Riccardo Rigon

List of Publications by Year
in descending order

65 papers	5,838 citations	101384 36 h-index	110170 64 g-index
100 all docs	100 docs citations	100 times ranked	5230 citing authors

#	Article	IF	Citations
1	Twenty-three unsolved problems in hydrology (UPH) â€“ a community perspective. Hydrological Sciences Journal, 2019, 64, 1141-1158.	1.2	474
2	An overview of current applications, challenges, and future trends in distributed process-based models in hydrology. Journal of Hydrology, 2016, 537, 45-60.	2.3	349
3	Geomorphological dispersion. Water Resources Research, 1991, 27, 513-525.	1.7	268
4	Self-organized fractal river networks. Physical Review Letters, 1993, 70, 822-825.	2.9	260
5	Energy dissipation, runoff production, and the three-dimensional structure of river basins. Water Resources Research, 1992, 28, 1095-1103.	1.7	258
6	GEOtop: A Distributed Hydrological Model with Coupled Water and Energy Budgets. Journal of Hydrometeorology, 2006, 7, 371-388.	0.7	233
7	Minimum energy and fractal structures of drainage networks. Water Resources Research, 1992, 28, 2183-2195.	1.7	230
8	Scaling laws for river networks. Physical Review E, 1996, 53, 1510-1515.	0.8	208
9	On Hack's Law. Water Resources Research, 1996, 32, 3367-3374.	1.7	202
10	On the spatial organization of soil moisture fields. Geophysical Research Letters, 1995, 22, 2757-2760.	1.5	193
11	Modelling the probability of occurrence of shallow landslides and channelized debris flows using GEOtopâ€FS. Hydrological Processes, 2008, 22, 532-545.	1.1	193
12	Geomorphological signatures of varying climate. Nature, 1995, 374, 632-635.	13.7	188
13	A robust and energy-conserving model of freezing variably-saturated soil. Cryosphere, 2011, 5, 469-484.	1.5	177
14	Fractal structures as least energy patterns: The case of river networks. Geophysical Research Letters, 1992, 19, 889-892.	1.5	150
15	Evolution and selection of river networks: Statics, dynamics, and complexity. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 2417-2424.	3.3	143
16	Can One Gauge the Shape of a Basin?. Water Resources Research, 1995, 31, 1119-1127.	1.7	138
17	Optimal channel networks: A framework for the study of river basin morphology. Water Resources Research, 1993, 29, 1635-1646.	1.7	135
18	GEOtop 2.0: simulating the combined energy and water balance at and below the land surface accounting for soil freezing, snow cover and terrain effects. Geoscientific Model Development, 2014, 7, 2831-2857.	1.3	134

#	Article	IF	Citations
19	More green and less blue water in the Alps during warmer summers. Nature Climate Change, 2020, 10, 155-161.	8.1	134
20	CHANNEL NETWORKS. Annual Review of Earth and Planetary Sciences, 1998, 26, 289-327.	4.6	132
21	A Note on Fractal Channel Networks. Water Resources Research, 1991, 27, 3041-3049.	1.7	112
22	Network allometry. Geophysical Research Letters, 2002, 29, 3-1.	1.5	107
23	On landscape self-organization. Journal of Geophysical Research, 1994, 99, 11971-11993.	3.3	102
24	Thermodynamics of Fractal Networks. Physical Review Letters, 1996, 76, 3364-3367.	2.9	89
25	Hillslope and channel contributions to the hydrologic response. Water Resources Research, 2003, 39, .	1.7	87
26	Role of Vegetation on Slope Stability under Transient Unsaturated Conditions. Procedia Environmental Sciences, 2013, 19, 932-941.	1.3	73
27	Impact of Watershed Geomorphic Characteristics on the Energy and Water Budgets. Journal of Hydrometeorology, 2006, 7, 389-403.	0.7	72
28	Potential for landsliding: Dependence on hyetograph characteristics. Journal of Geophysical Research, 2005, 110, .	3.3	67
29	Simulated effect of soil depth and bedrock topography on nearâ€surface hydrologic response and slope stability. Earth Surface Processes and Landforms, 2013, 38, 146-159.	1.2	66
30	The geomorphological unit hydrograph from a historicalâ€critical perspective. Earth Surface Processes and Landforms, 2016, 41, 27-37.	1.2	66
31	Self-organized river basin landscapes: Fractal and multifractal characteristics. Water Resources Research, 1994, 30, 3531-3539.	1.7	62
32	The GEOTOP snow module. Hydrological Processes, 2004, 18, 3667-3679.	1.1	61
33	Comparative evaluation of different satellite rainfall estimation products and bias correction in the Upper Blue Nile (UBN) basin. Atmospheric Research, 2016, 178-179, 471-483.	1.8	59
34	Modeling the water budget of the Upper Blue Nile basin using the JGrass-NewAge model system and satellite data. Hydrology and Earth System Sciences, 2017, 21, 3145-3165.	1.9	51
35	Modelling shallow landslide susceptibility by means of a subsurface flow path connectivity index and estimates of soil depth spatial distribution. Hydrology and Earth System Sciences, 2012, 16, 3959-3971.	1.9	48
36	Are river basins optimal channel networks?. Advances in Water Resources, 1993, 16, 69-79.	1.7	42

#	Article	IF	Citations
37	The JGrass-NewAge system for forecasting and managing the hydrological budgets at the basin scale: models of flow generation and propagation/routing. Geoscientific Model Development, 2011, 4, 943-955.	1.3	42
38	Geomorphological width functions and the random cascade. Geophysical Research Letters, 1994, 21, 2123-2126.	1.5	36
39	Integrated Physically based System for Modeling Landslide Susceptibility. Procedia Earth and Planetary Science, 2014, 9, 74-82.	0.6	36
40	Feasible optimality implies Hack's Law. Water Resources Research, 1998, 34, 3181-3189.	1.7	32
41	The geomorphic structure of the runoff peak. Hydrology and Earth System Sciences, 2011, 15, 1853-1863.	1.9	24
42	On the relative role of upslope and downslope topography for describing water flow path and storage dynamics: a theoretical analysis. Hydrological Processes, 2011, 25, 3909-3923.	1.1	22
43	Snow water equivalent modeling components in NewAge-JGrass. Geoscientific Model Development, 2014, 7, 725-736.	1.3	21
44	Estimating the water budget components and their variability in a pre-alpine basin with JGrass-NewAGE. Advances in Water Resources, 2017, 104, 37-54.	1.7	21
45	Spatioâ€temporal variability of water and energy fluxes â€" a case study for a mesoscale catchment in preâ€alpine environment. Hydrological Processes, 2016, 30, 3804-3823.	1.1	20
46	Geomorphological control on variably saturated hillslope hydrology and slope instability. Water Resources Research, 2016, 52, 4590-4607.	1.7	18
47	Carbonate pseudotachylytes: evidence for seismic faulting along carbonate faults. Terra Nova, 2011, 23, 187-194.	0.9	17
48	Modeling shortwave solar radiation using the JGrass-NewAge system. Geoscientific Model Development, 2013, 6, 915-928.	1.3	17
49	Performance of site-specific parameterizations of longwave radiation. Hydrology and Earth System Sciences, 2016, 20, 4641-4654.	1.9	16
50	Age-ranked hydrological budgets and a travel time description of catchment hydrology. Hydrology and Earth System Sciences, 2016, 20, 4929-4947.	1.9	14
51	Probabilistic structure of the distance between tributaries of given size in river networks. Water Resources Research, 2007, 43, .	1.7	13
52	Comparing Evapotranspiration Estimates from the GEOframe-Prospero Model with Penmanâ€"Monteith and Priestley-Taylor Approaches under Different Climate Conditions. Water (Switzerland), 2021, 13, 1221.	1.2	13
53	A method for solving heat transfer with phase change in ice or soil that allows for large time steps while guaranteeing energy conservation. Cryosphere, 2021, 15, 2541-2568.	1.5	13
54	Soil Moisture Estimation by Assimilating L-Band Microwave Brightness Temperature with Geostatistics and Observation Localization. PLoS ONE, 2015, 10, e0116435.	1.1	10

#	Article	IF	Citations
55	Bridging technology transfer boundaries: Integrated cloud services deliver results of nonlinear process models as surrogate model ensembles. Environmental Modelling and Software, 2021, 146, 105231.	1.9	9
56	A perturbative view on the subsurface water pressure response at hillslope scale. Water Resources Research, 2008, 44, .	1.7	8
57	The design, deployment, and testing of kriging models in GEOframe with SIK-0.9.8. Geoscientific Model Development, 2018, 11, 2189-2207.	1.3	8
58	Some Remarks on Bimodality Effects of the Hydraulic Properties on Shear Strength of Unsaturated Soils. Vadose Zone Journal, 2015, 14, 1-12.	1.3	7
59	Integration of a Three-Dimensional Process-Based Hydrological Model into the Object Modeling System. Water (Switzerland), 2016, 8, 12.	1.2	7
60	The Representation of Hydrological Dynamical Systems Using Extended Petri Nets (EPN). Water Resources Research, 2019, 55, 8895-8921.	1.7	7
61	The GEOframe-NewAge Modelling System Applied in a Data Scarce Environment. Water (Switzerland), 2020, 12, 86.	1.2	7
62	On the relations between the hydrological dynamical systems of water budget, travel time, response time and tracer concentrations. Hydrological Processes, 2021, 35, .	1.1	4
63	Implementing the Water, HEat and Transport model in GEOframe (WHETGEO-1D v.1.0): algorithms, informatics, design patterns, open science features, and 1D deployment. Geoscientific Model Development, 2022, 15, 75-104.	1.3	3
64	Modelling Evapotranspiration and the Surface Energy Budget in Alpine Catchments. , 2012, , .		1
65	On What is Explained by the Form of a Channel Network. Water Science and Technology Library, 1992, , 379-399.	0.2	1