

# Christopher J Kucharik

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

117 papers	15,938 citations	45 h-index	121 g-index
121 ext. papers	17,996 ext. citations	5.8 avg, IF	6.41 L-index

#	Paper	IF	Citations
117	Characterizing Dominant Field-Scale Cropping Sequences for a Potato and Vegetable Growing Region in Central Wisconsin. <i>Land</i> , <b>2022</b> , 11, 273	3.5	
116	Environmental outcomes of the US Renewable Fuel Standard.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2022</b> , 119,	11.5	4
115	Land use-land cover gradient demonstrates the importance of perennial grasslands with intact soils for building soil carbon in the fertile Mollisols of the North Central US. <i>Geoderma</i> , <b>2022</b> , 418, 115854	6.7	1
114	The Dynamic Relationship between Air and Land Surface Temperature within the Madison, Wisconsin Urban Heat Island. <i>Remote Sensing</i> , <b>2022</b> , 14, 165	5	2
113	Rapid changes in agricultural land use and hydrology in the Driftless Region <b>2021</b> , 4, e20214		0
112	Soil-dependent responses of US crop yields to climate variability and depth to groundwater. <i>Agricultural Systems</i> , <b>2021</b> , 190, 103085	6.1	5
111	Spatiotemporal trends in crop yields, yield variability, and yield gaps across the USA. <i>Crop Science</i> , <b>2020</b> , 60, 2085-2101	2.4	5
110	Spatial and temporal variability of future ecosystem services in an agricultural landscape. <i>Landscape Ecology</i> , <b>2020</b> , 35, 2569-2586	4.3	6
109	Fine-Scale Analysis of the Energy-Land-Water Nexus: Nitrate Leaching Implications of Biomass Cofiring in the Midwestern United States. <i>Environmental Science &amp; Technology</i> , <b>2020</b> , 54, 2122-2132 <sup>10.3</sup>		4
108	Knowledge Co-Production with Agricultural Trade Associations. <i>Water (Switzerland)</i> , <b>2020</b> , 12, 3236	3	1
107	Decadal-Scale Changes in the Seasonal Surface Water Balance of the Central United States from 1984 to 2007. <i>Journal of Hydrometeorology</i> , <b>2020</b> , 21, 1905-1927	3.7	1
106	Soil microclimates influence annual carbon loss via heterotrophic soil respiration in maize and switchgrass bioenergy cropping systems. <i>Agricultural and Forest Meteorology</i> , <b>2019</b> , 279, 107731	5.8	9
105	Nonlinear groundwater influence on biophysical indicators of ecosystem services. <i>Nature Sustainability</i> , <b>2019</b> , 2, 475-483	22.1	24
104	Litter quantity, litter chemistry, and soil texture control changes in soil organic carbon fractions under bioenergy cropping systems of the North Central U.S.. <i>Biogeochemistry</i> , <b>2019</b> , 143, 313-326	3.8	12
103	Scale-dependent interactions between tree canopy cover and impervious surfaces reduce daytime urban heat during summer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> , 116, 7575-7580	11.5	160
102	Management of minimum lake levels and impacts on flood mitigation: A case study of the Yahara Watershed, Wisconsin, USA. <i>Journal of Hydrology</i> , <b>2019</b> , 577, 123920	6	1
101	Comparing the effects of climate and land use on surface water quality using future watershed scenarios. <i>Science of the Total Environment</i> , <b>2019</b> , 693, 133484	10.2	12

100	Observation of irrigation-induced climate change in the Midwest United States. <i>Global Change Biology</i> , <b>2019</b> , 25, 3472-3484	11.4	26
99	Reply to Drescher: Interdisciplinary collaboration is essential to understand and implement climate-resilient strategies in cities. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2019</b> ,	11.5	1
98	Understanding relationships among ecosystem services across spatial scales and over time. <i>Environmental Research Letters</i> , <b>2018</b> , 13, 054020	6.2	49
97	Extreme precipitation and phosphorus loads from two agricultural watersheds. <i>Limnology and Oceanography</i> , <b>2018</b> , 63, 1221-1233	4.8	49
96	Scenarios reveal pathways to sustain future ecosystem services in an agricultural landscape. <i>Ecological Applications</i> , <b>2018</b> , 28, 119-134	4.9	24
95	The synergistic effect of manure supply and extreme precipitation on surface water quality. <i>Environmental Research Letters</i> , <b>2018</b> , 13, 044016	6.2	21
94	Continuous separation of land use and climate effects on the past and future water balance. <i>Journal of Hydrology</i> , <b>2018</b> , 565, 106-122	6	21
93	Drivers of Potential Recharge from Irrigated Agroecosystems in the Wisconsin Central Sands. <i>Vadose Zone Journal</i> , <b>2018</b> , 17, 170008	2.7	10
92	Abrupt Change in Ecological Systems: Inference and Diagnosis. <i>Trends in Ecology and Evolution</i> , <b>2018</b> , 33, 513-526	10.9	113
91	Urban heat island-induced increases in evapotranspirative demand. <i>Geophysical Research Letters</i> , <b>2017</b> , 44, 873-881	4.9	42
90	The Influence of Legacy P on Lake Water Quality in a Midwestern Agricultural Watershed. <i>Ecosystems</i> , <b>2017</b> , 20, 1468-1482	3.9	45
89	From pest data to abundance-based risk maps combining eco-physiological knowledge, weather, and habitat variability <b>2017</b> , 27, 575-588		7
88	Quantifying indirect groundwater-mediated effects of urbanization on agroecosystem productivity using MODFLOW-AgroIBIS (MAGI), a complete critical zone model. <i>Ecological Modelling</i> , <b>2017</b> , 359, 201-219		23
87	Effects of Root Distribution and Root Water Compensation on Simulated Water Use in Maize Influenced by Shallow Groundwater. <i>Vadose Zone Journal</i> , <b>2017</b> , 16, vzj2017.06.0118	2.7	8
86	Assessing the potential to decrease the Gulf of Mexico hypoxic zone with Midwest US perennial cellulosic feedstock production. <i>GCB Bioenergy</i> , <b>2017</b> , 9, 858-875	5.6	23
85	From qualitative to quantitative environmental scenarios: Translating storylines into biophysical modeling inputs at the watershed scale. <i>Environmental Modelling and Software</i> , <b>2016</b> , 85, 80-97	5.2	33
84	Is groundwater recharge always serving us well? Water supply provisioning, crop production, and flood attenuation in conflict in Wisconsin, USA. <i>Ecosystem Services</i> , <b>2016</b> , 21, 153-165	6.1	17
83	Carbon and energy fluxes in cropland ecosystems: a model-data comparison. <i>Biogeochemistry</i> , <b>2016</b> , 129, 53-76	3.8	17

82	Evidence for Compensatory Photosynthetic and Yield Response of Soybeans to Aphid Herbivory. <i>Journal of Economic Entomology</i> , <b>2016</b> , 109, 1177-1187	2.2	10
81	Nitrogen Fertilization Effects on Productivity and Nitrogen Loss in Three Grass-Based Perennial Bioenergy Cropping Systems. <i>PLoS ONE</i> , <b>2016</b> , 11, e0151919	3.7	30
80	Urban heat island impacts on plant phenology: intra-urban variability and response to land cover. <i>Environmental Research Letters</i> , <b>2016</b> , 11, 054023	6.2	91
79	Urban heat island effects on growing seasons and heating and cooling degree days in Madison, Wisconsin USA. <i>International Journal of Climatology</i> , <b>2016</b> , 36, 4873-4884	3.5	13
78	Simulated Effects of Soil Texture on Nitrous Oxide Emission Factors from Corn and Soybean Agroecosystems in Wisconsin. <i>Journal of Environmental Quality</i> , <b>2016</b> , 45, 1540-1548	3.4	21
77	Energy and water balance response of a vegetated wetland to herbicide treatment of invasive <i>Phragmites australis</i> . <i>Journal of Hydrology</i> , <b>2016</b> , 539, 290-303	6	10
76	Drought effects on US maize and soybean production: spatiotemporal patterns and historical changes. <i>Environmental Research Letters</i> , <b>2016</b> , 11, 094021	6.2	131
75	Explicit modeling of abiotic and landscape factors reveals precipitation and forests associated with aphid abundance. <i>Ecological Applications</i> , <b>2016</b> , 26, 2598-2608	4.9	14
74	Extreme daily loads: role in annual phosphorus input to a north temperate lake. <i>Aquatic Sciences</i> , <b>2015</b> , 77, 71-79	2.5	48
73	Use of insect exclusion cages in soybean creates an altered microclimate and differential crop response. <i>Agricultural and Forest Meteorology</i> , <b>2015</b> , 208, 50-61	5.8	6
72	Urban climate effects on extreme temperatures in Madison, Wisconsin, USA. <i>Environmental Research Letters</i> , <b>2015</b> , 10, 094024	6.2	79
71	Using a simple apparatus to measure direct and diffuse photosynthetically active radiation at remote locations. <i>PLoS ONE</i> , <b>2015</b> , 10, e0115633	3.7	11
70	Plausible futures of a social-ecological system: Yahara watershed, Wisconsin, USA. <i>Ecology and Society</i> , <b>2015</b> , 20,	4.1	56
69	Effect of Weed Management Strategy and Row Width on Nitrous Oxide Emissions in Soybean. <i>Weed Science</i> , <b>2015</b> , 63, 962-971	2	2
68	Direct human influence on atmospheric CO <sub>2</sub> seasonality from increased cropland productivity. <i>Nature</i> , <b>2014</b> , 515, 398-401	50.4	97
67	Influence of groundwater on plant water use and productivity: Development of an integrated ecosystem [Variably saturated soil water flow model. <i>Agricultural and Forest Meteorology</i> , <b>2014</b> , 189-190, 198-210	5.8	60
66	Seasonal nitrous oxide and methane fluxes from grain- and forage-based production systems in wisconsin, USA. <i>Journal of Environmental Quality</i> , <b>2014</b> , 43, 1833-43	3.4	13
65	Seasonality of the Urban Heat Island Effect in Madison, Wisconsin. <i>Journal of Applied Meteorology and Climatology</i> , <b>2014</b> , 53, 2371-2386	2.7	79

64	Testing the stability of carbon pools stored in tussock sedge meadows. <i>Applied Soil Ecology</i> , <b>2013</b> , 71, 48-57	5	5
63	Environmental sustainability of advanced biofuels. <i>Biofuels, Bioproducts and Biorefining</i> , <b>2013</b> , 7, 638-646	5.3	11
62	Impacts of a nuclear war in South Asia on soybean and maize production in the Midwest United States. <i>Climatic Change</i> , <b>2013</b> , 116, 373-387	4.5	26
61	Climatic impacts on winter wheat yields in Picardy, France and Rostov, Russia: 1973-2010. <i>Agricultural and Forest Meteorology</i> , <b>2013</b> , 176, 25-37	5.8	36
60	Effect of methodological consideration on soil carbon parameter estimates obtained via the acid hydrolysis-incubation method. <i>Soil Biology and Biochemistry</i> , <b>2013</b> , 67, 295-305	7.5	5
59	Soil Moisture Regime and Land Use History Drive Regional Differences in Soil Carbon and Nitrogen Storage Across Southern Wisconsin. <i>Soil Science</i> , <b>2013</b> , 178, 486-495	0.9	3
58	Climate-induced changes in biome distribution, NPP, and hydrology in the Upper Midwest U.S.: A case study for potential vegetation. <i>Journal of Geophysical Research G: Biogeosciences</i> , <b>2013</b> , 118, 248-264	3.7	20
57	Comparison of Two Chamber Methods for Measuring Soil Trace-Gas Fluxes in Bioenergy Cropping Systems. <i>Soil Science Society of America Journal</i> , <b>2013</b> , 77, 1601-1612	2.5	13
56	Miscanthus establishment and overwintering in the Midwest USA: a regional modeling study of crop residue management on critical minimum soil temperatures. <i>PLoS ONE</i> , <b>2013</b> , 8, e68847	3.7	26
55	A biophysical model of Sugarcane growth. <i>GCB Bioenergy</i> , <b>2012</b> , 4, 36-48	5.6	34
54	Soil carbon lost from Mollisols of the North Central U.S.A. with 20 years of agricultural best management practices. <i>Agriculture, Ecosystems and Environment</i> , <b>2012</b> , 162, 68-76	5.7	63
53	Interactive Crop Management in the Community Earth System Model (CESM1): Seasonal Influences on Land-Atmosphere Fluxes. <i>Journal of Climate</i> , <b>2012</b> , 25, 4839-4859	4.4	112
52	Impacts of Urbanization on Ecosystem Goods and Services in the U.S. Corn Belt. <i>Ecosystems</i> , <b>2012</b> , 15, 519-541	3.9	31
51	Characterizing the performance of ecosystem models across time scales: A spectral analysis of the North American Carbon Program site-level synthesis. <i>Journal of Geophysical Research</i> , <b>2011</b> , 116,		66
50	Crop management and phenology trends in the U.S. Corn Belt: Impacts on yields, evapotranspiration and energy balance. <i>Agricultural and Forest Meteorology</i> , <b>2011</b> , 151, 882-894	5.8	239
49	An alternative approach for quantifying climate regulation by ecosystems. <i>Frontiers in Ecology and the Environment</i> , <b>2011</b> , 9, 126-133	5.5	56
48	A Test of Diversity-Productivity Models in Natural, Degraded, and Restored Wet Prairies. <i>Restoration Ecology</i> , <b>2011</b> , 19, 186-193	3.1	16
47	Contribution of anaerobic digesters to emissions mitigation and electricity generation under U.S. climate policy. <i>Environmental Science &amp; Technology</i> , <b>2011</b> , 45, 6735-42	10.3	61

46	Data and monitoring needs for a more ecological agriculture. <i>Environmental Research Letters</i> , <b>2011</b> , 6, 014017	6.2	42
45	Role of Turbulent Heat Fluxes over Land in the Monsoon over East Asia. <i>International Journal of Geosciences</i> , <b>2011</b> , 02, 420-431	0.4	20
44	Mind the gap: how do climate and agricultural management explain the yield gap of croplands around the world?. <i>Global Ecology and Biogeography</i> , <b>2010</b> , 19, 769-782	6.1	345
43	Patterns of Climate Change Across Wisconsin From 1950 to 2006. <i>Physical Geography</i> , <b>2010</b> , 31, 1-28	1.8	71
42	21st century Wisconsin snow projections based on an operational snow model driven by statistically downscaled climate data. <i>International Journal of Climatology</i> , <b>2010</b> , 31, n/a-n/a	3.5	18
41	Land-use Effects on Soil Carbon and Nitrogen on a U.S. Midwestern Floodplain. <i>Soil Science Society of America Journal</i> , <b>2009</b> , 73, 217-225	2.5	49
40	Spatiotemporal Mapping of Temperature and Precipitation for the Development of a Multidecadal Climatic Dataset for Wisconsin. <i>Journal of Applied Meteorology and Climatology</i> , <b>2009</b> , 48, 742-757	2.7	49
39	Climate impacts on net primary productivity trends in natural and managed ecosystems of the central and eastern United States. <i>Agricultural and Forest Meteorology</i> , <b>2009</b> , 149, 2143-2161	5.8	57
38	Prairie restoration and carbon sequestration: difficulties quantifying C sources and sinks using a biometric approach <b>2009</b> , 19, 2185-201		21
37	Evaluating a terrestrial ecosystem model with satellite information of greenness. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		22
36	Controls of climatic variability and land cover on land surface hydrology of northern Wisconsin, USA. <i>Journal of Geophysical Research</i> , <b>2008</b> , 113,		9
35	Impacts of recent climate change on Wisconsin corn and soybean yield trends. <i>Environmental Research Letters</i> , <b>2008</b> , 3, 034003	6.2	149
34	Corn-based ethanol production compromises goal of reducing nitrogen export by the Mississippi River. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2008</b> , 105, 4513-8	11.5	276
33	Contribution of Planting Date Trends to Increased Maize Yields in the Central United States. <i>Agronomy Journal</i> , <b>2008</b> , 100, 328	2.2	41
32	Contribution of Planting Date Trends to Increased Maize Yields in the Central United States. <i>Agronomy Journal</i> , <b>2008</b> , 100, 328-336	2.2	109
31	Impact of Prairie Age and Soil Order on Carbon and Nitrogen Sequestration. <i>Soil Science Society of America Journal</i> , <b>2007</b> , 71, 430-441	2.5	51
30	Residue, respiration, and residuals: Evaluation of a dynamic agroecosystem model using eddy flux measurements and biometric data. <i>Agricultural and Forest Meteorology</i> , <b>2007</b> , 146, 134-158	5.8	80
29	A multiyear evaluation of a Dynamic Global Vegetation Model at three AmeriFlux forest sites: Vegetation structure, phenology, soil temperature, and CO <sub>2</sub> and H <sub>2</sub> O vapor exchange. <i>Ecological Modelling</i> , <b>2006</b> , 196, 1-31	3	147

28	Evaluating the seasonal and interannual variations in water balance in northern Wisconsin using a land surface model. <i>Journal of Geophysical Research</i> , <b>2006</b> , 111, n/a-n/a		21
27	A Multidecadal Trend of Earlier Corn Planting in the Central USA. <i>Agronomy Journal</i> , <b>2006</b> , 98, 1544-1550.	2	144
26	Modeling Global and Regional Net Primary Production under Elevated Atmospheric CO <sub>2</sub> : On a Potential Source of Uncertainty. <i>Earth Interactions</i> , <b>2006</b> , 10, 1-20	1.5	10
25	A paired study of prairie carbon stocks, fluxes, and phenology: comparing the world's oldest prairie restoration with an adjacent remnant. <i>Global Change Biology</i> , <b>2006</b> , 12, 122-139	11.4	57
24	Effects of El Niño/Southern Oscillation on the Climate, Water Balance, and Streamflow of the Mississippi River Basin. <i>Journal of Climate</i> , <b>2005</b> , 18, 4840-4861	4.4	41
23	Global consequences of land use. <i>Science</i> , <b>2005</b> , 309, 570-4	33.3	7529
22	Recent History of Large-Scale Ecosystem Disturbances in North America Derived from the AVHRR Satellite Record. <i>Ecosystems</i> , <b>2005</b> , 8, 808-824	3.9	35
21	Trends and Variability in U.S. Corn Yields Over the Twentieth Century. <i>Earth Interactions</i> , <b>2005</b> , 9, 1-29	1.5	89
20	Effects of Land Cover Change on the Energy and Water Balance of the Mississippi River Basin. <i>Journal of Hydrometeorology</i> , <b>2004</b> , 5, 640-655	3.7	137
19	Effects of logging on carbon dynamics of a jack pine forest in Saskatchewan, Canada. <i>Global Change Biology</i> , <b>2004</b> , 10, 1267-1284	11.4	109
18	Land Use, Land Cover, and Climate Change Across the Mississippi Basin: Impacts on Selected Land and Water Resources. <i>Geophysical Monograph Series</i> , <b>2004</b> , 249-261	1.1	21
17	Impact of changing land use practices on nitrate export by the Mississippi River. <i>Global Biogeochemical Cycles</i> , <b>2004</b> , 18, n/a-n/a	5.9	103
16	The influence of climate on in-stream removal of nitrogen. <i>Geophysical Research Letters</i> , <b>2004</b> , 31,	4.9	37
15	Integrated Biosphere Simulator (IBIS) yield and nitrate loss predictions for Wisconsin maize receiving varied amounts of nitrogen fertilizer. <i>Journal of Environmental Quality</i> , <b>2003</b> , 32, 247-68	3.4	102
14	Evaluating the impacts of land management and climate variability on crop production and nitrate export across the Upper Mississippi Basin. <i>Global Biogeochemical Cycles</i> , <b>2003</b> , 17, n/a-n/a	5.9	64
13	Evaluation of the importance of Lagrangian canopy turbulence formulations in a soil-plant-atmosphere model. <i>Agricultural and Forest Meteorology</i> , <b>2003</b> , 115, 51-69	5.8	43
12	Evaluation of a Process-Based Agro-Ecosystem Model (Agro-IBIS) across the U.S. Corn Belt: Simulations of the Interannual Variability in Maize Yield. <i>Earth Interactions</i> , <b>2003</b> , 7, 1-33	1.5	116
11	Integrated Biosphere Simulator (IBIS) Yield and Nitrate Loss Predictions for Wisconsin Maize Receiving Varied Amounts of Nitrogen Fertilizer <b>2003</b> , 32, 247		17

10	Measurements and Modeling of Carbon and Nitrogen Cycling in Agroecosystems of Southern Wisconsin: Potential for SOC Sequestration during the Next 50 Years. <i>Ecosystems</i> , <b>2001</b> , 4, 237-258	3.9	76
9	Global response of terrestrial ecosystem structure and function to CO <sub>2</sub> and climate change: results from six dynamic global vegetation models. <i>Global Change Biology</i> , <b>2001</b> , 7, 357-373	11.4	1464
8	Measurements and Modeling of Carbon and Nitrogen Cycling in Agroecosystems of Southern Wisconsin: Potential for SOC Sequestration during the Next 50 Years. <i>Ecosystems</i> , <b>2001</b> , 4, 237-258	3.9	40
7	Testing the performance of a dynamic global ecosystem model: Water balance, carbon balance, and vegetation structure. <i>Global Biogeochemical Cycles</i> , <b>2000</b> , 14, 795-825	5.9	533
6	Characterization of radiation regimes in nonrandom forest canopies: theory, measurements, and a simplified modeling approach. <i>Tree Physiology</i> , <b>1999</b> , 19, 695-706	4.2	167
5	Direct and Indirect Estimation of Leaf Area Index, fAPAR, and Net Primary Production of Terrestrial Ecosystems. <i>Remote Sensing of Environment</i> , <b>1999</b> , 70, 29-51	13.2	865
4	Measurements of leaf orientation, light distribution and sunlit leaf area in a boreal aspen forest. <i>Agricultural and Forest Meteorology</i> , <b>1998</b> , 91, 127-148	5.8	43
3	Measurements of branch area and adjusting leaf area index indirect measurements. <i>Agricultural and Forest Meteorology</i> , <b>1998</b> , 91, 69-88	5.8	147
2	Agricultural Landscape Transformation Needed to Meet Water Quality Goals in the Yahara River Watershed of Southern Wisconsin. <i>Ecosystems</i> , 1	3.9	0
1	Did agriculture beget agriculture during the past several millennia?. <i>Holocene</i> , 095968362210882	2.6	