Amilcare Porporato

List of Publications by Citations

224 papers	13,575 citations	55 h-index	112 g-index
249 ext. papers	15,411 ext. citations	5.3 avg, IF	6.76 L-index

#	Paper	IF	Citations
224	Water pulses and biogeochemical cycles in arid and semiarid ecosystems. *Oecologia*, **2004**, 141, 221-35	2.9	966
223	Environmental and stoichiometric controls on microbial carbon-use efficiency in soils. *New Phytologist*, **2012**, 196, 79-91	9.8	728
222	Responses of soil microbial communities to water stress: results from a meta-analysis. *Ecology*, **2012**, 93, 930-8	4.6	585
221	Plants in water-controlled ecosystems: active role in hydrologic processes and response to water stress: II. Probabilistic soil moisture dynamics. *Advances in Water Resources*, **2001**, 24, 707-723	4.7	548
220	Soil carbon and nitrogen mineralization: Theory and models across scales. *Soil Biology and Biochemistry*, **2009**, 41, 1355-1379	7.5	504
219	Stoichiometric controls on carbon, nitrogen, and phosphorus dynamics in decomposing litter. *Ecological Monographs*, **2010**, 80, 89-106	9	481
218	Soil water balance and ecosystem response to climate change. *American Naturalist*, **2004**, 164, 625-32	3.7	468
217	The global stoichiometry of litter nitrogen mineralization. *Science*, **2008**, 321, 684-6	33.3	432
216	Probabilistic modelling of water balance at a point: the role of climate, soil and vegetation. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **1999**, 455, 3789-3805	2.4	428
215	Plants in water-controlled ecosystems: active role in hydrologic processes and response to water stress: III. Vegetation water stress. *Advances in Water Resources*, **2001**, 24, 725-744	4.7	357
214	Global resorption efficiencies and concentrations of carbon and nutrients in leaves of terrestrial plants. *Ecological Monographs*, **2012**, 82, 205-220	9	346
213	Changes in rainfall seasonality in the tropics. *Nature Climate Change*, **2013**, 3, 811-815	21.4	344
212	On the spatial and temporal links between vegetation, climate, and soil moisture. *Water Resources Research*, **1999**, 35, 3709-3722	5.4	275
211	Hydrologic controls on soil carbon and nitrogen cycles. I. Modeling scheme. *Advances in Water Resources*, **2003**, 26, 45-58	4.7	187
210	A theoretical analysis of microbial eco-physiological and diffusion limitations to carbon cycling in drying soils. *Soil Biology and Biochemistry*, **2014**, 73, 69-83	7.5	162
209	Optimizing stomatal conductance for maximum carbon gain under water stress: a meta-analysis across plant functional types and climates. *Functional Ecology*, **2011**, 25, 456-467	5.6	159
208	Preferential states in soil moisture and climate dynamics. *Proceedings of the National Academy of Sciences of the United States of America*, **2004**, 101, 8848-51	11.5	156

207	Ecohydrology of Water-Controlled Ecosystems: Soil Moisture and Plant Dynamics **2005**,		156
206	Plants in water-controlled ecosystems: active role in hydrologic processes and response to water stress: IV. Discussion of real cases. *Advances in Water Resources*, **2001**, 24, 745-762	4.7	155
205	Hierarchy of models for meandering rivers and related morphodynamic processes. *Reviews of Geophysics*, **2007**, 45,	23.1	145
204	The ecohydrological role of soil texture in a water-limited ecosystem. *Water Resources Research*, **2001**, 37, 2863-2872	5.4	145
203	Basin-scale soil moisture dynamics and the probabilistic characterization of carrier hydrologic flows: Slow, leaching-prone components of the hydrologic response. *Water Resources Research*, **2007**, 43,	5.4	137
202	Hydraulic limits on maximum plant transpiration and the emergence of the safety-efficiency trade-off. *New Phytologist*, **2013**, 198, 169-178	9.8	128
201	Preferential states of seasonal soil moisture: The impact of climate fluctuations. *Water Resources Research*, **2000**, 36, 2209-2219	5.4	118
200	Coupled Dynamics of Photosynthesis, Transpiration, and Soil Water Balance. Part I: Upscaling from Hourly to Daily Level. *Journal of Hydrometeorology*, **2004**, 5, 546-558	3.7	108
199	A theoretical analysis of nonlinearities and feedbacks in soil carbon and nitrogen cycles. *Soil Biology and Biochemistry*, **2007**, 39, 1542-1556	7.5	105
198	On the long-term behavior of meandering rivers. *Water Resources Research*, **2005**, 41,	5.4	100
197	Spring frost risk in a changing climate. *Geophysical Research Letters*, **2008**, 35, n/a-n/a	4.9	98
196	The hysteretic evapotranspiration□Vapor pressure deficit relation. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 125-140	3.7	95
195	A Review of Soil Moisture Dynamics: From Rainfall Infiltration to Ecosystem Response. *Environmental Engineering Science*, **2005**, 22, 9-24	2	93
194	Biological constraints on water transport in the soil□plant□atmosphere system. *Advances in Water Resources*, **2013**, 51, 292-304	4.7	91
193	Hydrologic controls on soil carbon and nitrogen cycles. II. A case study. *Advances in Water Resources* , **2003**, 26, 59-70	4.7	90
192	Ecohydrology of Terrestrial Ecosystems. *BioScience*, **2010**, 60, 898-907	5.7	85
191	On the effects of seasonality on soil water balance and plant growth. *Water Resources Research*, **2012**, 48,	5.4	84
190	Nonlinear storage-discharge relations and catchment streamflow regimes. *Water Resources Research*, **2009**, 45,	5.4	84

189	Onset of water stress, hysteresis in plant conductance, and hydraulic lift: Scaling soil water dynamics from millimeters to meters. *Water Resources Research*, **2008**, 44,	5.4	83
188	Stochastic soil moisture dynamics along a hillslope. *Journal of Hydrology*, **2003**, 272, 264-275	6	81
187	Ecohydrology-a challenging multidisciplinary research perspective / Ecohydrologie: une perspective stimulante de recherche multidisciplinaire. *Hydrological Sciences Journal*, **2002**, 47, 811-821	3.5	80
186	Modelling soil carbon and nitrogen cycles during land use change. A review. *Agronomy for Sustainable Development*, **2011**, 31, 251-274	6.8	70
185	Role of microtopography in rainfall-runoff partitioning: An analysis using idealized geometry. *Water Resources Research*, **2010**, 46,	5.4	70
184	On the spectrum of soil moisture from hourly to interannual scales. *Water Resources Research*, **2007**, 43,	5.4	69
183	Soil Moisture Feedbacks on Convection Triggers: The Role of Soil–Plant Hydrodynamics. *Journal of Hydrometeorology*, **2009**, 10, 96-112	3.7	68
182	Analytical models of soil and litter decomposition: Solutions for mass loss and time-dependent decay rates. *Soil Biology and Biochemistry*, **2012**, 50, 66-76	7.5	67
181	Stochastic Dynamics of Plant-Water Interactions. *Annual Review of Ecology, Evolution, and Systematics*, **2007**, 38, 767-791	13.5	67
180	Natural streamflow regime alterations: Damming of the Piave river basin (Italy). *Water Resources Research*, **2010**, 46,	5.4	66
179	Superstatistics of hydro-climatic fluctuations and interannual ecosystem productivity. *Geophysical Research Letters*, **2006**, 33,	4.9	63
178	Ecohydrological model of flow duration curves and annual minima. *Water Resources Research*, **2008**, 44,	5.4	62
177	Probabilistic characterization of base flows in river basins: Roles of soil, vegetation, and geomorphology. *Water Resources Research*, **2007**, 43,	5.4	61
176	Modelling C3 and C4 photosynthesis under water-stressed conditions. *Plant and Soil*, **2008**, 313, 187-203	4.2	61
175	Intensive or extensive use of soil moisture: Plant strategies to cope with stochastic water availability. *Geophysical Research Letters*, **2001**, 28, 4495-4497	4.9	61
174	Climatic, ecophysiological, and phenological controls on plant ecohydrological strategies in seasonally dry ecosystems. *Ecohydrology*, **2015**, 8, 660-681	2.5	59
173	Optimization of stomatal conductance for maximum carbon gain under dynamic soil moisture. *Advances in Water Resources*, **2013**, 62, 90-105	4.7	59
172	Soil moisture and plant stress dynamics along the Kalahari precipitation gradient. *Journal of Geophysical Research*, **2003**, 108, n/a-n/a		59

171	Space-time modeling of soil moisture: Stochastic rainfall forcing with heterogeneous vegetation. *Water Resources Research*, **2006**, 42,	5.4	57
170	Modeling soil moisture and oxygen effects on soil biogeochemical cycles including dissimilatory nitrate reduction to ammonium (DNRA). *Advances in Water Resources*, **2013**, 62, 106-124	4.7	55
169	Strategies of a Bornean tropical rainforest water use as a function of rainfall regime: isohydric or anisohydric?. *Plant, Cell and Environment*, **2012**, 35, 61-71	8.4	55
168	Hydrologic and atmospheric controls on initiation of convective precipitation events. *Water Resources Research*, **2007**, 43,	5.4	55
167	Water cycling in a Bornean tropical rain forest under current and projected precipitation scenarios. *Water Resources Research*, **2004**, 40,	5.4	55
166	Analysis of rainfall seasonality from observations and climate models. *Climate Dynamics*, **2015**, 44, 3281-3301	4.2	54
165	Transient soil-moisture dynamics and climate change in Mediterranean ecosystems. *Water Resources Research*, **2008**, 44,	5.4	54
164	Signatures of large-scale soil moisture dynamics on streamflow statistics across U.S. climate regimes. *Water Resources Research*, **2007**, 43,	5.4	53
163	A stochastic model for daily subsurface CO2 concentration and related soil respiration. *Advances in Water Resources*, **2008**, 31, 987-994	4.7	51
162	Mean first passage times of processes driven by white shot noise. *Physical Review E*, **2001**, 63, 036105	2.4	51
161	Soil carbon and nitrogen dynamics in southern African savannas: the effect of vegetation-induced patch-scale heterogeneities and large scale rainfall gradients. *Climatic Change*, **2009**, 94, 63-76	4.5	50
160	Coupled Dynamics of Photosynthesis, Transpiration, and Soil Water Balance. Part II: Stochastic Analysis and Ecohydrological Significance. *Journal of Hydrometeorology*, **2004**, 5, 559-566	3.7	49
159	Projected changes of rainfall seasonality and dry spells in a high greenhouse gas emissions scenario. *Climate Dynamics*, **2016**, 46, 1331-1350	4.2	48
158	Analysis of soil carbon transit times and age distributions using network theories. *Journal of Geophysical Research*, **2009**, 114,		48
157	Irreversibility and fluctuation theorem in stationary time series. *Physical Review Letters*, **2007**, 98, 094101	7.4	48
156	Impact of hydroclimatic fluctuations on the soil water balance. *Water Resources Research*, **2006**, 42,	5.4	47
155	From rainfed agriculture to stress-avoidance irrigation: I. A generalized irrigation scheme with stochastic soil moisture. *Advances in Water Resources*, **2011**, 34, 263-271	4.7	46
154	Increasing atmospheric humidity and CO concentration alleviate forest mortality risk. *Proceedings of the National Academy of Sciences of the United States of America*, **2017**, 114, 9918-9923	11.5	45

153	Stochastic modeling of soil salinity. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	44
152	Representation of space-time variability of soil moisture. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2005**, 461, 4035-4055	2.4	43
151	Phase transitions driven by state-dependent poisson noise. *Physical Review Letters*, **2004**, 92, 110601	7.4	42
150	Beyond the SCS-CN method: A theoretical framework for spatially lumped rainfall-runoff response. *Water Resources Research*, **2016**, 52, 4608-4627	5.4	41
149	Soil nutrient cycles as a nonlinear dynamical system. *Nonlinear Processes in Geophysics*, **2004**, 11, 589-598	2.9	40
148	Comparative study of ecohydrological streamflow probability distributions. *Water Resources Research*, **2010**, 46,	5.4	38
147	Eco-hydrological controls on summertime convective rainfall triggers. *Global Change Biology*, **2007**, 13, 887-896	11.4	38
146	On the seasonal dynamics of mean soil moisture. *Journal of Geophysical Research*, **2002**, 107, ACL 8-1		38
145	Stochastic soil water balance under seasonal climates. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20140623	2.4	37
144	Effect of rainfall seasonality on carbon storage in tropical dry ecosystems. *Journal of Geophysical Research G: Biogeosciences*, **2013**, 118, 1156-1167	3.7	37
143	Two phenomenological constants explain similarity laws in stably stratified turbulence. *Physical Review E*, **2014**, 89, 023007	2.4	37
142	Hydrologic response of an alpine watershed: Application of a meteorological wireless sensor network to understand streamflow generation. *Water Resources Research*, **2011**, 47,	5.4	36
141	Reduced resilience as an early warning signal of forest mortality. *Nature Climate Change*, **2019**, 9, 880-885	21.4	35
140	A dynamical system perspective on plant hydraulic failure. *Water Resources Research*, **2014**, 50, 5170-5183	5.4	35
139	Traditional and microirrigation with stochastic soil moisture. *Water Resources Research*, **2010**, 46,	5.4	35
138	Diurnal cloud cycle biases in climate models. *Nature Communications*, **2017**, 8, 2269	17.4	34
137	Land and atmospheric controls on initiation and intensity of moist convection: CAPE dynamics and LCL crossings. *Water Resources Research*, **2015**, 51, 8476-8493	5.4	33
136	Optimal plant water-use strategies under stochastic rainfall. *Water Resources Research*, **2014**, 50, 5379-5394	5.4	33

135	Vegetation response to rainfall seasonality and interannual variability in tropical dry forests. *Hydrological Processes*, **2016**, 30, 3583-3595	3.3	33
134	Ecohydrological modeling in agroecosystems: Examples and challenges. *Water Resources Research*, **2015**, 51, 5081-5099	5.4	32
133	Ecohydrology of street trees: design and irrigation requirements for sustainable water use. *Ecohydrology*, **2014**, 7, 508-523	2.5	32
132	The role of tectonic uplift, climate, and vegetation in the long-term terrestrial phosphorous cycle. *Biogeosciences*, **2010**, 7, 2025-2038	4.6	32
131	From rainfed agriculture to stress-avoidance irrigation: II. Sustainability, crop yield, and profitability. *Advances in Water Resources*, **2011**, 34, 272-281	4.7	32
130	Soil heterogeneity in lumped mineralization–immobilization models. *Soil Biology and Biochemistry*, **2008**, 40, 1137-1148	7.5	32
129	Revisiting rainfall clustering and intermittency across different climatic regimes. *Water Resources Research*, **2009**, 45,	5.4	31
128	Sizing a rainwater harvesting cistern by minimizing costs. *Journal of Hydrology*, **2016**, 541, 1340-1347	6	31
127	Coupled moisture and microbial dynamics in unsaturated soils. *Water Resources Research*, **2007**, 43,	5.4	30
126	Interaction between large and small scales in the canopy sublayer. *Geophysical Research Letters*, **2004**, 31, n/a-n/a	4.9	30
125	Impact of climate variability on the vegetation water stress. *Journal of Geophysical Research*, **2000**, 105, 18013-18025		30
124	Drought-induced mortality of a Bornean tropical rain forest amplified by climate change. *Journal of Geophysical Research*, **2012**, 117, n/a-n/a		29
123	A dynamical system approach to soil salinity and sodicity. *Advances in Water Resources*, **2015**, 83, 68-76	4.7	27
122	Maximum discharge from snowmelt in a changing climate. *Geophysical Research Letters*, **2011**, 38, n/a-n/a	4.9	27
121	Common hydrologic and biogeochemical controls along the soil–stream continuum. *Hydrological Processes*, **2011**, 25, 1355-1360	3.3	26
120	Noise-induced vegetation patterns in fire-prone savannas. *Journal of Geophysical Research*, **2007**, 112,		26
119	Intertime jump statistics of state-dependent Poisson processes. *Physical Review E*, **2007**, 75, 011119	2.4	26
118	Coupled carbon and water fluxes in CAM photosynthesis: modeling quantification of water use efficiency and productivity. *Plant and Soil*, **2014**, 383, 111-138	4.2	25

117	Effect of different jump distributions on the dynamics of jump processes. *Physical Review E*, **2010**, 81, 061133	2.4	25
116	Probabilistic dynamics of soil nitrate: Coupling of ecohydrological and biogeochemical processes. *Water Resources Research*, **2008**, 44,	5.4	25
115	The effects of elevated atmospheric CO2 and nitrogen amendments on subsurface CO2 production and concentration dynamics in a maturing pine forest. *Biogeochemistry*, **2009**, 94, 271-287	3.8	24
114	Probabilistic dynamics of some jump-diffusion systems. *Physical Review E*, **2006**, 73, 026108	2.4	24
113	Detecting determinism and nonlinearity in river-flow time series. *Hydrological Sciences Journal*, **2003**, 48, 763-780	3.5	24
112	Manning's formula and Strickler's scaling explained by a co-spectral budget model. *Journal of Fluid Mechanics*, **2017**, 812, 1189-1212	3.7	23
111	An ecohydrological perspective on drought-induced forest mortality. *Journal of Geophysical Research G: Biogeosciences*, **2014**, 119, 965-981	3.7	23
110	Atmospheric Boundary-Layer Dynamics with Constant Bowen Ratio. *Boundary-Layer Meteorology*, **2009**, 132, 227-240	3.4	23
109	Causality across rainfall time scales revealed by continuous wavelet transforms. *Journal of Geophysical Research*, **2010**, 115,		22
108	A note on groundwater flow along a hillslope. *Water Resources Research*, **2004**, 40,	5.4	22
107	State-dependent fire models and related renewal processes. *Physical Review E*, **2006**, 74, 041112	2.4	21
106	Probabilistic description of crop development and irrigation water requirements with stochastic rainfall. *Water Resources Research*, **2013**, 49, 1466-1482	5.4	20
105	Accounting for landscape heterogeneity improves spatial predictions of tree vulnerability to drought. *New Phytologist*, **2018**, 220, 132-146	9.8	19
104	On the probabilistic structure of water age. *Water Resources Research*, **2015**, 51, 3588-3600	5.4	19
103	Modeling the vegetation–atmosphere carbon dioxide and water vapor interactions along a controlled CO2 gradient. *Ecological Modelling*, **2011**, 222, 653-665	3	19
102	A stochastic process for the interannual snow storage and melting dynamics. *Journal of Geophysical Research*, **2007**, 112,		19
101	Simplified stochastic soil-moisture models: a look at infiltration. *Hydrology and Earth System Sciences*, **2006**, 10, 861-871	5.5	19
100	The influence of stochastic soil moisture dynamics on gaseous emissions of NO, N2O, and N2. *Hydrological Sciences Journal*, **2003**, 48, 781-798	3.5	19

99	Similarity solutions of nonlinear diffusion problems related to mathematical hydraulics and the Fokker-Planck equation. *Physical Review E*, **2004**, 70, 056303	2.4	19
98	Probabilistic modeling of nitrogen and carbon dynamics in water-limited ecosystems. *Ecological Modelling*, **2004**, 179, 205-219	3	19
97	Nonlinear dynamics of the CAM circadian rhythm in response to environmental forcing. *Journal of Theoretical Biology*, **2015**, 368, 83-94	2.3	18
96	An ecohydrological model of malaria outbreaks. *Hydrology and Earth System Sciences*, **2012**, 16, 2759-2769	3.5	18
95	The rainfall-no rainfall transition in a coupled land-convective atmosphere system. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	18
94	Probabilistic description of topographic slope and aspect. *Journal of Geophysical Research*, **2009**, 114,		18
93	Stochastic modelling of phytoremediation. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2011**, 467, 3188-3205	2.4	17
92	Unified representation of the C3, C4, and CAM photosynthetic pathways with the Photo3 model. *Ecological Modelling*, **2018**, 384, 173-187	3	16
91	Prescription-induced jump distributions in multiplicative Poisson processes. *Physical Review E*, **2011**, 83, 061119	2.4	16
90	Ecohydrological model for the quantification of ecosystem services provided by urban street trees. *Urban Ecosystems*, **2018**, 21, 489-504	2.8	15
89	Interplay of climate seasonality and soil moisture-rainfall feedback. *Water Resources Research*, **2014**, 50, 6053-6066	5.4	15
88	Linking age, survival, and transit time distributions. *Water Resources Research*, **2015**, 51, 8316-8330	5.4	15
87	The Doomsday Equation and 50 years beyond: new perspectives on the human-water system. *Wiley Interdisciplinary Reviews: Water*, **2015**, 2, 407-414	5.7	15
86	Olive yield as a function of soil moisture dynamics. *Ecohydrology*, **2012**, 5, 99-107	2.5	15
85	From random variability to ordered structures: a search for general synthesis in ecohydrology. *Ecohydrology*, **2013**, 6, 333-342	2.5	14
84	Precipitation, dynamical intermittency, and sporadic randomness. *Advances in Water Resources*, **2010**, 33, 923-932	4.7	14
83	Stochastic rainfall-runoff model with explicit soil moisture dynamics. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2015**, 471, 20150389	2.4	13
82	A Class of Exact Solutions of the Boussinesq Equation for Horizontal and Sloping Aquifers. *Water Resources Research*, **2018**, 54, 767-778	5.4	13

81	Framework for event-based semidistributed modeling that unifies the SCS-CN method, VIC, PDM, and TOPMODEL. *Water Resources Research*, **2016**, 52, 7036-7052	5.4	13
80	Forest soil carbon and nitrogen cycles under biomass harvest: Stability, transient response, and feedback. *Ecological Modelling*, **2016**, 329, 64-76	3	13
79	The role of plant water storage and hydraulic strategies in relation to soil moisture availability. *Plant and Soil*, **2017**, 419, 503-521	4.2	13
78	Ecohydrological flow networks in the subsurface. *Ecohydrology*, **2014**, 7, n/a-n/a	2.5	13
77	Quantifying Asynchronicity of Precipitation and Potential Evapotranspiration in Mediterranean Climates. *Geophysical Research Letters*, **2019**, 46, 14692-14701	4.9	13
76	A dynamical systems framework for crop models: Toward optimal fertilization and irrigation strategies under climatic variability. *Ecological Modelling*, **2017**, 365, 80-92	3	12
75	On the theory of drainage area for regular and non-regular points. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2018**, 474, 20170693	2.4	12
74	Impacts of solar intermittency on future photovoltaic reliability. *Nature Communications*, **2020**, 11, 4781	17.4	12
73	Ecohydrology of agroecosystems: quantitative approaches towards sustainable irrigation. *Bulletin of Mathematical Biology*, **2015**, 77, 298-318	2.1	11
72	Impact of stochastic fluctuations in storage-discharge relations on streamflow distributions. *Water Resources Research*, **2010**, 46,	5.4	11
71	Rainfall intensification increases the contribution of rewetting pulses to soil heterotrophic respiration. *Biogeosciences*, **2020**, 17, 4007-4023	4.6	11
70	Channelization cascade in landscape evolution. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 1375-1382	11.5	11
69	Optimal control solutions to sodic soil reclamation. *Advances in Water Resources*, **2016**, 91, 37-45	4.7	10
68	Hydrological Spaces of Long-Term Catchment Water Balance. *Water Resources Research*, **2019**, 55, 10747-10764	5.4	10
67	The Energy Side of Budyko: Surface-Energy Partitioning From Hydrological Observations. *Geophysical Research Letters*, **2019**, 46, 7456-7463	4.9	9
66	Linking parametric and water-balance models of the Budyko and Turc spaces. *Advances in Water Resources*, **2019**, 134, 103435	4.7	9
65	Multiplicative jump processes and applications to leaching of salt and contaminants in the soil. *Physical Review E*, **2014**, 90, 052128	2.4	9
64	Some self-similar solutions in river morphodynamics. *Water Resources Research*, **2005**, 41,	5.4	9

63	On the dynamic smoothing of mountains. *Geophysical Research Letters*, **2017**, 44, 5531-5539	4.9	8
62	Hydrologic Transport of Dissolved Inorganic Carbon and Its Control on Chemical Weathering. *Journal of Geophysical Research F: Earth Surface*, **2017**, 122, 2016-2032	3.8	8
61	The effect of accelerated soil erosion on hillslope morphology. *Earth Surface Processes and Landforms*, **2019**, 44, 3007-3019	3.7	8
60	The Spatio-temporal Statistical Structure and Ergodic Behaviour of Scalar Turbulence Within a Rod Canopy. *Boundary-Layer Meteorology*, **2015**, 157, 447-460	3.4	8
59	Thermodynamics of an idealized hydrologic cycle. *Water Resources Research*, **2012**, 48,	5.4	8
58	Scale-wise evolution of rainfall probability density functions fingerprints the rainfall generation mechanism. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	8
57	Stochastic dynamics of snow avalanche occurrence by superposition of Poisson processes. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2012**, 468, 4193-4208	2.4	8
56	Linear layout of multiple flow-direction networks for landscape-evolution simulations. *Environmental Modelling and Software*, **2020**, 133, 104804	5.2	8
55	Approximate Analytical Solution to Diurnal Atmospheric Boundary-Layer Growth Under Well-Watered Conditions. *Boundary-Layer Meteorology*, **2015**, 156, 73-89	3.4	7
54	Variational analysis of landscape elevation and drainage networks. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20190775	2.4	7
53	Wetness controls on global chemical weathering. *Environmental Research Communications*, **2020**, 2, 085005	3.1	7
52	A fast-slow model of banded vegetation pattern formation in drylands. *Physica D: Nonlinear Phenomena*, **2020**, 410, 132534	3.3	6
51	Eco-hydrological controls on summertime convective rainfall triggers. *Global Change Biology*, **2007**, 07062108412026-??	2.4	5
50	The competitive advantage of a constitutive CAM species over a C4 grass species under drought and CO2 enrichment. *Ecosphere*, **2019**, 10, e02721	3.1	5
49	Impact of ecohydrological fluctuations on iron-redox cycling. *Soil Biology and Biochemistry*, **2019**, 133, 188-195	7.5	5
48	Comment on "Storage selection functions: A coherent framework for quantifying how catchments store and release water and solutes" by Rinaldo et al.. *Water Resources Research*, **2016**, 52, 613-615	5.4	5
47	Roughness effects on fine-scale anisotropy and anomalous scaling in atmospheric flows. *Physics of Fluids*, **2009**, 21, 035106	4.4	5
46	Langevin equations from time series. *Physical Review E*, **2005**, 71, 027101	2.4	5

45	The Formation of Clay-Enriched Horizons by Lessivage. *Geophysical Research Letters*, **2018**, 45, 7588-7595	4.9	5
44	Cloud cooling effects of afforestation and reforestation at midlatitudes. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	5
43	Optimal management of cattle grazing in a seasonally dry tropical forest ecosystem under rainfall fluctuations. *Journal of Hydrology*, **2020**, 588, 125102	6	4
42	Local kinetic interpretation of entropy production through reversed diffusion. *Physical Review E*, **2011**, 84, 041142	2.4	4
41	Radiative effects of daily cycle of cloud frequency in past and future climates. *Climate Dynamics*, **2020**, 54, 1625-1637	4.2	4
40	From turbulence to landscapes: Logarithmic mean profiles in bounded complex systems. *Physical Review E*, **2020**, 102, 033107	2.4	4
39	Spectral Signature of Landscape Channelization. *Geophysical Research Letters*, **2021**, 48, e2020GL091015	4.9	4
38	Bistable plant–soil dynamics and biogenic controls on the soil production function. *Earth Surface Processes and Landforms*, **2016**, 41, 1011-1017	3.7	4
37	State-dependent jump processes: Itô–Stratonovich interpretations, potential, and transient solutions. *Physical Review E*, **2018**, 98,	2.4	4
36	The role of hydrology on enhanced weathering for carbon sequestration I. Modeling rock-dissolution reactions coupled to plant, soil moisture, and carbon dynamics. *Advances in Water Resources*, **2021**, 154, 103934	4.7	4
35	Reply to comment by Fred L. Ogden et al. on "Beyond the SCS-CN method: A theoretical framework for spatially lumped rainfall-runoff response" *Water Resources Research*, **2017**, 53, 6351-6354	5.4	3
34	Ecohydrological controls on plant diversity in tropical South America. *Ecohydrology*, **2017**, 10, e1853	2.5	3
33	Multiple outflows, spatial components, and nonlinearities in age theory. *Water Resources Research*, **2017**, 53, 110-126	5.4	3
32	Dynamic evolution of the soil pore size distribution and its connection to soil management and biogeochemical processes. *Advances in Water Resources*, **2019**, 131, 103384	4.7	3
31	Dual structure of thermodynamics. *Physical Review E*, **2014**, 89, 042126	2.4	3
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