Renato Morbidelli

List of Publications by Year
in descending order

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83	3,237	159358	155451
papers	citations	30 h-index	55 g-index

87	87	87	2740
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Spatialâ€temporal variability of soil moisture and its estimation across scales. Water Resources Research, 2010, 46, .	1.7	352
2	Soil moisture spatial variability in experimental areas of central Italy. Journal of Hydrology, 2007, 333, 356-373.	2.3	336
3	Soil moisture temporal stability over experimental areas in Central Italy. Geoderma, 2009, 148, 364-374.	2.3	232
4	Catchment scale soil moisture spatialâ€“temporal variability. Journal of Hydrology, 2012, 422-423, 63-75.	2.3	190
5	The International Soil Moisture Network: serving Earth system science for over a decade. Hydrology and Earth System Sciences, 2021, 25, 5749-5804.	1.9	116
6	Antecedent wetness conditions based on ERS scatterometer data. Journal of Hydrology, 2009, 364, 73-87.	2.3	102
7	Influence of land use on soil moisture spatialâ€“temporal variability and monitoring. Journal of Hydrology, 2014, 516, 193-199.	2.3	102
8	On the interaction between infiltration and Hortonian runoff. Journal of Hydrology, 1998, 204, 52-67.	2.3	95
9	Development and analysis of the Soil Water Infiltration Global database. Earth System Science Data, 2018, 10, 1237-1263.	3.7	85
10	Role of slope on infiltration: A review. Journal of Hydrology, 2018, 557, 878-886.	2.3	84
11	Infiltration and deep flow over sloping surfaces: Comparison of numerical and experimental results. Journal of Hydrology, 2009, 374, 30-42.	2.3	75
12	Infiltration on sloping surfaces: Laboratory experimental evidence and implications for infiltration modeling. Journal of Hydrology, 2015, 523, 79-85.	2.3	65
13	Machine Learning to Estimate Surface Soil Moisture from Remote Sensing Data. Water (Switzerland), 2020, 12, 3223.	1.2	64
14	Areal Infiltration Modeling over Soils with Spatially Correlated Hydraulic Conductivities. Journal of Hydrologic Engineering - ASCE, 2001, 6, 150-158.	0.8	63
15	Monitoring Soil and Ambient Parameters in the IoT Precision Agriculture Scenario: An Original Modeling Approach Dedicated to Low-Cost Soil Water Content Sensors. Sensors, 2021, 21, 5110.	2.1	56
16	In situ measurements of soil saturated hydraulic conductivity: Assessment of reliability through rainfall-runoff experiments. Hydrological Processes, 2017, 31, 3084-3094.	1.1	55
17	Role of run-on for describing field-scale infiltration and overland flow over spatially variable soils. Journal of Hydrology, 2004, 286, 36-51.	2.3	53
18	A field-scale infiltration model accounting for spatial heterogeneity of rainfall and soil saturated hydraulic conductivity. Hydrological Processes, 2006, 20, 1465-1481.	1.1	50

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19	Detecting and mapping irrigated areas in a Mediterranean environment by using remote sensing soil moisture and a land surface model. Journal of Hydrology, 2021, 596, 126129.	2.3	49
20	Exploiting High-Resolution Remote Sensing Soil Moisture to Estimate Irrigation Water Amounts over a Mediterranean Region. Remote Sensing, 2020, 12, 2593.	1.8	48
21	Spatial-temporal variability of soil moisture: Addressing the monitoring at the catchment scale. Journal of Hydrology, 2019, 570, 436-444.	2.3	46
22	Improving the representation of soil moisture by using a semiâ€analytical infiltration model. Hydrological Processes, 2014, 28, 2103-2115.	1.1	42
23	Rainfall Infiltration Modeling: A Review. Water (Switzerland), 2018, 10, 1873.	1.2	42
24	A semi-analytical model of expected areal-average infiltration under spatial heterogeneity of rainfall and soil saturated hydraulic conductivity. Journal of Hydrology, 2006, 316, 184-194.	2.3	37
25	On the estimation of spatially representative plot scale saturated hydraulic conductivity in an agricultural setting. Journal of Hydrology, 2019, 570, 106-117.	2.3	37
26	Alternative use of tobacco as a sustainable crop for seed oil, biofuel, and biomass. Agronomy for Sustainable Development, 2016, 36, 1.	2.2	36
27	Infiltration-soil moisture redistribution under natural conditions: experimental evidence as a guideline for realizing simulation models. Hydrology and Earth System Sciences, 2011, 15, 2937-2945.	1.9	34
28	Laboratory experimental check of a conceptual model for infiltration under complex rainfall patterns. Hydrological Processes, 2006, 20, 439-452.	1.1	33
29	A conceptual model for infiltration in two-layered soils with a more permeable upper layer: From local to field scale. Journal of Hydrology, 2011, 410, 62-72.	2.3	33
30	Simplified modelling of areal average infiltration at the hillslope scale. Hydrological Processes, 2002, 16, 1757-1770.	1.1	32
31	Laboratory investigation on the role of slope on infiltration over grassy soils. Journal of Hydrology, 2016, 543, 542-547.	2.3	31
32	A parameterized model for local infiltration in two-layered soils with a more permeable upper layer. Journal of Hydrology, 2011, 396, 221-232.	2.3	30
33	Initial Soil Water Content as Input to Field-Scale Infiltration and Surface Runoff Models. Water Resources Management, 2012, 26, 1793-1807.	1.9	30
34	Effect of temporal aggregation on the estimate of annual maximum rainfall depths for the design of hydraulic infrastructure systems. Journal of Hydrology, 2017, 554, 710-720.	2.3	30
35	Soil water content vertical profiles under natural conditions: matching of experiments and simulations by a conceptual model. Hydrological Processes, 2014, 28, 4732-4742.	1.1	29
36	The history of rainfall data time-resolution in a wide variety of geographical areas. Journal of Hydrology, 2020, 590, 125258.	2.3	29

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37	Scaling of surface soil moisture over heterogeneous fields subjected to a single rainfall event. Journal of Hydrology, 2014, 516, 21-36.	2.3	28
38	Influence of temporal data aggregation on trend estimation for intense rainfall. Advances in Water Resources, 2018, 122, 304-316.	1.7	27
39	Irrigation estimates from space: Implementation of different approaches to model the evapotranspiration contribution within a soil-moisture-based inversion algorithm. Agricultural Water Management, 2022, 265, 107537.	2.4	22
40	Comparison of Theoretical and Experimental Soil Moisture Profiles under Complex Rainfall Patterns. Journal of Hydrologic Engineering - ASCE, 2008, 13, 1170-1176.	0.8	21
41	A Pedotransfer Function for Fieldâ€Scale Saturated Hydraulic Conductivity of a Small Watershed. Vadose Zone Journal, 2019, 18, 1-15.	1.3	20
42	Developing and testing a long-term soil moisture dataset at the catchment scale. Journal of Hydrology, 2013, 490, 144-151.	2.3	19
43	On the choice of the optimal frequency analysis of annual extreme rainfall by multifractal approach. Journal of Hydrology, 2019, 575, 1267-1279.	2.3	17
44	An investigation of the effects of spatial heterogeneity of initial soil moisture content on surface runoff simulation at a small watershed scale. Journal of Hydrology, 2016, 539, 589-598.	2.3	16
45	Experimental Analyses of the Evaporation Dynamics in Bare Soils under Natural Conditions. Water Resources Management, 2018, 32, 1153-1166.	1.9	15
46	Reassessment of a semi-analytical field-scale infiltration model through experiments under natural rainfall events. Journal of Hydrology, 2018, 565, 835-845.	2.3	15
47	Double-scale analysis on the detectability of irrigation signals from remote sensing soil moisture over an area with complex topography in central Italy. Advances in Water Resources, 2022, 161, 104130.	1.7	14
48	Optimizing a backscatter forward operator using Sentinel-1 data over irrigated land. Hydrology and Earth System Sciences, 2021, 25, 6283-6307.	1.9	14
49	Localâ€and fieldâ€scale infiltration into vertically nonâ€uniform soils with spatiallyâ€variable surface hydraulic conductivities. Hydrological Processes, 2012, 26, 3293-3301.	1.1	13
50	Assessing Inhomogeneities in Extreme Annual Rainfall Data Series by Multifractal Approach. Water (Switzerland), 2020, 12, 1030.	1.2	13
51	A New Conceptual Model for Slope-Infiltration. Water (Switzerland), 2019, 11, 678.	1.2	12
52	A simplified model for estimating field-scale surface runoff hydrographs. Hydrological Processes, 2007, 21, 1772-1779.	1.1	10
53	Laboratory Experimental Investigation of Infiltration by the Run-on Process. Journal of Hydrologic Engineering - ASCE, 2008, 13, 1187-1192.	0.8	10
54	Effective Saturated Hydraulic Conductivity for Representing Field-Scale Infiltration and Surface Soil Moisture in Heterogeneous Unsaturated Soils Subjected to Rainfall Events. Water (Switzerland), 2017, 9, 134.	1.2	9

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55	Long-term analysis of rainfall-induced landslides in Umbria, central Italy. Natural Hazards, 2021, 106, 2207-2225.	1.6	9
56	Characteristics of the Underestimation Error of Annual Maximum Rainfall Depth Due to Coarse Temporal Aggregation. Atmosphere, 2018, 9, 303.	1.0	8
57	Using Wastewater in Irrigation: The Effects on Infiltration Process in a Clayey Soil. Water (Switzerland), 2020, 12, 968.	1.2	8
58	A Review on Rainfall Data Resolution and Its Role in the Hydrological Practice. Water (Switzerland), 2021, 13, 1012.	1.2	8
59	The Role of Prior Probabilities on Parameter Estimation in Hydrological Models. Water Resources Research, 2022, 58, .	1.7	8
60	The Influence of Climate Change on Heavy Rainfalls in Central Italy. Procedia Earth and Planetary Science, 2015, 15, 694-701.	0.6	7
61	Detection of trends and break points in temperature: the case of Umbria (Italy) and Guadalquivir Valley (Spain). Acta Geophysica, 2018, 66, 329-343.	1.0	7
62	Estimation of Fieldâ€Scale Variability in Soil Saturated Hydraulic Conductivity From Rainfallâ€Runoff experiments. Water Resources Research, 2019, 55, 7902-7915.	1.7	7
63	Use of Similarity Profiles for Computing Surface Runoff over Small Watersheds. Journal of Hydrologic Engineering - ASCE, 1999, 4, 100-107.	0.8	6
64	A plot-scale uncertainty analysis of saturated hydraulic conductivity of a clay soil. Journal of Hydrology, 2021, 596, 125694.	2.3	6
65	Flood forecasting and infiltration modeling/PrÃ©vision de crue et modÃ©lisation de lâ€™infiltration. Hydrological Sciences Journal, 2004, 49, .	1.2	5
66	Atmospheric Stability and Meteorological Scenarios as Inputs to Air Pollution Transport Modeling. Water, Air, and Soil Pollution, 2011, 218, 275-281.	1.1	5
67	Multifractal analysis to study break points in temperature data sets. Chaos, 2019, 29, 093116.	1.0	5
68	On Infiltration and Infiltration Characteristic Times. Water Resources Research, 2022, 58, .	1.7	5
69	On the applicability of temporal stability analysis to raingauge network design. Hydrological Sciences Journal, 2019, 64, 1424-1438.	1.2	4
70	Temporal moment analysis for stochastic-advective vertical solute transport in heterogeneous unsaturated soils. Journal of Hydrology, 2015, 521, 261-273.	2.3	3
71	A laboratory experimental system for infiltration studies. Hydrology Research, 2017, 48, 741-748.	1.1	3
72	Simplified characteristic time method for accurate estimation of the soil hydraulic parameters from oneâ€dimensional infiltration experiments. Vadose Zone Journal, 2021, 20, e20117.	1.3	3

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73	Effect of Time-Resolution of Rainfall Data on Trend Estimation for Annual Maximum Depths with a Duration of 24 Hours. Water (Switzerland), 2021, 13, 3264.	1.2	3
74	Simplified Model for Simulating Basin-Scale Surface Runoff Hydrographs. Journal of Hydrologic Engineering - ASCE, 2008, 13, 164-170.	0.8	2
75	Impacts of Rainfall Data Aggregation Time on Pluvial Flood Hazard in Urban Watersheds. Water (Switzerland), 2022, 14, 544.	1.2	2
76	Infiltration Over Soils with Spatially-Correlated Hydraulic Properties. , 2000, , 1.		1
77	Infiltration and Run-On under Spatially Variable Hydrologic Properties. , 2006, , 8-1-8-15.		1
78	Areal reduction factor estimate for extreme rainfall events. , 2022, , 285-306.		1
79	A Preliminary Analysis of Field-Scale Infiltration into Layered Soils. , 2008, , .		0
80	An Experimental Hydrometeorological Investigation to Address Infiltration-Redistribution Modelling. , 2011, , .		0
81	The role of slope on the overland flow production. , 2013, , .		0
82	Time resolution of rain gauge data and its hydrological role. , 2022, , 171-216.		0
83	Rainfall and development of floods. , 2022, , 351-366.		0