Guo-Yue Niu

List of Publications by Year
in descending order

99 papers	9,439 citations	76326 40 h-index	39675 94 g-index
101 all docs	101 docs citations	101 times ranked	7707 citing authors

#	Article	IF	Citations
1	The community Noah land surface model with multiparameterization options (Noah-MP): 1. Model description and evaluation with local-scale measurements. Journal of Geophysical Research, 2011, 116, .	3.3	1,626
2	The Common Land Model. Bulletin of the American Meteorological Society, 2003, 84, 1013-1024.	3.3	1,058
3	Improvements to the Community Land Model and their impact on the hydrological cycle. Journal of Geophysical Research, 2008, 113, .	3.3	649
4	The community Noah land surface model with multiparameterization options (Noah-MP): 2. Evaluation over global river basins. Journal of Geophysical Research, 2011, 116, .	3.3	475
5	Development of a simple groundwater model for use in climate models and evaluation with Gravity Recovery and Climate Experiment data. Journal of Geophysical Research, 2007, 112, .	3.3	440
6	Effects of Frozen Soil on Snowmelt Runoff and Soil Water Storage at a Continental Scale. Journal of Hydrometeorology, 2006, 7, 937-952.	1.9	389
7	A simple TOPMODEL-based runoff parameterization (SIMTOP) for use in global climate models. Journal of Geophysical Research, 2005, 110, .	3.3	358
8	Use of FLUXNET in the Community Land Model development. Journal of Geophysical Research, 2008, 113, .	3.3	210
9	2005 drought event in the Amazon River basin as measured by GRACE and estimated by climate models. Journal of Geophysical Research, 2009, 114, .	3.3	210
10	Development of a China Dataset of Soil Hydraulic Parameters Using Pedotransfer Functions for Land Surface Modeling. Journal of Hydrometeorology, 2013, 14, 869-887.	1.9	208
11	Simulation of high-latitude hydrological processes in the Torneâ€“Kalix basin: PILPS Phase 2(e). Global and Planetary Change, 2003, 38, 1-30.	3.5	194
12	An observationâ€based formulation of snow cover fraction and its evaluation over large North American river basins. Journal of Geophysical Research, 2007, 112, .	3.3	189
13	Effects of vegetation canopy processes on snow surface energy and mass balances. Journal of Geophysical Research, 2004, 109, .	3.3	184
14	The RhÃ´ne-Aggregation Land Surface Scheme Intercomparison Project: An Overview. Journal of Climate, 2004, 17, 187-208.	3.2	178
15	River Network Routing on the NHDPlus Dataset. Journal of Hydrometeorology, 2011, 12, 913-934.	1.9	166
16	A gridded global data set of soil, intact regolith, and sedimentary deposit thicknesses for regional and global land surface modeling. Journal of Advances in Modeling Earth Systems, 2016, 8, 41-65.	3.8	161
17	Hydrological evaluation of the Noahâ€MP land surface model for the Mississippi River Basin. Journal of Geophysical Research D: Atmospheres, 2014, 119, 23-38.	3.3	151
18	Quantifying parameter sensitivity, interaction, and transferability in hydrologically enhanced versions of the Noah land surface model over transition zones during the warm season. Journal of Geophysical Research, 2010, 115, .	3.3	131

#	Article	IF	Citations
19	The effect of groundwater interaction in North American regional climate simulations with WRF/Noah-MP. Climatic Change, 2015, 129, 485-498.	3.6	114
20	Impacts of vegetation and groundwater dynamics on warm season precipitation over the Central United States. Journal of Geophysical Research, 2009, 114, .	3.3	107
21	Simulation of high latitude hydrological processes in the Torneâ€“Kalix basin: PILPS Phase 2(e). Global and Planetary Change, 2003, 38, 31-53.	3.5	106
22	Evaporation variability of Nam Co Lake in the Tibetan Plateau and its role in recent rapid lake expansion. Journal of Hydrology, 2016, 537, 27-35.	5.4	102
23	The Versatile Integrator of Surface and Atmosphere processes. Global and Planetary Change, 2003, 38, 175-189.	3.5	96
24	Modeling seasonal snowpack evolution in the complex terrain and forested Colorado Headwaters region: A model intercomparison study. Journal of Geophysical Research D: Atmospheres, 2014, 119, 13,795.	3.3	95
25	A Systematic Evaluation of Noahâ€MP in Simulating Landâ€Atmosphere Energy, Water, and Carbon Exchanges Over the Continental United States. Journal of Geophysical Research D: Atmospheres, 2017, 122, 12,245.	3.3	92
26	Multisensor snow data assimilation at the continental scale: The value of Gravity Recovery and Climate Experiment terrestrial water storage information. Journal of Geophysical Research, 2010, 115, .	3.3	86
27	Improving land-surface model hydrology: Is an explicit aquifer model better than a deeper soil profile?. Geophysical Research Letters, 2007, 34, .	4.0	72
28	Which way do you lean? Using slope aspect variations to understand Critical Zone processes and feedbacks. Earth Surface Processes and Landforms, 2018, 43, 1133-1154.	2.5	70
29	An integrated modelling framework of catchmentâ€scale ecohydrological processes: 1. Model description and tests over an energyâ€limited watershed. Ecohydrology, 2014, 7, 427-439.	2.4	68
30	Future precipitation changes and their implications for tropical peatlands. Geophysical Research Letters, 2007, 34, .	4.0	65
31	Critical Zone Services: Expanding Context, Constraints, and Currency beyond Ecosystem Services. Vadose Zone Journal, 2015, 14, vzj2014.10.0142.	2.2	60
32	Enhancing the estimation of continentalâ€scale snow water equivalent by assimilating MODIS snow cover with the ensemble Kalman filter. Journal of Geophysical Research, 2008, 113, .	3.3	57
33	Assessing a land surface model's improvements with GRACE estimates. Geophysical Research Letters, 2006, 33, .	4.0	52
34	Implementing and Evaluating Variable Soil Thickness in the Community Land Model, Version 4.5 (CLM4.5). Journal of Climate, 2016, 29, 3441-3461.	3.2	49
35	Retrieving snow mass from GRACE terrestrial water storage change with a land surface model. Geophysical Research Letters, 2007, 34, .	4.0	48
36	The Landscape Evolution Observatory: A large-scale controllable infrastructure to study coupled Earth-surface processes. Geomorphology, 2015, 244, 190-203.	2.6	47

#	Article	IF	Citations
37	Why Do Largeâ€Scale Land Surface Models Produce a Low Ratio of Transpiration to Evapotranspiration?. Journal of Geophysical Research D: Atmospheres, 2018, 123, 9109-9130.	3.3	47
38	The versatile integrator of surface atmospheric processes. Global and Planetary Change, 2003, 38, 191-208.	3.5	45
39	Implementing Dynamic Root Optimization in Noahâ€MP for Simulating Phreatophytic Root Water Uptake. Water Resources Research, 2018, 54, 1560-1575.	4.2	44
40	Assessing five evolving microbial enzyme models against field measurements from a semiarid savannah-What are the mechanisms of soil respiration pulses?. Geophysical Research Letters, 2014, 41, 6428-6434.	4.0	42
41	Modeling spatial and temporal variations in soil moisture in China. Science Bulletin, 2011, 56, 1809-1820.	1.7	41
42	A hybridâ€3D hillslope hydrological model for use in <scp>E</scp>arth system models. Water Resources Research, 2015, 51, 8218-8239.	4.2	41
43	Simulation of snow mass and extent in general circulation models. Hydrological Processes, 1999, 13, 2097-2113.	2.6	40
44	Evaluating Enhanced Hydrological Representations in Noah LSM over Transition Zones: Implications for Model Development. Journal of Hydrometeorology, 2009, 10, 600-622.	1.9	40
45	A Wetâ€Bulb Temperatureâ€Based Rainâ€Snow Partitioning Scheme Improves Snowpack Prediction Over the Drier Western United States. Geophysical Research Letters, 2019, 46, 13825-13835.	4.0	39
46	Water and Heat Transport in the Desert Soil and Atmospheric Boundary Layer in Western China. Boundary-Layer Meteorology, 1997, 85, 179-195.	2.3	38
47	Enhancing the Noahâ€MP Ecosystem Response to Droughts With an Explicit Representation of Plant Water Storage Supplied by Dynamic Root Water Uptake. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002062.	3.8	32
48	Incipient subsurface heterogeneity and its effect on overland flow generation â€“ insight from a modeling study of the first experiment at the Biosphere 2 Landscape Evolution Observatory. Hydrology and Earth System Sciences, 2014, 18, 1873-1883.	4.9	29
49	Improving the Xin'anjiang hydrological model based on massâ€“energy balance. Hydrology and Earth System Sciences, 2017, 21, 3359-3375.	4.9	29
50	Model performance, model robustness, and model fitness scores: A new method for identifying good landâ€surface models. Geophysical Research Letters, 2008, 35, .	4.0	26
51	Climatic forcing for recent significant terrestrial drying and wetting. Advances in Water Resources, 2019, 133, 103425.	3.8	24
52	Hydrologic functioning of the deep critical zone and contributions to streamflow in a highâ€elevation catchment: Testing of multiple conceptual models. Hydrological Processes, 2019, 33, 476-494.	2.6	22
53	The flood of November 1994 in Piedmont, Italy: a quantitative analysis and simulation. Hydrological Processes, 2002, 16, 1275-1299.	2.6	21
54	Impact of sensor failure on the observability of flow dynamics at the Biosphere 2 LEO hillslopes. Advances in Water Resources, 2015, 86, 327-339.	3.8	21

#	Article	IF	Citations
55	Parameter Sensitivity Analysis for Computationally Intensive Spatially Distributed Dynamical Environmental Systems Models. Journal of Advances in Modeling Earth Systems, 2019, 11, 2896-2909.	3.8	21
56	An integrated modelling framework of catchmentâ€scale ecohydrological processes: 2. The role of water subsidy by overland flow on vegetation dynamics in a semiâ€arid catchment. Ecohydrology, 2014, 7, 815-827.	2.4	20
57	Stable water isotope simulation in different reservoirs of Manaus, Brazil, by Community Land Model incorporating stable isotopic effect. International Journal of Climatology, 2009, 29, 619-628.	3.5	18
58	Parameter estimation in ensemble based snow data assimilation: A synthetic study. Advances in Water Resources, 2011, 34, 407-416.	3.8	18
59	Multiresponse modeling of variably saturated flow and isotope tracer transport for a hillslope experiment at the Landscape Evolution Observatory. Hydrology and Earth System Sciences, 2016, 20, 4061-4078.	4.9	18
60	Testing the hybridâ€3â€D hillslope hydrological model in a controlled environment. Water Resources Research, 2016, 52, 1089-1107.	4.2	18
61	Why Is the Terrestrial Water Storage in Dryland Regions Declining? A Perspective Based on Gravity Recovery and Climate Experiment Satellite Observations and Noah Land Surface Model With Multiparameterization Schemes Model Simulations. Water Resources Research, 2020, 56, e2020WR027102.	4.2	18
62	High-resolution simulations of mean and extreme precipitation with WRF for the soil-erosive Loess Plateau. Climate Dynamics, 2020, 54, 3489-3506.	3.8	18
63	Interannual variation in biogenic emissions on a regional scale. Journal of Geophysical Research, 2007, 112, .	3.3	17
64	Evaluating the effect of rainfall variability on vegetation establishment in a semidesert grassland. Environmental Monitoring and Assessment, 2014, 186, 395-406.	2.7	17
65	Global Evaluation of the Noahâ€MP Land Surface Model and Suggestions for Selecting Parameterization Schemes. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	17
66	Ensemble Evaluation of Hydrologically Enhanced Noah-LSM: Partitioning of the Water Balance in High-Resolution Simulations over the Little Washita River Experimental Watershed. Journal of Hydrometeorology, 2011, 12, 45-64.	1.9	16
67	Interactions between snow cover and evaporation lead to higher sensitivity of streamflow to temperature. Communications Earth & Environment, 2020, 1, .	6.8	15
68	Coupling surface flow with high-performance subsurface reactive flow and transport code PFLOTRAN. Environmental Modelling and Software, 2021, 137, 104959.	4.5	15
69	Quantifying the Impact of Climate Change and Human Activities on Streamflow in a Semi-Arid Watershed with the Budyko Equation Incorporating Dynamic Vegetation Information. Water (Switzerland), 2018, 10, 1781.	2.7	12
70	Sensitivity of biogenic emissions simulated by a land-surface model to land-cover representations. Atmospheric Environment, 2008, 42, 4185-4197.	4.1	11
71	An improved vegetation emissivity scheme for land surface modeling and its impact on snow cover simulations. Climate Dynamics, 2019, 53, 6215-6226.	3.8	11
72	Massive crop expansion threatens agriculture and water sustainability in northwestern China. Environmental Research Letters, 2022, 17, 034003.	5.2	11

#	Article	IF	Citations
73	Estimating Irrigation Water Consumption Using Machine Learning and Remote Sensing Data in Kansas High Plains. Remote Sensing, 2022, 14, 3004.	4.0	11
74	Spatial statistical properties and scale transform analyses on the topographic index derived from DEMs in China. Computers and Geosciences, 2009, 35, 592-602.	4.2	10
75	Drought adaptability of phreatophytes: insight from vertical root distribution in drylands of China. Journal of Plant Ecology, 2021, 14, 1128-1142.	2.3	10
76	Controlled Experiments of Hillslope Coevolution at the Biosphere 2 Landscape Evolution Observatory: Toward Prediction of Coupled Hydrological, Biogeochemical, and Ecological Change. , 0, , .		9
77	Effects of differential hillslopeâ€scale water retention characteristics on rainfallâ€“runoff response at the Landscape Evolution Observatory. Hydrological Processes, 2018, 32, 2118-2127.	2.6	9
78	Vegetation source water identification using isotopic and hydrometric observations from a subhumid mountain catchment. Ecohydrology, 2020, 13, e2167.	2.4	9
79	Study of the Spatiotemporal Characteristics of Meltwater Contribution to the Total Runoff in the Upper Changjiang River Basin. Water (Switzerland), 2017, 9, 165.	2.7	7
80	Effects of Irrigation on Seasonal and Annual Temperature and Precipitation over China Simulated by the WRF Model. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034222.	3.3	7
81	A Microbialâ€Explicit Soil Organic Carbon Decomposition Model (MESDM): Development and Testing at a Semiarid Grassland Site. Journal of Advances in Modeling Earth Systems, 2022, 14, e2021MS002485.	3.8	7
82	Earth System Model, Modeling the Land Component of. , 2012, , 139-168.		6
83	A piecewise modeling approach for climate sensitivity studies: Tests with a shallow-water model. Journal of Meteorological Research, 2015, 29, 735-746.	2.4	6
84	Relative model score: a scoring rule for evaluating ensemble simulations with application to microbial soil respiration modeling. Stochastic Environmental Research and Risk Assessment, 2018, 32, 2809-2819.	4.0	6
85	Physicsâ€Based Narrowband Optical Parameters for Snow Albedo Simulation in Climate Models. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	6
86	Development of a Largeâ€Scale Hydrological Model TOPX and Its Coupling with Regional Integrated Environment Modeling System RIEMS. Chinese Journal of Geophysics, 2009, 52, 762-771.	0.2	5
87	Assessment of the Effects of Climate Change on Evapotranspiration with an Improved Elasticity Method in a Nonhumid Area. Sustainability, 2018, 10, 4589.	3.2	5
88	Bayesian inference and predictive performance of soil respiration models in the presence of model discrepancy. Geoscientific Model Development, 2019, 12, 2009-2032.	3.6	5
89	The impact of sea surface temperature on the North American monsoon: A GCM study. Geophysical Research Letters, 2003, 30, .	4.0	3
90	Exploring the Potential of Long Shortâ€Term Memory Networks for Improving Understanding of Continentalâ€and Regionalâ€Scale Snowpack Dynamics. Water Resources Research, 2022, 58, .	4.2	3

#	Article	IF	Citations
91	A Catchmentâ€Based Hierarchical Spatial Tessellation Approach to a Better Representation of Land Heterogeneity for Hyperâ€Resolution Land Surface Modeling. Water Resources Research, 2022, 58, .	4.2	3
92	The Control of Plant and Soil Hydraulics on the Interannual Variability of Plant Carbon Uptake Over the Central US. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	3
93	Simulations of seasonal variations of stable water isotopes in land surface process model CLM. Science Bulletin, 2009, 54, 1765-1772.	9.0	2
94	Ubiquitous Fractal Scaling and Filtering Behavior of Hydrologic Fluxes and Storages from A Mountain Headwater Catchment. Water (Switzerland), 2020, 12, 613.	2.7	2
95	Highly sampled measurements in a controlled atmosphere at the Biosphere 2 Landscape Evolution Observatory. Scientific Data, 2020, 7, 306.	5.3	1
96	An improved practical approach for estimating catchmentâ€scale response functions through wavelet analysis. Hydrological Processes, 2021, 35, e14082.	2.6	1
97	Improved runoff simulations for a highly varying soil depth and complex terrain watershed in the Loess Plateau with the Community Land Model version 5. Geoscientific Model Development, 2022, 15, 3405-3416.	3.6	1
98	Modeling the Continental Hydrology: The Interplay between Canopy Interception and Hill-Slope Runoff. , 2004, , 284.		0
99	Impacts of Fractional Snow Cover on Surface Air Temperature in the NCAR Community Atmosphere Model (NCAR-CAM2). , 2004, , .		0