.P. Lohiede, and **C.J. Kucharik**. Simulating changing water and nutrient transport in the Yahara River watershed using a coupled modeling approach. 2015 AWRA Wisconsin Annual Meeting, March 5-6, Oconomowoc, Wisconsin.
  23. Ester, C., M. Nocco, A. Sandel, **C.J. Kucharik**, and G. Kraft. Estimating groundwater recharge and solute loading in agricultural systems using passive capillary lysimeters. 2015 AWRA Wisconsin Annual Meeting, March 5-6, Oconomowoc, Wisconsin.
  24. Gray, J. S. Frolking, E. Kort, D. Ray, **C.J. Kucharik**, N. Ramankutty, M. Friedl. A direct human influence on atmospheric CO<sub>2</sub> seasonality from increased cropland productivity. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 15-19 December 2014 (abstract, nonrefereed, poster presentation).
  25. Von Haden, A., E. Marin-Spiotta, and **C.J. Kucharik**. Partitioning of Heterotrophic Soil Respiration in Corn and Switchgrass to Evaluate In Situ Soil Organic Matter Decomposition Dynamics. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 15-19 December 2014 (abstract, nonrefereed, poster presentation).
  26. Schatz, J. and **C.J. Kucharik**. Seasonality of the urban heat island effect: patterns and drivers. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 15-19 December 2014 (abstract, nonrefereed, poster presentation).
  27. Singh, A., S. Serbin, **C. Kucharik**, and P. Townsend. Spectroscopic measurements of soybeans used to parameterize physiological traits in the Agro-IBIS ecosystem model. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 15-19 December 2014 (abstract, nonrefereed, poster presentation).
  28. Motew, M., E.G. Booth, S.R. Carpenter, and **C.J. Kucharik**. Factors Affecting P Loads to Surface Waters: Comparing the Roles of Precipitation and Land Management



- Practices. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 15-19 December 2014 (abstract, nonrefereed, poster presentation).
29. Booth, E.G., **C.J. Kucharik**, and S.P. Loheide. Assessing agricultural vulnerability to recent climate change and variability in Wisconsin using USDA crop insurance indemnity data. 2014 AWRA Wisconsin Annual Meeting, March 13-14, WI Dells, Wisconsin.
  30. Soylu, E., S. Loheide, and **C. Kucharik**. Impacts of root distribution and root water uptake on maize water use in shallow groundwater agroecosystems. 2014 AWRA Wisconsin Annual Meeting, March 13-14, WI Dells, Wisconsin.
  31. Schatz, J. and **C.J. Kucharik**. Urban effects on extreme heat in a mid-sized North American city. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 9-13 December 2013 (abstract, nonrefereed, poster presentation).
  32. Nocco, M.A., and **C.J. Kucharik**. Evaluating regional water scarcity: Irrigated crop water budgets for groundwater management in the Wisconsin Central Sands. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 9-13 December 2013 (abstract, nonrefereed, oral presentation).
  33. Booth, E.G., S.C. Zipper, S.P. Loheide, and **C.J. Kucharik**. Is Groundwater Recharge Always Serving Us Well? Water Supply and Crop Production in Conflict in the Yahara River Watershed, Wisconsin. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 9-13 December 2013 (abstract, nonrefereed, oral presentation).
  34. Carr, B.D., M.E. Soylu, J.C. Patton, B.K. Hornbuckle, and **C.J. Kucharik**. Using Cosmic-rays to Evaluate Estimates of Root-zone Soil Water from an Agro-ecosystem Model at a Field Site with a Shallow Water Table. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 9-13 December 2013 (abstract, nonrefereed, poster).
  35. Duran, B.E., and **C.J. Kucharik**. Comparison of Two Chamber Methods for Measuring Soil Trace-gas Fluxes in Bioenergy Cropping Systems. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 9-13 December 2013 (abstract, nonrefereed, poster).
  36. Soylu, M.E., S. Loheide, and **C.J. Kucharik**. Effects Of Compensatory Root Water Uptake and Water Table Depth Variations On Net Primary Productivity and Transpiration. ASA, CSSA, and SSSA International Annual Meetings, Nov. 3-6, 2013 Tampa FL. (abstract, nonreferreed, INVITED talk).
  37. VanLoocke, A., C.J. Bernacchi, T. Twine, and **C.J. Kucharik**. Scaling Biogeochemical Processes to Quantify the Impacts Regional Scale Land-Use-Change in the Context of Bioenergy. ASA, CSSA, and SSSA International Annual Meetings, Nov. 3-6, 2013 Tampa FL. (abstract, nonreferreed, talk).
  38. Twine, T.E., A. VanLoocke, C.J. Bernacchi, and **C.J. Kucharik**. Representing belowground processes in land surface models: applications at the regional scale and remaining challenges. Ecological Society of America Annual Meeting, Minneapolis MN, August 4-9, 2013 (abstract, nonreferreed, talk).
  39. VanLoocke, A., C.J. Bernacchi, T.E. Twine, and **C.J. Kucharik**. Water quality and quantity in the context of large-scale cellulosic biofuel production in the Mississippi-Atchafalaya River Basin. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 3-7 December 2012 (abstract, nonrefereed, poster).
  40. Booth, E.G., S.C. Zipper, S.P. Loheide, and **C.J. Kucharik**. Recharge as an Ecosystem Service and Disservice in a Midwestern, Urbanizing, Agricultural Watershed with an

- Increasing Precipitation Trend. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 3-7 December 2012 (abstract, nonrefereed, poster).
41. Soylu, M.E., **C.J. Kucharik**, and S.P. Loheide. Analyzing Groundwater-Vegetation Interactions using a Dynamic Agroecosystem Model. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 3-7 December 2012 (abstract, nonrefereed, poster).
  42. Cruse, M. and **C.J. Kucharik**. The drought of 2012: Effects on photosynthesis and soil respiration in bioenergy cropping systems of the Midwest USA. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 3-7 December 2012 (abstract, nonrefereed, poster).
  43. Laube, B., R.D. Jackson, and C.J. Kucharik. Plant community impacts on nitrous oxide emissions and aboveground productivity in perennial grasslands. Ecological Society of America Annual Meeting, Portland, OR, 5-10 August 2012 (abstract, nonrefereed, talk).
  44. Motew, M.M., and C.J. Kucharik. Climate induced changes in biome distribution, NPP, and hydrology for potential vegetation of the Upper Midwest US. Ecological Society of America Annual Meeting, Portland, OR, 5-10 August 2012 (abstract, nonrefereed, talk).
  45. **Kucharik, C.J.**, and A.D. VanLoocke, 2011. Is Miscanthus a high risk biofuel feedstock prospect for the upper Midwest US. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December 2011 (abstract, nonrefereed, poster).
  46. Loheide, S.P., E.G. Booth, **C.J. Kucharik**, S.R. Carpenter, C. Gries, E. Katt-Reinders, A.R. Rissman, M.G. Turner. Developing a framework to assess the water quality and quantity impacts of climate change, shifting land use, and urbanization in a Midwestern agricultural landscape. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December 2011 (abstract, nonrefereed, poster).
  47. Motew, M., and **C.J. Kucharik**, 2011. Climate induced changes in biome distribution, NPP and hydrology for potential vegetation of the Upper Midwest US. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December 2011 (abstract, nonrefereed, talk).
  48. **Kucharik, C.J.**, 2011. Climate change and impacts on Wisconsin agriculture. 2011 Annual Meeting of Wisconsin Crop Improvement Association, Madison, WI, 29 November, 2011 (no abstract, nonrefereed, invited talk).
  49. **Kucharik, C.J.**, 2011. A cropping systems ecology view of sustainable bioenergy research. Annual Wisconsin Bioenergy Summit, Madison, WI, 6 October, 2011 (no abstract, nonrefereed, invited talk).
  50. **Kucharik, C.J.**, 2011. Bioenergy Sustainability Research at the Arlington Agricultural Research Station. Annual Wisconsin Crop Management Conference, Madison, WI, 11-13 January, 2011 (no abstract, nonrefereed, invited talk).
  51. **Kucharik, C.J.**, 2011. Climate Change and Water Availability. Annual Wisconsin Crop Management Conference, Madison, WI, 11-13 January, 2011 (no abstract, nonrefereed, invited talk).
  52. †**Kucharik, C.J.**, 2011. Recent Climate Change Across Wisconsin and Impacts on Agriculture. Annual Wisconsin Fresh Fruit and Vegetable Conference, Wisconsin Dells, WI, 2-4 January, 2011 (no abstract, nonrefereed, invited talk).
  53. Sacks, W.J. and **C.J. Kucharik**, 2010. Trends in crop management and phenology in the U.S. Corn Belt and impacts on yields, evapotranspiration and energy balance. American

- Geophysical Union Annual Fall Meeting, San Francisco, CA, 13-17 December 2010 (abstract, nonrefereed, talk).
54. <sup>†</sup>**Kucharik, C.J.**, 2010. Observations of Recent Climate Change Across Wisconsin. 7<sup>th</sup> Annual Green Energy Summit: The New Green Economy, Milwaukee, WI, 24-26 March 2010 (abstract, nonrefereed, invited talk).
  55. Herrick, B.M., S.B. Glass, and **C.J. Kucharik**, 2010. Climate change and ecological restoration at the University of Wisconsin-Madison Arboretum. Midwest-Great Lakes Chapter of the Society for Ecological Restoration 2nd Annual Chapter Meeting. 9-10 April 2010 Madison, WI (abstract, nonrefereed, talk).
  56. Stanley, E.H.; L. Beversdorf; S. R. Carpenter; P. C. Hanson; Y. F. Hsieh; R. J. Hunt; E. Kara; A. M. Kamarainen; **C. J. Kucharik**; R. C. Lathrop; K. D. McMahon; T. Miller; J. F. Walker; C. H. Wu, 2009. Limnological consequences of climate change in Wisconsin lakes: the North Temperate Lakes Long Term Ecological Research Program. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 14-18 December, 2009 (abstract, nonrefereed, invited talk).
  57. Twine, T.E. and **C. J. Kucharik**, 2009. Capturing Crop Response to Climate and Management Variability in Models: Evaluation Using FLUXNET Data with Applications at the Regional Scale. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 14-18 December, 2009 (abstract, nonrefereed, talk).
  58. Logan, K.E., **C. J. Kucharik**, and A. Schneider, 2009. Urban Impact at the Urban-Agricultural Interface in Madison, WI: an Ecosystem Modeling Approach. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 14-18 December, 2009 (abstract, nonrefereed, poster).
  59. Licker, R., **C. J. Kucharik**, J.A. Foley, M. Johnston, C. Monfreda, N. Ramankutty, 2009. Using global land cover data to assess regional food production potential. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 14-18 December, 2009 (abstract, refereed, poster).
  60. Schwalm, C., C.A. Williams, K. Schaefer, and NACP contributors (**C.J. Kucharik** one of 20+ other contributors to this group project), 2009. Intercomparison of modeled and observed net ecosystem productivity during drought. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 14-18 December, 2009 (abstract, nonrefereed, talk).
  61. Levis, S., G.B. Bonan, and **C. Kucharik**, 2008. Dynamic Crop Life Cycles in the CCSM. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 15-19 December, 2008 (abstract, nonrefereed, talk).
  62. **Kucharik, C.J.**, 2008. Impacts of Changing Climate and Management on Midwest Agriculture. 2008 Ecological Society of America Annual Meeting. Milwaukee, WI, 3-8 Aug 2008 (abstract, nonrefereed, invited talk).
  63. **Kucharik, C.J.**, 2007. Influence of prairie age and soil order on carbon sequestration in Wisconsin CRP Lands. 2007 Ecological Society of America annual meeting. San Jose, CA, 5-10 August 2007 (abstract, nonrefereed, invited talk).
  64. Post, W.M., T. King, L. Gu, F. Hoffman, **C. Kucharik**, W. Parton, M. Torn, and D. Miller. An Integrated Terrestrial Carbon Model (ITCM) for North America: Constraining Process Models with Experiments and Measurements for Analysis and Projection, 2007. U.S. North American Carbon Program (NACP) Investigators Meeting, January 22-24, 2007, Colorado Springs, CO (abstract, nonrefereed, talk).

65. Munger, W.J., S.P Urbanski, C. Barford, S.C. Wofsy, **C. Kucharik**, E. Hammond-Pyle, J. Budney, K. McKain, N. Pederson, and D. Fitzjarrald, 2007. Trends in CO<sub>2</sub> exchange at Harvard Forest. U.S. North American Carbon Program (NACP) Investigators Meeting, January 22-24, 2007, Colorado Springs, CO (abstract, nonrefereed, talk)
66. Jelinski, N.A., J.B. Zedler, and **C.J. Kucharik**, 2007. Carbon sequestration, land use and vegetation change: Prospects for a southern Wisconsin floodplain. Wisconsin Wetlands Association's 12th Annual Wetland Science Forum, La Crosse WI, February 1-2 2007 (abstract, nonrefereed, talk).
67. **Kucharik, C.J.** and T.E. Twine, 2006. Residue and Residuals: Evaluation of an agroecosystem model using eddy flux measurements and other ecological data. 2006 American Geophysical Union Annual Fall Meeting. San Francisco, CA, 11-15 December 2006 (abstract, nonrefereed, invited talk).
68. West, P.C., J.A. Foley, **C.J. Kucharik**, and C. Barford, 2006. Spatial distribution of ecosystem services within large river basins. International Conference on Rivers and Civilization, La Crosse, Wisconsin, June 25-28, 2006 (abstract, nonrefereed, talk).
69. Donner, S.D. and **C.J. Kucharik**, 2006. Large-scale modeling: IBIS-THMB Dynamic Modelling system. Environmental Protection Agency (EPA) Nutrient Sources, Transport, and Fate Symposium. Minneapolis, MN, Nov 7-9, 2006 (abstract, nonrefereed, talk).
70. **Kucharik, C.J.**, 2005. Using the USDA Weekly Crop Progress Record to Document Trends in Corn Planting Date From 1979 to 2005. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December, 2005 (abstract, nonrefereed, talk).
71. Donner, S.D., Twine, T.E., **Kucharik, C.J.**, and M. Oppenheimer, 2005. Can the Climate be Used Predict Annual Nitrogen Flux by the Mississippi River and the Extent of Gulf Hypoxia? American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December, 2005 (abstract, nonrefereed, talk).
72. Howard, E.A., Coleman, K.J., Barford, C.C., **Kucharik, C.**, Foley, J.A., 2005. When the globe is your classroom: teaching and learning about large-scale environmental change online. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December, 2005 (abstract, nonrefereed, poster).
73. Twine, T.E., and **C.J. Kucharik**, 2005. Incorporating agricultural ecosystems into a dynamic global vegetation model for climate change studies. Annual meeting of the Ecological Society of America, Montréal, Canada, August 7-12, 2005 (abstract, nonrefereed, invited talk).
74. Vano, J.A., Foley, J.A., **Kucharik, C.J.**, Coe, M.T., 2005. Investigating the Influences of Climatic Variability and Land Cover Change on the Land Surface Hydrology of Northern Wisconsin, USA. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 5-9 December, 2005 (abstract, nonrefereed, talk).
75. **Kucharik, C.J.**, 2004. Incorporating representation of agricultural ecosystems and management within a dynamic biosphere model: Approach, validation, and significance. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 13-17 December 2004 (abstract, nonrefereed, invited talk).
76. Vano, J.A., J.A. Foley, M.T. Coe, and **C.J. Kucharik**, 2004. Modeling the effects of heterogeneity on landscape water and energy balances in northern Wisconsin. Ecological Society of America Annual Meeting, Portland, OR, 1-6 August, 2004 (abstract, nonrefereed, talk).

77. **Kucharik, C.J.** and **Fayram, N.J.**, 2004. Gauging restoration success at Curtis prairie: Assessing structure and function using comparative measurements of the carbon cycle. North American Prairie Conference, Madison, WI, 8-12 August 2004 (abstract, nonrefereed, invited talk).
78. **Vano, J.A.**, J.A. Foley, **C.J. Kucharik**, and M.T. Coe, 2004. Evaluating the Influence of Various Vegetation and Soil Types on Water and Energy Balances in Northern Wisconsin Using a Dynamic Biosphere Model. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 13-17 December, 2004 (abstract, nonrefereed, talk).
79. **Twine, T.E.** and **C.J. Kucharik**, 2004. An Inter-comparison of Vegetation Greenness From Satellite Observations and a Terrestrial Ecosystem Model. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 13-17 December, 2004 (abstract, nonrefereed, talk).
80. **Twine, T.E.**, **C. Kucharik**, M. Coe, **S. Donner**, J. Lenters, and J. Foley, 2003. Evaluating the effects of land cover change on the hydrology of the Mississippi River Basin. 83rd Annual American Meteorological Society meeting and 17th Annual Conference on Hydrology, February 9-13, 2003, Long Beach, CA (abstract, nonrefereed, talk).
81. **Donner, S.D.** and **C.J. Kucharik**, 2003. The impact of changing cropping practices on nitrate export by the Mississippi River since 1960. American Geophysical Union Chapman Conference, June 14-18, Santa Fe, NM, 2003 (abstract, nonrefereed, talk).
82. **Kucharik, C.J.** and **M. El Mayaar**, 2003. Simulation of the seasonal and interannual variability of carbon and water cycles within three mid-latitude forests using a Dynamic Global Vegetation Model. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 8-12 December, 2003 (abstract, nonrefereed, poster).
83. **Kucharik, C.J.**, 2003. Simulations of decadal-scale climate change impacts on agriculture: Attributing trends in regional corn yields to physiological effects versus adjusted farm management. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 8-12 December, 2003 (abstract, nonrefereed, talk).
84. **Cahill, K.N.**, J.A. Foley, and **C.J. Kucharik**, 2003. Large uncertainties in estimating grassland carbon fluxes: Can net ecosystem production be inferred? American Geophysical Union Annual Fall Meeting, San Francisco, CA, 8-12 December, 2003 (abstract, nonrefereed, poster).
85. **Donner, S.D.**, **C.J. Kucharik**, and J.A. Foley, 2003. The impact of changing land use practices on nitrate export by the Mississippi River. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 8-12 December, 2003 (abstract, nonrefereed, talk).
86. **Twine, T.E.**, M.T. Coe, J.D. Lenters, **C.J. Kucharik**, **S.D. Donner**, and J.A. Foley, 2002. Evaluating the effects of land cover change on the hydrology of the Mississippi River Basin. Mississippi River Climate and Hydrology Conference, New Orleans, LA, May 13-17, 2002 (abstract, nonrefereed, talk).
87. **Donner, S.D.**, M.T. Coe, and **C.J. Kucharik**, 2002. Evaluating the impacts of land management and climate variability on nitrate export in the Upper Mississippi River basin. Mississippi River Climate and Hydrology Conference, New Orleans, LA, May 13-17, 2002 (abstract, nonrefereed, talk).
88. **Brye, K.R.**, and **C.J. Kucharik**, 2002. Soil carbon and bulk density in two restored prairie topochronosequences on contrasting soils in southern Wisconsin. Annual meeting

- of the Soil Science Society of America, Indianapolis, IN, 11-14 November, 2002 (abstract, nonrefereed, poster).
89. **Kucharik, C.J., J.A. Roth,** and R.T. Niebelski, 2002. Statistical assessment of a paired-site approach for verification of C and N sequestration on Wisconsin CRP land. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 6-10 December, 2002 (abstract, nonrefereed, poster).
  90. Howard, E., S.T. Gower, J.A. Foley, and **C.J. Kucharik**, 2002. Effects of logging on carbon dynamics of a jack pine forest chronosequence in Saskatchewan, Canada. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 6-10 December, 2002 (abstract, nonrefereed, poster).
  91. Cahill, K., **C.J. Kucharik**, J.A. Foley, and T.C. Balsler. Carbon cycling in restored Wisconsin grasslands: Examining linkages between plant diversity, microbial communities, and ecosystem function. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 6-10 December, 2002 (abstract, nonrefereed, poster).
  92. Dripps, W.R., **Kucharik, C.J.,** Lenters, J.D., Anderson, M.P. and J.A. Foley, 2001. Modeling the Spatial and Temporal Distribution of Groundwater Recharge Across a Forested Watershed in northern Wisconsin. American Geophysical Union annual Spring Meeting, 29 May – Jun 2 Boston, MA, 2001 (abstract, nonrefereed, poster).
  93. Donner, S.D., **C.J. Kucharik**, and J.A. Foley, 2001. The impact of hydrology and agricultural activity on nitrate export by the Mississippi River. North American Benthological Society Annual Meeting, LaCrosse, WI 3-8 June 2001 (abstract, nonrefereed, talk).
  94. **Kucharik, C.J.,** J.A. Foley, C. Delire, N. Ramankutty, 2001. Testing the performance of a Dynamic Global Ecosystem Model: Water balance, carbon balance, and vegetation structure. International Geosphere-Biosphere Program (IGBP) Global Change Open Science Conference, The Netherlands, 10-13 July 2001 (abstract, nonrefereed, poster).
  95. **Kucharik, C.,** K. Brye, C. Molling, and S. Donner, 2001. Applying global ecosystem modeling tools to agriculture: continental-scale food production to precision-farming. International Geosphere-Biosphere Program (IGBP) Global Change Open Science Conference, The Netherlands, 10-13 July 2001 (abstract, nonrefereed, poster).
  96. Brye, K. and **C. J. Kucharik**, 2001. Carbon sequestration in two restored prairie chronosequences on contrasting soils in southern Wisconsin. Ecological Society of America Annual Meeting, Madison WI, 5-10 August 2001 (abstract, nonrefereed, talk).
  97. Donner, S., **C. Kucharik**, M.T. Coe, and J.A. Foley, 2001. The impact of hydrology and agricultural activity on nitrate export in the Mississippi River system. Ecological Society of America Annual Meeting, Madison WI, 5-10 August 2001 (abstract, nonrefereed, talk).
  98. **Kucharik, C.J.** and K.R. Brye, 2001. IBIS yield and nitrate loss predictions for maize agroecosystems receiving varied N-fertilizer. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 10-14 December, 2001 (abstract, nonrefereed, poster).
  99. Twine, T., M.T. Coe, J.A. Foley, J. Lenters, and **C.J. Kucharik**, 2001. Investigating the Effects of Land Cover Change on the Hydrology of the Mississippi River Basin. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 10-14 December, 2001 (abstract, nonrefereed, talk).
  100. Donner, S. and **C.J. Kucharik**, 2001. Evaluating the impacts of climate variability and land management on nitrate export and crop production across the Upper

- Mississippi Basin. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 10-14 December, 2001 (abstract, nonrefereed, talk).
101. **Kucharik, C.J.**, and K.R. Brye, 2000. Assessing the impact of prairie restoration and agricultural land use on soil carbon dynamics in southern Wisconsin. Ecological Society of America Annual Meeting, Snowbird, UT, 6-10 August 2000 (abstract, nonrefereed, talk).
  102. **Kucharik, C.J.**, Foley, J.A., C. Delire, M.T. Coe, J.D. Lenters, and N. Ramankutty, 1999. The IBIS-2 Dynamic Global Biosphere Model: Model Formulation and Evaluation. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 13-17 December, 1999 (abstract, nonrefereed, talk).
  103. **Kucharik, C.J.**, Foley, J.A., C. Delire, V. Fisher, M.T. Coe, S.T. Gower, J.D. Lenters, C. Young-Molling, *J.M. Norman*, and N. Ramankutty, 1999. The IBIS-2 Dynamic Global Biosphere Model: Model Formulation and Evaluation. Ecological Society of America Annual Meeting, Spokane, WA, 8-12 August, 1999 (abstract, nonrefereed, talk).
  104. **Kucharik, C.J.** and *J.M. Norman*, 1997. Characterizing the radiation regime in nonrandom forest canopies. American Geophysical Union Annual Fall Meeting, San Francisco, CA, 8-12 December, 1997 (abstract, nonrefereed, talk).
  105. **Kucharik, C.J.** and *J.M. Norman*, 1996. Measuring canopy architecture with a Multiband Vegetation Imager. American Meteorological Society and Proceedings of the 22<sup>nd</sup> Conference of Agricultural and Forest Meteorology, 28 January – 2 February, Atlanta, GA 1996 (abstract, nonrefereed, talk).

***Nonrefereed publications not included above***

1. Wisconsin Governor's Task Force on Global Warming, 2008. Wisconsin's Strategy for Reducing Global Warming. Final Report to Governor Jim Doyle. 232 pp. Madison, WI.
2. Wisconsin Initiative on Climate Change Impacts, 2011. First Adaptive Assessment Report. 172 pp. Madison, WI.

***Unpublished technical reports***

N/A

***Publications by candidate's postdocs and students that do not include candidate as a co-author***

1. Sacks, W.J., D. Deryng, J.A. Foley, and N. Ramankutty (2010). Crop planting dates: an analysis of global patterns. *Global Ecology and Biogeography* DOI: 10.1111/j.1466-8238.2010.00551.x, 1-14. (I helped advise on acquisition of USDA datasets)
2. Sacks W.J., B.I. Cook, N. Buening, S. Levis, and J.H. Helkowski (2009). Effects of global irrigation on the near-surface climate. *Climate Dynamics* 33,159–175. doi:10.1007/s00382-008-0445-z. (I advised the research team on irrigation datasets and modeling approaches to irrigation demand in ecosystem models).

3. Zaks D.P.M., C.C. Barford, N. Ramankutty, and J.A. Foley (2009). Producer and consumer responsibility for greenhouse gas emissions from agricultural production – A perspective from the Brazilian Amazon. *Environmental Research Letters* 4 044010 (12pp) doi:10.1088/1748-9326/4/4/044010. (I advised the research team on connections between global agriculture and greenhouse gas emissions).
4. Zaks, D.P.M., N. Ramankutty, C.C. Barford, and J.A. Foley (2007), From Miami to Madison: Investigating the relationship between climate and terrestrial net primary production, *Global Biogeochem. Cycles*, 21, GB3004, doi:10.1029/2006GB002705. (I advised the research team on connections between climate and plant productivity, and how it is simulated in ecosystem models).

### Outreach Publications

1. **Kucharik, C.J.** and P. Nowak, 2011. *Agriculture and Climate Change in Wisconsin*. Agriculture Working Group Contribution to the Wisconsin Initiative on Climate Change Impacts First Adaptive Assessment Report.
2. Kraft, G., S. Greb, and **C.J. Kucharik**, 2011. *Climate Change Influences on Wisconsin Central Sands Hydrology and Aquatic Ecosystems*. Central Sands Hydrology Working Group Contribution to the Wisconsin Initiative on Climate Change Impacts First Adaptive Assessment Report.
3. Vimont, D. J., **C. Kucharik**, D. Lorenz, M. Notaro, S. Vavrus and K. Holman, 2011. *Climate Change in Wisconsin*. Climate Working Group Contribution to the Wisconsin Initiative on Climate Change Impacts First Adaptive Assessment Report.
4. **Kucharik, C.J.**, 2008. Five things everyone should know about: Carbon offsets. *Grow Magazine*, UW-Madison College of Agricultural and Life Sciences communication program.

### Postdoctoral Scientists Advised

#### *Present:*

Zhang, J. (Ph.D. Lehigh University, 2016). Supported on UW2020 funded project “Anticipating Abrupt Ecological Change in Ecosystems (ACES)”.

Booth, E. (Ph.D. University of Wisconsin-Madison, 2011). 2011-present. Supported on NSF Water Sustainability and Climate Program effort in Yahara watershed

#### *Previous:*

Twine, Tracy (Ph.D. University of Wisconsin-Madison). 2004.

El Maayar, Mustapha (Ph.D. University of Toronto). 2002-2003.

Chen, Xi (Ph.D. University of Central Florida, 2014). 2014-2106. Supported on NSF Water Sustainability and Climate Program effort in Yahara watershed focusing on hydrologic modeling.



Singh, Aditya (Ph.D., University of Wisconsin-Madison, 2014). 2014-2016. Supported on USDA AFRI bioenergy grant focusing on Agro-IBIS modeling of climate and soybean aphid impacts on yield and other ecosystem services across southern Wisconsin.

Soylu, Evren (Ph.D., University of Nebraska-Lincoln, 2011). 2011-2014. Supported on NSF Water Sustainability and Climate Program effort in Yahara watershed focusing on land-surface/groundwater modeling.

Schatz, J. (Ph.D. University of Wisconsin-Madison, 2015). 2015-present. Supported on NSF Water Sustainability and Climate Program effort in Yahara watershed focusing on Urban Heat Island studies.

### **Research Students Advised**

#### *Present Graduate Students:*

Masarik, Kevin (Ph.D., expected spring 2019; Nelson Institute Environment and Resources). Tentative research: impacts of N-fertilizer use on groundwater and surface water quality. **NOTE:** *Kevin is a University Fellowship award winner for fall 2014.*

Motew, Melissa (Ph.D. expected Spring 2017; Nelson Institute Environment and Resources). Thesis title: Impacts of historical and future climate change on the potential vegetation distribution across the Midwest US.

Nocco, Mallika (Ph.D. expected summer 2017): Nelson Institute Environment and Resources). Ph.D. thesis title: Impacts of climate and land management on groundwater recharge in the Wisconsin Central Sands. **NOTE:** *Mallika was awarded an EPA-STAR two-year graduate fellowship in spring of 2014.*

Von Haden, Adam (Ph.D. expected spring 2017; Nelson Institute Environment and Resources). Ph.D. topic: C cycling and stabilization in bioenergy cropping systems.

McNamee, Elizabeth (Ph.D. expected summer 2020; Agronomy). Thesis title: Impacts of varied irrigation management strategies on water balance in the Wisconsin Central Sands.

Campbell, Tracy (M.S. expected summer 2018; Agroecology). Thesis research: Agroecoinformatics and soil biogeochemistry.

#### *Past Graduate Students:*

2016: M.S.: Leytem, Paige. Agroecology program, thesis track. M.S. thesis title: Assessing the potential of Pearl Millet as a cover crop in the Wisconsin Central Sands.

2015: Ph.D.: Cruse, Michael. Nelson Institute Environment and Resources. Ph.D. thesis title: Quantifying Carbon Exchange in Midwest U.S. Bioenergy Cropping Systems after Land-use Change: The Effects of Drought and Uncertainty in Model Predictions. Current position: with University of Minnesota Extension.

2015: Ph.D.: Schatz, Jason. Nelson Institute Environment and Resources. Ph.D. thesis title: The Urban Climate of Madison, Wisconsin. Current position: UW-Madison, postdoctoral scientist.

- 2014: M.S.: Mork (Perillo), Amelia. Nelson Institute Environment and Resources. Thesis title: Soybean aphid impacts on plant photosynthesis and productivity in southern Wisconsin: effects of population density and timing of introduction. Current position: Greenhouse manager, Bloomington, Indiana.
- 2014: M.S.: Gaillard, Richard, Agroecology program. Thesis title: Soil N<sub>2</sub>O emissions from corn and soybean agriculture in Wisconsin: simulated causes of spatial and temporal variability. Current position: Ph.D. student, Nelson Institute for Environmental Studies, UW-Madison.
- 2013: M.S.: Duran, Brianna Laube, Nelson Institute Environment and Resources. M.S. thesis title: Nitrogen pollution and productivity in bioenergy grasslands: do diversity and fertilizer management matter? Current position: unknown.
- 2012: Ph.D.: Licker, Rachel, Nelson Institute Environment and Resources. Ph.D. thesis title: Biophysical and socioeconomic drivers of crop yield gaps between the U.S., France, and the former Soviet Union. Current position: Postdoctoral fellow, Princeton University.
- 2012: Ph.D.: Sanford, Gregg, Agronomy; Ph.D. thesis title: Long-term differences in soil carbon dynamics at the Wisconsin Integrated Cropping Systems Trial (WICST). Current position: research specialist for GLBRC at UW-Madison.
- 2011: M.S.: Motew, M.M: Thesis title: “Climate induced changes in natural ecosystems of the Midwest U.S.” Current position: PhD candidate, UW-Madison Nelson Institute Environment and Resources Program.
- 2010: Ph.D.: LeZaks, David: Dissertation title: “Reducing environmental externalities from agricultural production: methods, models, and policies”. Current position: honorary research fellow at The Nelson Institute (SAGE).
- 2010, M.S.: Kelly E. Logan: Thesis title: “Impacts of urbanization on energy balance, net primary production, and surface runoff in the U.S. Corn Belt: an ecosystem modeling approach across three metropolitan areas” (co-advised with Annemarie Schneider; Kucharik contributed to 50% of the advising). Current position: Research intern in Washington D.C. area.
- 2010, Ph.D.: William J. Sacks: Dissertation title: “Improving the representation of agricultural land management in land surface models”. Current position: Research scientist at National Center for Atmospheric Research.
- 2007, M.S.: Nicolas A. Jelinski: Thesis title: “Carbon, Land-use and vegetation change: assessing a southern Wisconsin Floodplain” (co-advised with Joy Zedler; Kucharik contributed to 80% of advising). Current position: Assistant Professor, University of Minnesota.
- 2005, M.S.: Julie A. Vano: Thesis title: “Land surface hydrology in northern Wisconsin, USA: influences of climate variability and land cover” (co-advised with Jon Foley and Michael Coe; Kucharik contributed to 33% of advising). Current position: Ph.D. candidate, University of Washington.

- 2004, M.S.: Heather Kelley (non-thesis option in Environmental Monitoring). Current position: Geographic Information Systems (GIS) specialist with Matanuska Susitna Borough (Palmer, Alaska).
- 2003, M.S.: Kim Nicholas-Cahill: Thesis title: “Issues in evaluating carbon sequestration and attributing carbon credits to grassland restoration efforts” (co-advised with Jon Foley; Kucharik contributed to 80% of advising). Current position: Assoc. Professor, Lund University, Sweden.
- 2002, M.S.: Johna A. Roth: Thesis title: “Carbon Sequestration in Dane County: a comparative analysis of the scientific and economic feasibility of grassland to offset power plant emissions”. Current position: Certified Project Manager and evaluation consultant with TecMarket Works, Madison WI.

*Past Undergraduate Students (theses):*

- 2010, B.S., Brianna Laube, Senior Honors Thesis (Botany). Thesis title: “Environmental and temporal effects on soil respiration in bioenergy cropping systems”. Current position: M.S. Environment and Resources program, The Nelson Institute, University of Wisconsin-Madison.
- 2008, B.S., Rachael Steller, Senior Honors Thesis (Biological Aspects of Conservation). Thesis title: “Testing the design of soil incubation chambers on measurements of soil C mineralization” (co-advised with Teri Balsler; Kucharik provided 95% of advising). Current position: Student, Maurer School of Law at Indiana University-Bloomington.
- 2007, B.S., Anne Drehfal, Senior Honors Thesis (Molecular Biology). Thesis title: “An initial assessment of biogeochemical cycling and ecosystem structure and function at Biocore prairie” (co-advised with Teri Balsler; Kucharik provided 95% of advising). Current position: Midwest Permaculture.
- 2003, B.S., Nathan Fayram, Senior Thesis (Botany and Biological Aspects of Conservation). Thesis title: “Assessing Aboveground and Belowground Structure and Function in Curtis and Greene Prairies at the University of Wisconsin Arboretum” (co-advised with Don Waller; Kucharik provided 95% of advising). Current position: Director of Land Management, Mississippi Valley Conservancy, LaCrosse, WI.
- 2002, B.S., Erica Grimm, Senior Honors Thesis (Botany). Thesis title: “Assessing differences in ecological and biogeochemical functioning in the UW Arboretum prairies” (co-advised with Jon Foley; Kucharik provided 90% of advising). Current position: Emergency medicine resident program at Stanford University School of Medicine.
- 2000, B.S., Paul Stoy, Senior Honors Thesis (Botany, Zoology). Thesis title: “Assessing the impact of prairie restoration soil carbon storage” (co-advised with Jon Foley; Kucharik provided 90% of advising). Current position: Asst. Professor, Montana State Univ.

*Thesis and Dissertation Committees:*

Currently serving on 17 graduate committees (does not include my own students):

Ruben Behnke (M.S., 2011); Kristin Charipar (M.S., 2011); Jereme Gaeta (Ph.D., 2012); Natalie Hunt (Ph.D., 2013); Sami Khanal (Ph.D., 2012); Beth Lawrence (Ph.D., 2010); Mitch Myhre (M.S., 2010); Evan Murdock (Ph.D., current); Jason Patton (M.S., 2010); Scott Peckham (Ph.D., 2011); Steve Plachinski (M.S., 2010); Jessica Price (Ph.D., 2016); Shawn Serbin (Ph.D., 2011); Julie Sinistore (Ph.D., 2012); A. Peyton Smith (Ph.D., 2013); Christopher Stillion (M.S., 2011); Devin Wixon (Ph.D., 2012); Yang Yang (Ph.D., 2015), Caitlin Kontgis (Ph.D., 2016); Gina Cook (M.S., current); Jiangxiao Qiu (Ph.D., 2016); Kaitlin Stack Whitney (Ph.D., 2016); Kelly Wilhelm (Ph.D., current); Tyler Lark (Ph.D., current); Maciek Kazula (Ph.D., 2016); Rebecca Redline (M.S. 2015), Sabrina Ruis (Ph.D. 2015); Rose Graves (Ph.D., current); Yanghui Kang (M.S., 2013; Ph.D., current); Sam Zipper (Ph.D., 2015); Cathy Day (Ph.D., current); Lei Gu (Ph.D., current); Melanie Stock (Ph.D., current); Tedward Erker (Ph.D., current); Anna Cates (Ph.D., current); Vaishnavi Tripuraneni (Ph.D., current); Carly Ziter (Ph.D., current); Ke Wu (Ph.D., current); Sarah Fuller (M.S., current); Niels Jorgensen (Ph.D., current); Camilo Villouta Albornoz (Ph.D., current); Jeffrey Spencer Evans (Ph.D., current); Kristin Braziunas (Ph.D., current).

**Invited Research Presentations and Seminars** († denotes keynote presentation)

1. Kucharik, C.J. Scenarios, Simulations, and Sustainability Science: Thinking about the future of the Yahara Watershed in southern Wisconsin. Noon@Niche (WID) talk, February 3, 2016, UW-Madison.
2. Kucharik, C.J. Scenarios, Simulations, and Sustainability Science: Thinking about the future of the Yahara Watershed in southern Wisconsin. Invited talk at Indiana University, April 14, 2016. Bloomington, Indiana.
3. Kucharik, C.J. The Water Sustainability and Climate program at UW-Madison: Yahara 2070 – A vision for the future. Guest Lecture in Robin Mittenthal’s environmental health course. May 16, 2016.
4. Kucharik, C.J. Climate change: scientific facts and political persuasion. Guest lecture in CALS 155 freshman course. November 6, 2015, UW-Madison.
5. Kucharik, C.J. Climate change and Agriculture. Guest lecture in AOS332 (McKinley). March 17, 2015.
6. †Kucharik, C.J. Using integrated scenarios to envision ecosystem response to land use and climate change by the year 2070 in the Yahara Watershed. Wisconsin Academy of Arts, Letters, and Science (taped for re-broadcast on University Place on Wisconsin Public TV). February 3, 2015, Madison WI.
7. Kucharik, C.J. Using integrated scenarios to envision ecosystem response to land use and climate change by the year 2070 in the Yahara Watershed. UW-Madison Livable Cities Symposium. May 12, 2015, Pyle Center, Madison Wisconsin.
8. Kucharik C.J. An overview of Yahara 2070. Nelson Institute Earth Day event, April 20, 2015. Monona Terrace, Madison, Wisconsin.
9. Kucharik, C.J. Building a sustainable biofuels future. UW-Madison Center for Climatic Research Climate Change Symposium. March 6, 2015.
10. Kucharik, C.J. Agricultural impacts on water quality and quantity in Wisconsin. Water@UW Symposium, May 11, 2015. Madison, Wisconsin.

11. Kucharik, C.J. Impacts of changing climate on agriculture. Guest interview/lecture for the new UW-Madison MOOC on Climate Change organized by Steve Ackerman and Margaret Mooney. January 23, 2015.
12. Kucharik, C.J. Yahara 2070: What we've learned from the development of scenarios for problem solving in the Yahara watershed. Badger Bioneers conference hosted by Sustain Dane, November 19, 2014, Madison, WI.
13. Kucharik, C.J. Climate change: scientific facts and political persuasion. Guest lecture in CALS 155 freshman course. November 6, 2014, UW-Madison.
14. Kucharik, C.J. Water Sustainability and Climate project update to Clean Lakes Task Force. April 2, 2014, Madison, WI.
15. Kucharik, C.J. Recent climate change and impacts to Wisconsin Agriculture. DATCP Organic Advisory Council monthly meeting, January 15, 2014. DATCP, Madison WI.
16. Kucharik, C.J. Recent climate change and impacts to Wisconsin Agriculture in the Central Sands. Annual Wisconsin Potato and Vegetable Grower Association annual meeting. February 4, 2014, Stevens Point, WI.
17. Kucharik, C.J. Introduction to the UW-Madison Water Sustainability and Climate Project in the Yahara Watershed. UW-Madison Sustainability Forum, February 27, 2014, UW-Madison, Madison, WI.
18. Kucharik, C.J. and R.D. Jackson. Climate change and impacts to grazing systems. Annual WI Grazing Conference, Wausau WI, January 17, 2013.
19. Kucharik, C.J. Climate change impacts on food and agriculture. CALS Sustainable Food Seminar Series, March 5, 2013. UW-Madison.
20. Kucharik, C.J. Climate change in Wisconsin. Madison Kiwanis monthly meeting, March 18, 2013. Madison DoubleTree hotel, Madison, WI.
21. Kucharik, C.J. Climate change and agriculture: a two-way street. Lecture in IES 332, March 21, 2013, UW-Madison.
22. Kucharik, C.J. Climate change in Wisconsin and impacts on water resources. DNR Statewide Meeting, April 3, 2013, Pyle Center, Madison, WI.
23. Kucharik, C.J. Water sustainability and climate in the Yahara Watershed. UW Nelson Institute Earth Day Conference, April 15, 2013, Monona Terrace, Madison, WI.
24. †Kucharik, C.J. Developing a Framework to study the impacts of climate change, land use, and urbanization on ecosystem services in the Yahara Watershed. Invited lecture at the University of Iowa, April 28-30, Iowa City, Iowa.
25. Kucharik, C.J. Climate change in WI and impacts on grazing systems. Monthly meeting of the grazers network in Marathon County, WI. May 27, 2013, Wausau, WI.
26. Kucharik, C.J. Developing a Framework to study the impacts of climate change, land use, and urbanization on ecosystem services in the Yahara Watershed. Invited lecture at CPEP, UW-Madison, September 20, 2013.
27. Kucharik, C.J. Climate change: scientific facts and political persuasion. Guest lecture in CALS 155 freshman course. November 7, 2013, UW-Madison.
28. Kucharik, C.J. Building a sustainable bioenergy future. Guest lecture in Engineering Physics 602, November 9, 2013, UW-Madison.
29. Kucharik, C.J. Forward thinking for the Yahara Watershed: A framework to assess the impacts of future climate change, land use and urbanization on ecosystem services. UW Agronomy department seminar, November 13, 2013.

30. †Kucharik, C.J. Climate change in Wisconsin and Impacts on Agriculture. Discovery Farms meeting, December 12, 2012, Wisconsin Dells, WI.
31. Kucharik, C.J. Recent climate change in Wisconsin. Stakeholders forum/meeting on WI Central Sands Water Issues. May 22, 2012. Wautoma, WI.
32. †Kucharik, C.J. Agroecology in the Corn Belt: A broad perspective on connections between climate, land management, and ecosystem services. Kellogg Biological Station, Michigan State University, April 20, 2012.
33. Kucharik, C.J. Climate Change and Wisconsin Agriculture. UW-Madison LaFollette Institute Celebration of 100 years of the Wisconsin Idea. April 26, 2012. Madison, WI.
34. †Kucharik, C.J. Connections Between Climate, Land Management, and Ecosystem Services in the Midwest USA. University of Illinois, EBI, April 27, 2012.
35. Kucharik, C.J., 2011. Climate change and impacts on Wisconsin agriculture. 2011 Annual Meeting of Wisconsin Crop Improvement Association, Madison, WI, 29 November, 2011.
36. Kucharik, C.J., 2011. A cropping systems ecology view of sustainable bioenergy research. Annual Wisconsin Bioenergy Summit, Madison, WI, 6 October, 2011.
37. Kucharik, C.J., 2011. Wisconsin Annual Crop Management Conference. Climate Change and Water Availability. Madison, Wisconsin. January 12, 2011.
38. Kucharik, C.J., 2011. Wisconsin Annual Crop Management Conference. Update on Bioenergy Research at the Arlington Agricultural Research Station. Madison, Wisconsin. January 12, 2011.
39. †Kucharik, C.J., 2011. Wisconsin Fresh Fruit and Vegetable Conference. Recent climate change across Wisconsin and Potential Impacts on Agriculture. Wisconsin Dells, Wisconsin. January 3, 2011.
40. Kucharik, C.J., 2010. 3<sup>rd</sup> Agro-IBIS Modeling Workshop. Recent improvements to Agro-IBIS and applications for dynamic vegetation and fire modeling across the Midwest. Minneapolis Minnesota. October 15, 2010.
41. Kucharik, C.J., 2010. Columbia County Corn Growers Summer Meeting. Climate Change and Impacts on Wisconsin Agriculture. Hampden, Wisconsin. August 17, 2010.
42. Kucharik, C.J., 2010. Wisconsin Initiative on Climate Change Impacts (WICCI) Advisory Committee Meeting. Agriculture Working Group Update. Madison, Wisconsin. May 25, 2010.
43. Kucharik, C.J., 2010. 2<sup>nd</sup> Agro-IBIS Modeling Workshop. Overview of Agro-IBIS and applications for precision farming. Iowa State University, Ames, Iowa. April 14, 2010.
44. †Kucharik, C.J., 2010. Seventh Annual Green Energy Summit: The New Green Economy. Observations of Recent Climate Change Across Wisconsin. Midwest Express Center, Milwaukee Wisconsin. March 25, 2010.
45. Kucharik, C.J., 2010. Annual Wisconsin Ecology Faculty Dinner. Climate change in Wisconsin. Madison, Wisconsin. March 3, 2010.
46. Kucharik, C.J., 2010. Wisconsin Grasslands Bioenergy Symposium. Carbon Sequestration and the CRP: A Case Study of Southern Wisconsin. Madison, Wisconsin. February 16, 2010.
47. Kucharik, C.J., 2010. Wisconsin Focus on Energy Symposium on Energy, Climate, and Carbon in Wisconsin. Impacts of Climate Change and CO<sub>2</sub> on Wisconsin Agriculture. Concourse Hotel, Madison Wisconsin. January 15, 2010.

- Kucharik, C.J., 2010. Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) monthly Board of Directors meeting. Recent Climate Change Across Wisconsin and Impacts on Wisconsin Agriculture. Madison, Wisconsin. January 12, 2010.
48. †Kucharik, C.J., 2009. North Central Weed Science Society (NCWSS) 64th Annual Meeting. Building a Sustainable Biofuels Future. Kansas City, MO. December 8, 2009.
  49. Kucharik, C.J., 2009. Wisconsin Association of Professional Agricultural Consultants (WAPAC) 23rd Annual New Horizons Seminar. Climate Change and Agroecosystem Carbon Balance. Arlington Wisconsin. December 3, 2009. (co-presented with Randy Jackson).
  50. Kucharik, C.J., 2009. Nelson Institute for Environmental Studies 332 guest lecture (Jack Williams, instructor, UW-Madison). Interactions between agricultural land use change and the Climate System. Madison, Wisconsin. November 19, 2009.
  51. Kucharik, C.J., 2009. Presentation to the Public Service Commission (PSC) and Wisconsin Rep. Tammy Baldwin. Recent Climate Change Across Wisconsin. Madison, Wisconsin. November 13, 2009.
  52. Kucharik, C.J., 2009. UW-Madison Soil Science 728 Graduate Seminar (UW-Madison). Ecosystem Services in Agriculture: Carbon Sequestration. October 7, 2009.
  53. Kucharik, C.J., 2009. UW-Madison Environmental Studies “We Conserve” course lecture (UW-Madison). Connections between Agriculture, Bioenergy, and Environmental Sustainability. Madison, Wisconsin. September 22, 2009.
  54. Kucharik, C.J., 2009. Nelson Institute for Environmental Studies Community Environmental Forum. Recent Climate Change Across Wisconsin. Madison, Wisconsin. September 15, 2009.
  55. Kucharik, C.J., 2009. WICCI Advisory Committee Fall Meeting (DATCP, Madison, WI). Historical and Future Climate Change In Wisconsin. September 14, 2009.
  56. Kucharik, C.J., 2009. Briefing to Wisconsin Department of Natural Resources Secretary Matt Frank. Historical and Future Climate Change in Wisconsin. Madison, Wisconsin. September 2, 2009.
  57. Kucharik, C.J., 2009. Annual Department of Agronomy and Soils Arlington Field Day. Recent Climate Change Impacts on Corn and Soybean Yield Trends. Arlington, Wisconsin. August 27, 2009.
  58. Kucharik, C.J., 2009. Organization for Economic Cooperation and Development (OECD) International Conference on Sustaining Soil Productivity in Response to Global Climate Change: Science, Policy, and Ethics. Building a Sustainable Biofuel Future. Madison, Wisconsin. June 30, 2009.
  59. Kucharik, C.J., 2009. National Academy of Sciences workshop “Expanding Biofuel Production: Sustainability and the Transition to Advanced Biofuels – Lessons from the Upper Midwest. Connections between Midwest U.S. Agriculture and Water Quality in the Gulf of Mexico (and participation in panel discussion). Madison, Wisconsin. June 23, 2009.
  60. Kucharik, C.J., 2009. University of Wisconsin-Madison Arboretum. Recent Evidence of Climate Change Across Wisconsin. Madison, Wisconsin. June 12, 2009.
  61. Kucharik, C.J., 2009. UW-Madison Department of Soil Science Colloquium on Environmental Toxicology. Connections between Midwest USA Agriculture and Gulf of Mexico Hypoxia. Madison, Wisconsin. May 5, 2009.

62. Kucharik, C.J., 2009. State Employees Council of Wisconsin Federation of Teachers Professional Development Day at UW-Madison. Recent Climate Change in Wisconsin and Impacts on Agriculture. Madison, Wisconsin. April 24, 2009.
63. Kucharik, C.J., 2009. Wisconsin's Energy Future: Third annual Nelson Institute Earth Day Conference, Monona Terrace. Building a Sustainable Biofuel Future. Madison Wisconsin. April 22, 2009.
64. Kucharik, C.J., 2009. UW-Madison Atmospheric and Oceanic Sciences 980: Climate Change in Wisconsin. Recent Climate Change in Wisconsin: Impacts on Agricultural Land Management and Crop Productivity. Madison, Wisconsin. April 17, 2009.
65. Kucharik, C.J., 2009. UW-Madison Department of Atmospheric and Oceanic Sciences weekly colloquium. Recent Climate Change Across Wisconsin: Impacts on Agricultural Land Management and Crop Productivity. Madison, Wisconsin. March 30, 2009.
66. Kucharik, C.J., 2009. Wisconsin Initiative on Climate Change Impacts (WICCI) seminar series, UW-Madison Genetics/Biotechnology Center. Streamed live on-line and taped for rebroadcast on Wisconsin Public Television. Recent Evidence of Wisconsin Climate Change. Madison, Wisconsin. March 19, 2009.
67. Kucharik, C.J., 2009. Annual meeting of the Wisconsin Section of the American Water Resources Association (AWRA). Wisconsin Climate Change and Water Resources. Stevens Point, Wisconsin. March 5, 2009.
68. Kucharik, C.J., 2009. Annual meeting of Wisconsin Government Affairs. Recent Evidence of Climate Change in Wisconsin: Facts, Figures, and Fiction. Madison, Wisconsin. February 19, 2009.
69. †Kucharik, C.J., 2009. Annual science meeting of the Wisconsin Department of Natural Resources. Building a Sustainable Biofuel Future. Wausau, Wisconsin. February 12, 2009.
70. Kucharik, C.J., 2008. UW-Madison General Ecology 460 (Instructor Stanley Dodson). Guest lecture on "Carbon sequestration: An ecosystem service from agricultural land management". Madison, Wisconsin, November 26, 2008.
71. Kucharik, C.J., 2008. UW-Madison Climate People and Environment Program (CPEP) weekly seminar series. "Recent evidence of Wisconsin Climate Change". Madison, Wisconsin. November 18, 2008.
72. Kucharik, C.J., 2008. Madison Audubon Society monthly meeting. Carbon Sequestration and Climate Change. University of Wisconsin Arboretum, Madison, Wisconsin. October 21, 2008.
73. Kucharik, C.J., 2008. Wisconsin Water Resources Meeting. Recent climate change across Wisconsin. Baraboo, Wisconsin. October 1, 2008.
74. Kucharik, C.J., 2008. Wisconsin Water Resources Meeting. Recent climate change across Wisconsin. Madison, Wisconsin. July 8, 2008.
75. Kucharik, C.J., 2008. University of Wisconsin-Madison University Club Luncheon Lecture Series, spring semester. Recent Evidence of Wisconsin Climate Change and Impacts on Agriculture. Madison, Wisconsin.
76. Kucharik, C.J., 2008. 28<sup>th</sup> Conference on Agricultural and Forest Meteorology, Orlando, FL, 28 April – 2 May. Measurements and modeling of canopy architecture in high latitude, non-random forests: tales from BOREAS. Orlando, Florida. April 28, 2008.



77. Kucharik, C.J., 2008. Nelson Institute Annual Earth Day Conference. Impacts of recent climate change on Wisconsin corn and soybean yield trends. Madison, Wisconsin. April 15, 2008.
78. Kucharik, C.J., 2008. University of Wisconsin School of Engineering, Professional Development Course J887: Developing a Climate Change Strategy for Businesses and Public Institutions, (Pat Eagan, program director). "Carbon Sequestration: a climate change mitigation strategy". Madison, Wisconsin. January 23, 2008.
79. Kucharik, C.J., 2007. 68<sup>th</sup> Midwest Fish and Wildlife Conference. Climate Change in Wisconsin. Madison, Wisconsin. December 10, 2007.
80. Kucharik, C.J., 2007. UW-Madison Agroecology 702 guest lecture. "Ecosystem services in Agriculture: Carbon sequestration". Madison, Wisconsin. October 11, 2007.
81. †Kucharik, C.J., 2007. Wisconsin Department of Natural Resources Annual Citizen's Monitoring Conference. Recent evidence of climate change across Wisconsin. Merrimac, Wisconsin. October 5, 2007.
82. Kucharik, C.J., 2007. Wisconsin Farmer's Union Annual conference (with State Rep. Spencer Black). Climate Change and Carbon Sequestration in Wisconsin. Chippewa Falls, Wisconsin. August 18, 2007.
83. Kucharik, C.J., 2007. UW-Madison Dept. of Atmospheric and Oceanic Sciences 980. "Connections between climate and agriculture". Madison, Wisconsin. March 2, 2007.
84. Kucharik, C.J., 2007. Annual winter meeting of with Wisconsin Integrated Cropping Systems Trial (WICST) (Madison, WI). Impacts of prairie age and soil order on carbon sequestration. Madison, Wisconsin. February 16, 2007.
85. Kucharik, C.J., 2006. University of Nebraska-Lincoln, School of Natural Resources Weekly Fall Seminar Series. A Multidecadal Trend of Earlier Corn Planting in the Central USA: Causes and Implications. Lincoln, Nebraska. October 17, 2006.
86. Kucharik, C.J., 2006. UW-Madison Center for Sustainability and the Global Environment (SAGE) weekly seminar series. A trend towards earlier corn planting in the central USA. Madison, Wisconsin. February 8, 2006.
87. †Kucharik, C.J., 2006. Wisconsin fertilizer, Aglime and Pest management annual conference. Carbon sequestration and the Conservation Reserve Program (CRP). January 18, 2006.
88. Kucharik, C.J., 2005. National Institute for Global Environmental Change (NIGEC) Southcentral region annual meeting. Evaluating Agro-IBIS using AmeriFlux data New Orleans, LA. June 14, 2005.
89. Kucharik, C.J., 2005. QUEST crop modelling workshop held at Rothamsted Agricultural Research Center. Agro-IBIS and PALMS: modeling agroecosystems from the field to regional scale Harpenden, United Kingdom. March 8, 2005.
90. Kucharik, C.J., 2004. Dane County Land Conservation Committee - monthly meeting. Carbon Sequestration and the Conservation Reserve Program. Madison, Wisconsin. October 27, 2004.
91. Kucharik, C.J., 2004. UW-Madison Center for Sustainability and the Global Environment (SAGE) weekly seminar series. Can carbon sequestration in Dane county offset emissions of C from the Blount street coal plant of MG&E?. Madison, Wisconsin. October 6, 2004.

92. Kucharik, C.J., 2004. National Institute for Global Environmental Change (NIGEC) Southcentral region annual meeting. Evaluating and ecosystem model with satellite derived measures of greenness New Orleans, LA. June 21, 2004.
93. Kucharik, C.J., 2004. UW-Madison Nelson Institute for Environmental Studies 101 guest lecture (Madison, WI). Climate change, carbon sequestration, and agriculture. Madison, Wisconsin. February 12, 2004.
94. Kucharik, C.J., 2003. S.C. Johnson, Inc. Carbon sequestration and carbon crediting: fact or fiction in the Midwest on agricultural lands. Racine, Wisconsin. November 26, 2003.
95. Kucharik, C.J., 2003. UW-Madison General Ecology 460 (Instructor Stanley Dodson). Guest lecture on "Carbon sequestration: An ecosystem service". Madison, Wisconsin. October 9, 2003.
96. Kucharik, C.J., 2003. UW-Madison Center for Sustainability and the Global Environment (SAGE) weekly seminar series. Carbon sequestration across southern Wisconsin. Madison, Wisconsin. September 2, 2003.
97. Kucharik, C.J., 2003. National Institute for Global Environmental Change (NIGEC) Southcentral region annual meeting. The Agro-IBIS agroecosystem modeling tool. New Orleans, LA. April 7, 2003.
98. Kucharik, C.J., 2002. National Institute for Global Environmental Change (NIGEC) Southcentral region annual meeting. Evaluating ecological modeling tools using a variety of datasets from the field scale to the Midwest. New Orleans, LA. July 29, 2002.
99. Kucharik, C.J., 2002. The Nature Conservancy. Using ecological models to study the impacts of land management on carbon, water, and energy cycling. LaCrosse, Wisconsin. April 8, 2002.
100. Kucharik, C.J., 2002. Wisconsin Focus on Energy Environmental Research Program. Carbon sequestration and prairie restoration in Wisconsin. Madison, Wisconsin. March 19, 2002.
101. Kucharik, C.J., 2002. Annual winter meeting of with Wisconsin Integrated Cropping Systems Trial (WICST). Potential impacts of agricultural land management on soil carbon pools at WICST. Madison, Wisconsin. February 8, 2002.
102. Kucharik, C.J., 2001. Midwest Renewable Energy Fair. Carbon sequestration associated with prairie restoration in southern Wisconsin. Amherst, Wisconsin. June 22, 2001.
103. Kucharik, C.J., 2001. Edgewood College Earth Day Conference. Carbon sequestration and prairies in southern Wisconsin. Madison, Wisconsin. April 22, 2001.
104. Kucharik, C.J., 2001. UW-Madison Nelson Institute for Environmental Studies 980 guest lecture. Climate change, carbon sequestration, and agriculture. Madison, Wisconsin. March 21, 2001.
105. Kucharik, C.J., 2001. Wisconsin Department of Natural Resources. Carbon sequestration and carbon crediting. Madison, Wisconsin. February 28, 2001.
106. Kucharik, C.J., 2000. International Crane Foundation. Rates of carbon sequestration associated with the prairie chronosequence at the International Crane Foundation. Baraboo, Wisconsin. November 17, 2000.
107. Kucharik, C.J., 2000. Wisconsin Agribusiness Council annual meeting. Carbon sequestration, carbon credits, and agriculture. Madison, Wisconsin. February 8, 2000.

## **Media appearances**

### 2016:

- (9/7) Yahara watershed: a place a change. Wisconsin Public TV documentary, airdate: September 7, 2016. Available online: <http://www.pbs.org/video/2365830152/>
- (8/7) Wisconsin farmers enjoying quintessential growing season so far this year. Wisconsin State Journal.
- (1/25) Blue Sky Science – Wisconsin State Journal. What and where is the Yahara watershed?

### 2015:

- (12/2) NBC15 News, Madison WI. Making climate change local to Madison (with respect to COP21 talks in Paris, France).

New research project at Green Lake, Wisconsin

- (10/16) <http://www.wpr.org/agencies-landowners-collaborate-cleaning-states-deepest-lake>

- (10/14) [http://host.madison.com/wsj/news/local/on-wisconsin-green-lake-trying-to-set-an-example/article\\_892dea7c-2266-5c2d-b8b3-162d6de9db88.html](http://host.madison.com/wsj/news/local/on-wisconsin-green-lake-trying-to-set-an-example/article_892dea7c-2266-5c2d-b8b3-162d6de9db88.html)

- (10/15) [http://www.thecountrytoday.com/country\\_life/article\\_a1225996-7117-11e5-8e37-57b72a0258ae.html](http://www.thecountrytoday.com/country_life/article_a1225996-7117-11e5-8e37-57b72a0258ae.html)

- (10/07) <http://fox11online.com/news/local/fox-cities/green-lake-boat-tour>

- (10/06) <http://www.thenorthwestern.com/story/news/2015/10/06/push-seeks-clean-up-green-lake-long-term/73463336/>

- (9/28) Heat waves hit urban heat islands hardest. UW News Communications.

- (8/28) Writer calls for long-term thinking about water quality. Madison Magazine; Channel3000.com

- (8/19) Green Lake: “An ecological Jewel”. Ripon Commonwealth Press

- (8/10) Researchers study Wisconsin’s deepest natural lake to help preserve an ecological jewel. UW News

### 2014:

- (11/25) How people make summer hotter. *Scientific American*.

- (11/19) Crops play a major role in the annual CO<sub>2</sub> cycle increase. UW-Madison news.

- (11/19) Crops play a major role in the annual CO2 cycle increase. Google news.
- (11/10) Tempest in the isthmus: central Madison hotter than outskirts. AP news.
- (10/27) Urban Heat Islands: Guest appearance on Larry Meiller show, Wisconsin Public Radio.
- (10/25) Tempest in the isthmus: central Madison hotter than outskirts UW researchers say, Wisconsin State Journal.
- (10/21) Madison's urban heat island. WMSN-TV, Fox 47 news, Madison WI.
- (10/21) Madison's urban heat island. WISC-TV, Channel 3 news, Madison WI.
- (10/21) When the isthmus is an island: Madison's hottest, and coldest, spots. UW-Madison news.
- (5/21) Appleton Post Crescent (Fox Valley/Appleton), Manitowoc News, Wausau Daily Herald, Door County Advocate, Stevens Point Journal, Fond du Lac Reporter, The Oshkosh Northwestern. "Is the Madison area doomed? Scientists unveil scenarios for life in 2070".
- (5/19) Fond du Lac County Reporter "Cold, rainy weather is keeping area farmers out of their fields"
- (5/18) LaCrosse Tribune "Scientists unveil scenarios for 2070 in Wisconsin"
- (5/15) WisconsinWatch.org (Wisconsin Center for Investigative Journalism), "Scientists unveil scenarios for 2070 life in Madison area"
- (5/15) The Cap Times, Madison, WI. "What will Yahara watershed look like in 2070? UW Scientist lay out scenarios".
- (5/14) NBC Channel 15 Madison. "A look at the future: Yahara Watershed in 2070".
- (5/6) UW News. "Research by Nelson affiliates shapes national climate report".
- (3/1) WisconsinWatch.org (Wisconsin Center for Investigative Journalism) & The Madison Cap Times, "Even while adapting, most Wisconsin farmers are climate skeptics".
- (3/1) CALS Grow Magazine, "12 in 125".
- (1/27) The Country Today. "St. Louis of the Midwest': Professor says Wisconsin likely to have warmer future.

### 2013:

- (12/1) Grow Magazine, UW-Madison CALS. Communication in Science.
- (7/1) Ecologists map benefits of our ecosystems. UW-Madison news.
- (6/13) Wausau City Pages – story on "Feed shortage and climate change".
- (2/28) Wisconsin climate trending towards more extremes – AgriView.
- (2/20) WKOW-TV Channel 27 Madison interview about climate change impacts to agriculture

### 2012:

- (12/18) The Country Today – Warming climates good, bad for crop outlook
- (10/15) Grow Magazine, UW-Madison CALS. Coping with the climate.
- (7/10) Interview on Wisconsin Public Radio – the Kathleen Dunn Show, on 2012 drought and impacts on agriculture.
- (7/6) Wisconsin Farm Report interview; experts weight in on drought conditions.
- (7/2) UW News: War-related climate change would substantially reduce crop yields
- (6/28) Crops, people wilt in intense heat across southern Wisconsin. Interview with the Isthmus.
- (3/9) NSF media release: Cry me a river: following a watershed’s winding path to sustainability

### 2011:

- (12/14) The Country Today – climate could hurt yields.
- (10/1) Grow Magazine – Biofuels – getting it right.
- (1/26) Appearance on Milwaukee Public Radio (WUWM) “Lake Effect” program discussing new NSF Water Sustainability and Climate grant.
- (1/26) Appearance on the Larry Meiller show on Wisconsin Public Radio; topic “Climate change and sustainable bioenergy”.
- (1/13) Wisconsin Public Television: Segment on Climate Change and Bioenergy showcased for the weekly magazine show “In Wisconsin”. Interview by Art Hackett.
- (1/6) 15-minute radio interview with 89.9FM Madison, WORT on water, sustainability, and climate change.
- (1/6) Milwaukee Journal Sentinel business news, “Water Study Wins Grant”.
- (1/6) University of Wisconsin-Madison news “Water, water everywhere focus of new sustainability project”. (<http://www.news.wisc.edu/18823>)

### 2010:

- (10/10) Meeting of retired UW-Extension faculty, members of “Cuba Kids”. “Agriculture and Climate Change in Wisconsin”.
- (8/10) Columbia County Corn Growers monthly meeting. “Recent climate change, variability and agriculture in Wisconsin”.
- (5/10) Interviewed by Darrel Anderson of The Successful Farming Radio Magazine on “Climate Change and Crop Development” and “Climate Change and Crop Yields”.
- (2/10) Interviewed and research profiled in Wisconsin Natural Resources Magazine “Preparing to Adapt: Natural Resource Managers and University Researchers are Focusing on Strategies to Adapt to Climate Change in Wisconsin”.
- (1/10) Focus on Energy Environmental and Economic Research Program Annual Forum (Madison, WI): “Recent Climate Change in Wisconsin and Impacts on Agriculture”

## 2009:

- (11/09) Addressed Wisconsin Public Service Commission and Rep. Tammy Baldwin (Madison, WI): “Climate Change in Wisconsin”.
- (9/09) WICCI Working Group Meeting, Plenary Address (Madison, WI): “Evidence of Recent Climate Change Across Wisconsin”
- (9/09) Addressed the WICCI Advisory Council (Madison, WI): “Evidence of Recent Climate Change Across Wisconsin”
- (9/09) Nelson Institute Community Environmental Forum (Madison, WI): “Enabling Climate Impact Assessment in Wisconsin”
- (9/09) Radio interview with Chuck Quirnbach, Wisconsin Public Radio.
- (9/09) Wisconsin Public Radio “University of the Air” Interview
- (9/09) Climate change research profiled in front page story in the Milwaukee Journal Sentinel “Warming in Wisconsin”.
- (9/09) Press release on results from climate data; numerous newspaper, television, and radio interviews (WISC-TV, Madison, WI; Wisconsin Public Radio).
- (9/09) Briefed DNR Secretary Matt Frank on WICCI progress and Climate Change in Wisconsin (Madison, WI)
- (5/09) Milwaukee Journal Sentinel (newspaper) interview on northern Wisconsin drought and lake levels (science writer: Lee Bergquist)
- (3/09) UW Nelson Institute / Wisconsin Public Television “Bracing for Impact” lecture series (Madison, WI): “Recent Evidence of Climate Change Across Wisconsin”
- (2/09) Interviewed by Dan Looker (science writer) for *Successful Farming Magazine* on Global Warming and Agriculture.

## 2008:

- (3/08) Interview/taped production for “Think MTV” online program on “Wisconsin Ethanol and Gulf Coast Dead Zones”.
- (3/08) Radio interview with Chuck Quirnbach, Wisconsin Public Radio.
- (3/08) Interview with Harvey Black, Milwaukee Journal Sentinel. “The mighty microbe: some scientists fear CO<sub>2</sub>-spewing bacterial will speed global warming”.
- (3/08) Ethanol production / Gulf dead zone research profiled in UW-Madison News, CBC News, Time magazine, Wisconsin Public Radio (WPR), National Public Radio (NPR), The Capital Times and the Milwaukee Journal Sentinel.

## 2007 and earlier:

- (10/06) Research on earlier corn planting profiled in Wisconsin State Journal
- (2/04) Interviewed for *Wisconsin Agriculturalist* magazine cover story “Field of Dreams: Carbon farming could help solve global warming and provide profits for farmers”.
- (9/03) Research profiled in UW-Madison alumni magazine *On Wisconsin* entitled “Root of the problem”.
- (8/02) Research profiled in front page business section Wisconsin State Journal story on “Switchgrass: Is this simple grass a panacea for the world”.
- (8/02) Interviewed for the “Why Files Science Behind the News”. Biomass, switchgrass, and carbon cycling; Should we buy biomass?

(2/00) Interviewed by Pam Jahnke for the Wisconsin Farm Report (WTDY 1670 AM, Madison, and statewide) on agriculture and carbon credits.