Ge Sun

List of Publications by Year
in descending order

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117 papers	6,580 citations	43973 48 h-index	74018 75 g-index
134 all docs	134 docs citations	134 times ranked	7061 citing authors

#	Article	IF	Citations
1	Reanalysis of global terrestrial vegetation trends from MODIS products: Browning or greening?. Remote Sensing of Environment, 2017, 191, 145-155.	4.6	258
2	Estimation of net ecosystem carbon exchange for the conterminous United States by combining MODIS and AmeriFlux data. Agricultural and Forest Meteorology, 2008, 148, 1827-1847.	1.9	221
3	Carbon fluxes, evapotranspiration, and water use efficiency of terrestrial ecosystems in China. Agricultural and Forest Meteorology, 2013, 182-183, 76-90.	1.9	211
4	A general predictive model for estimating monthly ecosystem evapotranspiration. Ecohydrology, 2011, 4, 245-255.	1.1	195
5	Impacts of Multiple Stresses on Water Demand and Supply Across the Southeastern United States¹. Journal of the American Water Resources Association, 2008, 44, 1441-1457.	1.0	189
6	Upscaling key ecosystem functions across the conterminous United States by a water-centric ecosystem model. Journal of Geophysical Research, 2011, 116, .	3.3	159
7	Energy and water balance of two contrasting loblolly pine plantations on the lower coastal plain of North Carolina, USA. Forest Ecology and Management, 2010, 259, 1299-1310.	1.4	157
8	Assessing net ecosystem carbon exchange of U.S. terrestrial ecosystems by integrating eddy covariance flux measurements and satellite observations. Agricultural and Forest Meteorology, 2011, 151, 60-69.	1.9	157
9	Response of evapotranspiration to changes in land use and land cover and climate in China during 2001â€“2013. Science of the Total Environment, 2017, 596-597, 256-265.	3.9	152
10	Spatiotemporal trends of urban heat island effect along the urban development intensity gradient in China. Science of the Total Environment, 2016, 544, 617-626.	3.9	147
11	Effects of forest management on productivity and carbon sequestration: A review and hypothesis. Forest Ecology and Management, 2015, 355, 124-140.	1.4	145
12	Regional annual water yield from forest lands and its response to potential deforestation across the southeastern United States. Journal of Hydrology, 2005, 308, 258-268.	2.3	140
13	Hydraulic redistribution of soil water by roots affects whole€stand evapotranspiration and net ecosystem carbon exchange. New Phytologist, 2010, 187, 171-183.	3.5	137
14	Decoupling the influence of leaf and root hydraulic conductances on stomatal conductance and its sensitivity to vapour pressure deficit as soil dries in a drained loblolly pine plantation. Plant, Cell and Environment, 2009, 32, 980-991.	2.8	133
15	A comparison of the watershed hydrology of coastal forested wetlands and the mountainous uplands in the Southern US. Journal of Hydrology, 2002, 263, 92-104.	2.3	131
16	Response of carbon fluxes to drought in a coastal plain loblolly pine forest. Global Change Biology, 2010, 16, 272-287.	4.2	130
17	Burned forests impact water supplies. Nature Communications, 2018, 9, 1307.	5.8	116
18	Forest ecohydrological research in the 21st century: what are the critical needs?. Ecohydrology, 2011, 4, 146-158.	1.1	110

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19	Effects of timber management on the hydrology of wetland forests in the southern United States. Forest Ecology and Management, 2001, 143, 227-236.	1.4	103
20	Impacts of impervious cover, water withdrawals, and climate change on river flows in the conterminous US. Hydrology and Earth System Sciences, 2012, 16, 2839-2857.	1.9	103
21	Data-driven diagnostics of terrestrial carbon dynamics over North America. Agricultural and Forest Meteorology, 2014, 197, 142-157.	1.9	88
22	Development of a coupled carbon and water model for estimating global gross primary productivity and evapotranspiration based on eddy flux and remote sensing data. Agricultural and Forest Meteorology, 2016, 223, 116-131.	1.9	85
23	Ecohydrological Processes Explain Urban Dry Island Effects in a Wet Region, Southern China. Water Resources Research, 2018, 54, 6757-6771.	1.7	84
24	Spatiotemporal patterns and drivers of soil contamination with heavy metals during an intensive urbanization period (1989â€“2018) in southern China. Environmental Pollution, 2020, 260, 114075.	3.7	81
25	Sectoral contributions to surface water stress in the coterminous United States. Environmental Research Letters, 2013, 8, 035046.	2.2	78
26	Daily Landsat-scale evapotranspiration estimation over a forested landscape in North Carolina, USA, using multi-satellite data fusion. Hydrology and Earth System Sciences, 2017, 21, 1017-1037.	1.9	77
27	Modelling the potential role of forest thinning in maintaining water supplies under a changing climate across the conterminous United States. Hydrological Processes, 2015, 29, 5016-5030.	1.1	74
28	Effects of precipitation on grassland ecosystem restoration under grazing exclusion in Inner Mongolia, China. Landscape Ecology, 2014, 29, 1657-1673.	1.9	73
29	A Comparison of Three Methods to Estimate Evapotranspiration in Two Contrasting Loblolly Pine Plantations: Age-Related Changes in Water Use and Drought Sensitivity of Evapotranspiration Components. Forest Science, 2012, 58, 497-512.	0.5	68
30	Urbanization dramatically altered the water balances of a paddy field-dominated basin in southern China. Hydrology and Earth System Sciences, 2015, 19, 3319-3331.	1.9	68
31	Ecohydrological implications of drought for forests in the United States. Forest Ecology and Management, 2016, 380, 335-345.	1.4	67
32	Ecohydrological processes and ecosystem services in the Anthropocene: a review. Ecological Processes, 2017, 6, .	1.6	67
33	Interactive effects of nocturnal transpiration and climate change on the root hydraulic redistribution and carbon and water budgets of southern United States pine plantations. Tree Physiology, 2012, 32, 707-723.	1.4	66
34	MODELING ACTUAL EVAPOTRANSPIRATION FROM FORESTED WATERSHEDS ACROSS THE SOUTHEASTERN UNITED STATES. Journal of the American Water Resources Association, 2003, 39, 886-896.	1.0	65
35	A comparison of hydrologic models for ecological flows and water availability. Ecohydrology, 2015, 8, 1525-1546.	1.1	62
36	Soil physiochemical properties and landscape patterns control trace metal contamination at the urban-rural interface in southern China. Environmental Pollution, 2019, 250, 537-545.	3.7	61

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37	Drought impacts on ecosystem functions of the U.S. National Forests and Grasslands: Part II assessment results and management implications. Forest Ecology and Management, 2015, 353, 269-279.	1.4	60
38	Urbanization alters watershed hydrology in the Piedmont of North Carolina. Ecohydrology, 2011, 4, 256-264.	1.1	57
39	Interactive influences of ozone and climate on streamflow of forested watersheds. Global Change Biology, 2012, 18, 3395-3409.	4.2	57
40	Conversion of natural forests to managed forest plantations decreases tree resistance to prolonged droughts. Forest Ecology and Management, 2015, 355, 58-71.	1.4	55
41	Bi-criteria evaluation of the MIKE SHE model for a forested watershed on the South Carolina coastal plain. Hydrology and Earth System Sciences, 2010, 14, 1033-1046.	1.9	54
42	Fertilization intensifies drought stress: Water use and stomatal conductance of Pinus taeda in a midrotation fertilization and throughfall reduction experiment. Forest Ecology and Management, 2015, 355, 72-82.	1.4	53
43	Quantifying the effects of overgrazing on mountainous watershed vegetation dynamics under a changing climate. Science of the Total Environment, 2018, 639, 1408-1420.	3.9	53
44	Impacts of Urbanization on Watershed Water Balances Across the Conterminous United States. Water Resources Research, 2020, 56, e2019WR026574.	1.7	53
45	Seasonal rainfallâ€“runoff relationships in a lowland forested watershed in the southeastern USA. Hydrological Processes, 2011, 25, 2032-2045.	1.1	52
46	The role of harvest residue in rotation cycle carbon balance in loblolly pine plantations. Respiration partitioning approach. Global Change Biology, 2012, 18, 3186-3201.	4.2	52
47	Ten-year variability in ecosystem water use efficiency in an oak-dominated temperate forest under a warming climate. Agricultural and Forest Meteorology, 2016, 218-219, 209-217.	1.9	52
48	On the coupling between precipitation and potential evapotranspiration: contributions to decadal drought anomalies in the Southwest China. Climate Dynamics, 2017, 48, 3779-3797.	1.7	52
49	The sensitivity of ecosystem service models to choices of input data and spatial resolution. Applied Geography, 2018, 93, 25-36.	1.7	51
50	No Proportional Increase of Terrestrial Gross Carbon Sequestration From the Greening Earth. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2540-2553.	1.3	51
51	Contrasting effects of urbanization and agriculture on surface temperature in eastern China. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9597-9606.	1.2	49
52	The effect of water table fluctuation on soil respiration in a lower coastal plain forested wetland in the southeastern U.S.. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 1748-1762.	1.3	48
53	Hydrology and microtopography control carbon dynamics in wetlands: Implications in partitioning ecosystem respiration in a coastal plain forested wetland. Agricultural and Forest Meteorology, 2017, 247, 343-355.	1.9	48
54	Regional patterns of postwildfire streamflow response in the Western United States: The importance of scaleâ€specific connectivity. Hydrological Processes, 2017, 31, 2582-2598.	1.1	47

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55	Understanding moisture stress on light use efficiency across terrestrial ecosystems based on global flux and remoteâ€sensing data. Journal of Geophysical Research G: Biogeosciences, 2015, 120, 2053-2066.	1.3	45
56	MODELING THE HYDROLOGIC IMPACTS OF FOREST HARVESTING ON FLORIDA FLATWOODS. Journal of the American Water Resources Association, 1998, 34, 843-854.	1.0	44
57	Modeling Potential Evapotranspiration of Two Forested Watersheds in the Southern Appalachians. Transactions of the ASABE, 2011, 54, 2067-2078.	1.1	44
58	Coastal wetland resilience to climate variability: A hydrologic perspective. Journal of Hydrology, 2019, 568, 275-284.	2.3	44
59	Investigating impacts of drought and disturbance on evapotranspiration over a forested landscape in North Carolina, USA using high spatiotemporal resolution remotely sensed data. Remote Sensing of Environment, 2020, 238, 111018.	4.6	41
60	Sensitivity of pine flatwoods hydrology to climate change and forest management in Florida, USA. Wetlands, 2009, 29, 826-836.	0.7	40
61	Environmental controls on seasonal ecosystem evapotranspiration/potential evapotranspiration ratio as determined by the global eddy flux measurements. Hydrology and Earth System Sciences, 2017, 21, 311-322.	1.9	40
62	Understanding coastal wetland hydrology with a new regionalâ€scale, processâ€based hydrological model. Hydrological Processes, 2018, 32, 3158-3173.	1.1	38
63	Forest Management Challenges for Sustaining Water Resources in the Anthropocene. Forests, 2016, 7, 68.	0.9	36
64	Biophysical controls on nocturnal sap flow in plantation forests in a semi-arid region of northern China. Agricultural and Forest Meteorology, 2020, 284, 107904.	1.9	36
65	Understanding the role of regional water connectivity in mitigating climate change impacts on surface water supply stress in the United States. Journal of Hydrology, 2019, 570, 80-95.	2.3	35
66	Influence of basin characteristics on the effectiveness and downstream reach of interbasin water transfers: displacing a problem. Environmental Research Letters, 2015, 10, 124005.	2.2	34
67	Drought and thinning have limited impacts on evapotranspiration in a managed pine plantation on the southeastern United States coastal plain. Agricultural and Forest Meteorology, 2018, 262, 14-23.	1.9	34
68	Effects of Urbanization on Watershed Evapotranspiration and Its Components in Southern China. Water (Switzerland), 2020, 12, 645.	1.2	34
69	Forested lands dominate drinking water supply in the conterminous United States. Environmental Research Letters, 2021, 16, 084008.	2.2	34
70	Drought impacts on ecosystem functions of the U.S. National Forests and Grasslands: Part I evaluation of a water and carbon balance model. Forest Ecology and Management, 2015, 353, 260-268.	1.4	32
71	Assessment of wildland fire impacts on watershed annual water yield: Analytical framework and case studies in the United States. Ecohydrology, 2017, 10, e1794.	1.1	32
72	Water Quantity and Quality at the Urban-Rural Interface. , 0, , 29-48.		31

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73	Combined effects of climate and land management on watershed vegetation dynamics in an arid environment. Science of the Total Environment, 2017, 589, 73-88.	3.9	31
74	Modeling the impacts of urbanization on watershed-scale gross primary productivity and tradeoffs with water yield across the conterminous United States. Journal of Hydrology, 2020, 583, 124581.	2.3	27
75	Impact of air pollution induced climate change on water availability and ecosystem productivity in the conterminous United States. Climatic Change, 2017, 140, 259-272.	1.7	26
76	Integrated Modeling of Water Supply and Demand under Management Options and Climate Change Scenarios in Chifeng City, China. Journal of the American Water Resources Association, 2015, 51, 655-671.	1.0	25
77	Disentangling the Effects of Temperature, Moisture, and Substrate Availability on Soil CO₂ Efflux. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 2060-2075.	1.3	25
78	Potential impacts of climate change on vegetation dynamics and ecosystem function in a mountain watershed on the Qinghai-Tibet Plateau. Climatic Change, 2019, 156, 31-50.	1.7	24
79	Long-term carbon flux and balance in managed and natural coastal forested wetlands of the Southeastern USA. Agricultural and Forest Meteorology, 2020, 288-289, 108022.	1.9	24
80	Effects of land-use change and drought on decadal evapotranspiration and water balance of natural and managed forested wetlands along the southeastern US lower coastal plain. Agricultural and Forest Meteorology, 2021, 303, 108381.	1.9	24
81	Water Stress Projections for the Northeastern and Midwestern United States in 2060: Anthropogenic and Ecological Consequences. Journal of the American Water Resources Association, 2013, 49, 938-952.	1.0	23
82	Projecting water yield and ecosystem productivity across the United States by linking an ecohydrological model to WRF dynamically downscaled climate data. Hydrology and Earth System Sciences, 2016, 20, 935-952.	1.9	23
83	Divergence of ecosystem services in U.S. National Forests and Grasslands under a changing climate. Scientific Reports, 2016, 6, 24441.	1.6	22
84	Trade-off between watershed water yield and ecosystem productivity along elevation gradients on a complex terrain in southwestern China. Journal of Hydrology, 2020, 590, 125449.	2.3	22
85	Combined effects of urbanization and climate change on watershed evapotranspiration at multiple spatial scales. Journal of Hydrology, 2020, 587, 124869.	2.3	22
86	Urbanization Aggravates Effects of Global Warming on Local Atmospheric Drying. Geophysical Research Letters, 2022, 49, .	1.5	22
87	Climate Variability Masked Greening Effects on Water Yield in the Yangtze River Basin During 2001â€“2018. Water Resources Research, 2022, 58, .	1.7	22
88	Spatial Patterns of Development Drive Water Use. Water Resources Research, 2018, 54, 1633-1649.	1.7	21
89	Using regional scale flowâ€“ecology modeling to identify catchments where fish assemblages are most vulnerable to changes in water availability. Freshwater Biology, 2018, 63, 928-945.	1.2	21
90	Implications of Upstream Flow Availability for Watershed Surface Water Supply across the Conterminous United States. Journal of the American Water Resources Association, 2018, 54, 694-707.	1.0	20

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91	Future shift of the relative roles of precipitation and temperature in controlling annual runoff in the conterminous United States. Hydrology and Earth System Sciences, 2017, 21, 5517-5529.	1.9	18
92	Climatic Controls on Watershed Reference Evapotranspiration Varied during 1961â€“2012 in Southern China. Journal of the American Water Resources Association, 2019, 55, 189-208.	1.0	17
93	Vegetation greening weakened the capacity of water supply to China's South-to-North Water Diversion Project. Hydrology and Earth System Sciences, 2021, 25, 5623-5640.	1.9	17
94	Clearcutting upland forest alters transpiration of residual trees in the riparian buffer zone. Hydrological Processes, 2015, 29, 4979-4992.	1.1	15
95	Ecosystem Productivity and Evapotranspiration Are Tightly Coupled in Loblolly Pine (Pinus taeda L.) Plantations along the Coastal Plain of the Southeastern U.S.. Forests, 2021, 12, 1123.	0.9	15
96	Coupling simulation of water-carbon processes for catchmentâ€•calibration and validation of the WaSSI-C model. Chinese Journal of Plant Ecology, 2013, 37, 492-502.	0.3	14
97	Water Yield Responses to Gradual Changes in Forest Structure and Species Composition in a Subboreal Watershed in Northeastern China. Forests, 2019, 10, 211.	0.9	13
98	Testing DRAINMOD-FOREST for predicting evapotranspiration in a mid-rotation pine plantation. Forest Ecology and Management, 2015, 355, 37-47.	1.4	12
99	Managing Forest Water Quantity and Quality under Climate Change. , 2013, , 249-306.		12
100	Detection of the Coupling between Vegetation Leaf Area and Climate in a Multifunctional Watershed, Northwestern China. Remote Sensing, 2016, 8, 1032.	1.8	11
101	Dependence of 3â€‰month Standardized Precipitationâ€‰Evapotranspiration Index dryness/wetness sensitivity on climatological precipitation over southwest China. International Journal of Climatology, 2018, 38, 4568-4578.	1.5	10
102	Climate change challenges efficiency of inter-basin water transfers in alleviating water stress. Environmental Research Letters, 2022, 17, 044050.	2.2	10
103	How well do terrestrial biosphere models simulate coarse-scale runoff in the contiguous United States?. Ecological Modelling, 2015, 303, 87-96.	1.2	9
104	Estimates of Precipitation IDF Curves and Design Discharges for Road-Crossing Drainage Structures: Case Study in Four Small Forested Watersheds in the Southeastern US. Journal of Hydrologic Engineering - ASCE, 2021, 26, .	0.8	9
105	Interâ€Basin Transfers Extend the Benefits of Water From Forests to Population Centers Across the Conterminous U.S.. Water Resources Research, 2022, 58, .	1.7	8
106	Using Î´13C and Î´18O to analyze loblolly pine (Pinus taeda L.) response to experimental drought and fertilization. Tree Physiology, 2019, 39, 1984-1994.	1.4	6
107	Detecting Coastal Wetland Degradation by Combining Remote Sensing and Hydrologic Modeling. Forests, 2022, 13, 411.	0.9	6
108	Determination of spatial scale of response unit for the WASSI-C eco-hydrological modelâ€”a case study on the upper Zagunao River watershed of China. Chinese Journal of Plant Ecology, 2013, 37, 132-141.	0.3	5

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109	Parallelization of a distributed ecohydrological model. Environmental Modelling and Software, 2018, 101, 51-63.	1.9	4
110	Heterotrophic Respiration and the Divergence of Productivity and Carbon Sequestration. Geophysical Research Letters, 2021, 48, e2020GL092366.	1.5	4
111	Managing Forests and Water for People under a Changing Environment. Forests, 2020, 11, 331.	0.9	3
112	Evapotranspiration: Challenges in Measurement and Modeling. Eos, 2014, 95, 256-256.	0.1	2
113	Water balance of municipal wastewater irrigation in a coastal forested watershed. Ecohydrology, 2020, 13, e2227.	1.1	1
114	Variability of tree transpiration across three zones in a southeastern U.S. Piedmont watershed. Hydrological Processes, 2021, 35, e14389.	1.1	1
115	Spatial variability in tree-ring carbon isotope discrimination in response to local drought across the entire loblolly pine natural range. Tree Physiology, 2022, 42, 44-58.	1.4	1
116	Data on projections of surface water withdrawal, consumption, and availability in the conterminous United States through the 21st century. Data in Brief, 2019, 23, 103786.	0.5	0
117	Impacts of Hurricane Michael on Watershed Hydrology: A Case Study in the Southeastern United States. Forests, 2022, 13, 904.	0.9	0