Alberto Montanari

List of Publications by Year
in descending order

144 papers	12,703 citations	35864 50 h-index	25840 106 g-index

210 all docs	210 docs citations	210 times ranked	10702 citing authors

#	Article	IF	Citations
1	A decade of Predictions in Ungauged Basins (PUB)â€"a review. Hydrological Sciences Journal, 2013, 58, 1198-1255.	2.6	866
2	Changing climate both increases and decreases European river floods. Nature, 2019, 573, 108-111.	35.8	709
3	â€œPanta Rheiâ€"Everything Flowsâ€: Change in hydrology and societyâ€"The IAHS Scientific Decade 2013â€"2022. Hydrological Sciences Journal, 2013, 58, 1256-1275.	2.6	593
4	Twenty-three unsolved problems in hydrology (UPH) â€" a community perspective. Hydrological Sciences Journal, 2019, 64, 1141-1158.	2.6	556
5	Uncertainty in river discharge observations: a quantitative analysis. Hydrology and Earth System Sciences, 2009, 13, 913-921.	4.9	504
6	Understanding flood regime changes in Europe: a state-of-the-art assessment. Hydrology and Earth System Sciences, 2014, 18, 2735-2772.	4.9	442
7	Comparison of short-term rainfall prediction models for real-time flood forecasting. Journal of Hydrology, 2000, 239, 132-147.	5.5	423
8	Global and Regional Increase of Precipitation Extremes Under Global Warming. Water Resources Research, 2019, 55, 4901-4914.	4.1	390
9	Flood fatalities in Africa: From diagnosis to mitigation. Geophysical Research Letters, 2010, 37, .	3.9	305
10	Assessing the effect on flood frequency of land use change via hydrological simulation (with) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382	5.5	256
11	Climate change impactsâ€"throwing the dice?. Hydrological Processes, 2010, 24, 374-381.	2.6	248
12	Statistical analysis of hydroclimatic time series: Uncertainty and insights. Water Resources Research, 2007, 43, .	4.1	242
13	Fractionally differenced ARIMA models applied to hydrologic time series: Identification, estimation, and simulation. Water Resources Research, 1997, 33, 1035-1044.	4.1	232
14	A stochastic approach for assessing the uncertainty of rainfall-runoff simulations. Water Resources Research, 2004, 40, .	4.1	219
15	Large-sample hydrology: a need to balance depth with breadth. Hydrology and Earth System Sciences, 2014, 18, 463-477.	4.9	219
16	Modeling and mitigating natural hazards: Stationarity is immortal!. Water Resources Research, 2014, 50, 9748-9756.	4.1	216
17	Regional flow-duration curves: reliability for ungauged basins. Advances in Water Resources, 2004, 27, 953-965.	3.8	202
18	What do we mean by â€˜uncertaintyâ€™? The need for a consistent wording about uncertainty assessment in hydrology. Hydrological Processes, 2007, 21, 841-845.	2.6	196

#	Article	IF	Citations
19	Large sample behaviors of the generalized likelihood uncertainty estimation (GLUE) in assessing the uncertainty of rainfall-runoff simulations. Water Resources Research, 2005, 41, .	4.1	195
20	Negligent killing of scientific concepts: the stationarity case. Hydrological Sciences Journal, 2015, 60, 1174-1183.	2.6	181
21	On the calibration of hydrological models in ungauged basins: A framework for integrating hard and soft hydrological information. Water Resources Research, 2009, 45, .	4.1	167
22	A blueprint for processâ€based modeling of uncertain hydrological systems. Water Resources Research, 2012, 48, .	4.1	161
23	Model selection techniques for the frequency analysis of hydrological extremes. Water Resources Research, 2009, 45, .	4.1	154
24	Convergence of approaches toward reducing uncertainty in predictions in ungauged basins. Water Resources Research, 2011, 47, .	4.1	152
25	A seasonal fractional ARIMA Model applied to the Nile River monthly flows at Aswan. Water Resources Research, 2000, 36, 1249-1259.	4.1	145
26	A look at the links between drainage density and flood statistics. Hydrology and Earth System Sciences, 2009, 13, 1019-1029.	4.9	136
27	Estimating long-range dependence in the presence of periodicity: An empirical study. Mathematical and Computer Modelling, 1999, 29, 217-228.	1.9	126
28	Developing predictive insight into changing water systems: use-inspired hydrologic science for the Anthropocene. Hydrology and Earth System Sciences, 2013, 17, 5013-5039.	4.9	122
29	Analysis of the effects of different scenarios of historical data availability on the calibration of a spatially-distributed hydrological model. Journal of Hydrology, 2004, 291, 232-253.	5.5	121
30	Uncertainty in hydrological signatures for gauged and ungauged catchments. Water Resources Research, 2016, 52, 1847-1865.	4.1	119
31	Validation of hydrological models: Conceptual basis, methodological approaches and a proposal for a code of practice. Physics and Chemistry of the Earth, 2012, 42-44, 70-76.	3.1	117
32	Satellite nighttime lights reveal increasing human exposure to floods worldwide. Geophysical Research Letters, 2014, 41, 7184-7190.	3.9	117
33	Hydrology of the Po River: looking for changing patterns in river discharge. Hydrology and Earth System Sciences, 2012, 16, 3739-3747.	4.9	107
34	Estimating the uncertainty of hydrological forecasts: A statistical approach. Water Resources Research, 2008, 44, .	4.1	104
35	Probability-weighted hazard maps for comparing different flood risk management strategies: a case study. Natural Hazards, 2009, 50, 479-496.	3.4	100
36	Neural networks and non-parametric methods for improving real-time flood forecasting through conceptual hydrological models. Hydrology and Earth System Sciences, 2002, 6, 627-639.	4.9	98

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37	Calibration of hydrological models in the spectral domain: An opportunity for scarcely gauged basins?. Water Resources Research, 2007, 43, .	4.1	88
38	Introduction to special section on Uncertainty Assessment in Surface and Subsurface Hydrology: An overview of issues and challenges. Water Resources Research, 2009, 45, .	4.1	80
39	Relation Between the North-Atlantic Oscillation and Hydroclimatic Conditions in Mediterranean Areas. Water Resources Management, 2011, 25, 1269-1279.	4.0	80
40	Detection of trends in magnitude and frequency of flood peaks across Europe. Hydrological Sciences Journal, 2018, 63, 493-512.	2.6	75
41	Design flood estimation using model selection criteria. Physics and Chemistry of the Earth, 2009, 34, 606-611.	3.1	70
42	Virtual laboratories: new opportunities for collaborative water science. Hydrology and Earth System Sciences, 2015, 19, 2101-2117.	4.9	67
43	Calibration of rainfall-runoff models in ungauged basins: A regional maximum likelihood approach. Advances in Water Resources, 2010, 33, 1235-1242.	3.8	64
44	Adaptation of water resources systems to changing society and environment: a statement by the International Association of Hydrological Sciences. Hydrological Sciences Journal, 2016, 61, 2803-2817.	2.6	64
45	Inferring the flood frequency distribution for an ungauged basin using a spatially distributed rainfall-runoff model. Hydrology and Earth System Sciences, 2008, 12, 1141-1152.	4.9	63
46	Prediction of low-flow indices in ungauged basins through physiographical space-based interpolation. Journal of Hydrology, 2009, 378, 272-280.	5.5	61
47	Human-impacted waters: New perspectives from global high-resolution monitoring. Water Resources Research, 2015, 51, 7064-7079.	4.1	59
48	Data errors and hydrological modelling: The role of model structure to propagate observation uncertainty. Advances in Water Resources, 2013, 51, 498-504.	3.8	56
49	Panta Rhei 2013â€“2015: global perspectives on hydrology, society and change. Hydrological Sciences Journal, 0, , 1-18.	2.6	56
50	Smooth regional estimation of low-flow indices: physiographical space based interpolation and top-kriging. Hydrology and Earth System Sciences, 2011, 15, 715-727.	4.9	55
51	Estimating the Uncertainty of Hydrological Predictions through Data-Driven Resampling Techniques. Journal of Hydrologic Engineering - ASCE, 2015, 20, .	2.1	54
52	Assessing the reliability of regional depth-duration-frequency equations for gaged and ungaged sites. Water Resources Research, 2003, 39, .	4.1	53
53	Probabilistic Hydrological Post-Processing at Scale: Why and How to Apply Machine-Learning Quantile Regression Algorithms. Water (Switzerland), 2019, 11, 2126.	2.8	53
54	Application of a barrier island translation model to the millennial-scale evolution of Sand Key, Florida. Continental Shelf Research, 2008, 28, 1116-1126.	1.9	51

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55	The scientific legacy of Harold Edwin Hurst (1880â€“1978). Hydrological Sciences Journal, 2016, 61, 1571-1590.	2.6	51
56	Globally Universal Fractal Pattern of Human Settlements in River Networks. Earth's Future, 2018, 6, 1134-1145.	6.2	51
57	Some long-run properties of rainfall records in Italy. Journal of Geophysical Research, 1996, 101, 29431-29438.	3.2	49
58	Hydrologic controls on basinâ€scale distribution of benthic invertebrates. Water Resources Research, 2014, 50, 2903-2920.	4.1	49
59	Estimating the flood frequency distribution at seasonal and annual time scales. Hydrology and Earth System Sciences, 2012, 16, 4651-4660.	4.9	43
60	Uncertainty of Hydrological Predictions. , 2011, , 459-478.		41
61	A reflection on the first 50 years of Water Resources Research. Water Resources Research, 2015, 51, 7829-7837.	4.1	41
62	Efficiency of Storm Detention Tanks for Urban Drainage Systems under Climate Variability. Journal of Water Resources Planning and Management - ASCE, 2012, 138, 36-46.	2.9	40
63	AFFDEF: A spatially distributed grid based rainfallâ€“runoff model for continuous time simulations of river discharge. Environmental Modelling and Software, 2007, 22, 823-836.	4.5	38
64	Stochastic Flow Analysis for Predicting River Scour of Cohesive Soils. Journal of Hydraulic Engineering, 2006, 132, 493-500.	2.0	36
65	Effect of observation errors on the uncertainty of design floods. Physics and Chemistry of the Earth, 2012, 42-44, 85-90.	3.1	36
66	Reliability of different depth-duration-frequency equations for estimating short-duration design storms. Water Resources Research, 2006, 42, .	4.1	34
67	Emerging Approaches to Hydrological Risk Management in a Changing World. , 2013, , 3-10.		34
68	Interval Type-2 Relative Entropy Fuzzy C-Means clustering. Information Sciences, 2014, 272, 49-72.	7.1	34
69	A European Flood Database: facilitating comprehensive flood research beyond administrative boundaries. Proceedings of the International Association of Hydrological Sciences, 0, 370, 89-95.	1.0	33
70	Real-time flood forecasting via combined use of conceptual and stochastic models. Physics and Chemistry of the Earth, 1999, 24, 793-798.	0.3	32
71	Assessing the effects of land-use changes on annual average gross erosion. Hydrology and Earth System Sciences, 2002, 6, 255-265.	4.9	32
72	Stochastic rainfall analysis for storm tank performance evaluation. Hydrology and Earth System Sciences, 2010, 14, 1221-1232.	4.9	31

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73	The effects of the spatial variability of soil infiltration capacity in distributed flood modelling. Hydrological Processes, 2000, 14, 2779-2794.	2.6	30
74	Debatesâ€"Perspectives on socioâ€hydrology: Introduction. Water Resources Research, 2015, 51, 4768-4769.	4.1	29
75	Fifty years ofWater Resources Research: Legacy and perspectives for the science of hydrology. Water Resources Research, 2015, 51, 6797-6803.	4.1	29
76	Deseasonalisation of hydrological time series through the normal quantile transform. Journal of Hydrology, 2005, 313, 274-282.	5.5	28
77	Estimating the suspended sediment yield in a river network by means of geomorphic parameters and regression relationships. Hydrology and Earth System Sciences, 2008, 12, 177-191.	4.9	28
78	Can a simple stochastic model generate rich patterns of rainfall events?. Journal of Hydrology, 2011, 411, 279-289.	5.5	28
79	Climate and hydrological variability: the catchment filtering role. Hydrology and Earth System Sciences, 2015, 19, 379-387.	4.9	27
80	Quantification of predictive uncertainty in hydrological modelling by harnessing the wisdom of the crowd: A large-sample experiment at monthly timescale. Advances in Water Resources, 2020, 136, 103470.	3.8	26
81	Bluecat: A Local Uncertainty Estimator for Deterministic Simulations and Predictions. Water Resources Research, 2022, 58, .	4.1	26
82	Propagation of uncertainties in coupled hydro-meteorological forecasting systems: A stochastic approach for the assessment of the total predictive uncertainty. Atmospheric Research, 2011, 100, 263-274.	4.2	25
83	An ecohydrological model of malaria outbreaks. Hydrology and Earth System Sciences, 2012, 16, 2759-2769.	4.9	24
84	Hydro-power production and fish habitat suitability: Assessing impact and effectiveness of ecological flows at regional scale. Advances in Water Resources, 2018, 116, 29-39.	3.8	24
85	Investigation of dominant hydrological processes in a tropical catchment in a monsoonal climate via the downward approach. Hydrology and Earth System Sciences, 2006, 10, 769-782.	4.9	23
86	Comparative Study of a Cell-Based and Electrochemical Biosensor for the Rapid Detection of 2,4,6-Trichloroanisole in Barrel Water Extracts. Beverages, 2019, 5, 1.	2.9	22
87	Forecasting of storm rainfall by combined use of radar, rain gages and linear models. Atmospheric Research, 1996, 42, 199-216.	4.2	20
88	Characterizing and Modeling Seasonality in Extreme Rainfall. Water Resources Research, 2018, 54, 6242-6258.	4.1	20
89	A large sample analysis of European rivers on seasonal river flow correlation and its physical drivers. Hydrology and Earth System Sciences, 2019, 23, 73-91.	4.9	20
90	Topography- and nightlight-based national flood risk assessment in Canada. Hydrology and Earth System Sciences, 2017, 21, 2219-2232.	4.9	19

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91	Knickpoints and hillslope failures: Interactions in a steady-state experimental landscape. , 2006, , .		17
92	Perennial springs provide information to predict low flows in mountain basins. Hydrological Sciences Journal, 2017, 62, 2469-2481.	2.6	17
93	Quantification of predictive uncertainty in hydrological modelling by harnessing the wisdom of the crowd: Methodology development and investigation using toy models. Advances in Water Resources, 2020, 136, 103471.	3.8	17
94	Calibration of a rainfallâ€“runoff model at regional scale by optimising river discharge statistics: Performance analysis for the average/low flow regime. Physics and Chemistry of the Earth, 2012, 42-44, 77-84.	3.1	16
95	Global-scale human pressure evolution imprints on sustainability of river systems. Hydrology and Earth System Sciences, 2019, 23, 3933-3944.	4.9	15
96	Toward a theoretical framework for integrated modeling of hydrological change. Wiley Interdisciplinary Reviews: Water, 2014, 1, 427-438.	7.0	14
97	Greedy Automatic Signal Decomposition and Its Application to Daily GPS Time Series. Journal of Geophysical Research: Solid Earth, 2018, 123, 6992-7003.	3.4	14
98	Oral Health-Related Quality of Life in Children and Adolescents with a Traumatic Injury of Permanent Teeth and the Impact on Their Families: A Systematic Review. International Journal of Environmental Research and Public Health, 2022, 19, 3087.	2.7	14
99	Modelling hydrological data with and without long memory. Meccanica, 1996, 31, 87-101.	2.0	12
100	Framing and the disposition effect: evidence from mutual fund investor redemption behaviour. Quantitative Finance, 2014, 14, 683-697.	1.7	12
101	On the future of journal publications in hydrology. Hydrology Research, 2014, 45, 515-518.	2.4	12
102	The effects of non-stationarity on the evaluation of critical design storms. Water Science and Technology, 1998, 37, 187-193.	2.5	11
103	A probabilistic approach to the analysis of contraction scour. Journal of Hydraulic Research/De Recherches Hydrauliques, 2006, 44, 654-662.	1.8	11
104	Editorial: Toward 50 years of Water Resources Research. Water Resources Research, 2013, 49, 7841-7842.	4.1	11
105	Joint editorial: Fostering innovation and improving impact assessment for journal publications in hydrology. Water Resources Research, 2016, 52, 2399-2402.	4.1	11
106	An equivalent cross-sectional basis for semidistributed hydrological modeling. Water Resources Research, 2014, 50, 4395-4415.	4.1	10
107	Joint Editorialâ€"On the future of journal publications in hydrology. Hydrological Sciences Journal, 2014, 59, 955-958.	2.6	10
108	Sensitivity of the peak flows to the spatial variability of the soil infiltration capacity for different climatic scenarios. Physics and Chemistry of the Earth, 2003, 28, 247-254.	3.1	9

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109	Elementary pre-service teachersâ€™ conceptual understanding of dissolving: a Vygotskian concept development perspective. Research in Science and Technological Education, 2015, 33, 304-324.	2.3	8
110	Joint editorial â€“ Fostering innovation and improving impact assessment for journal publications in hydrology. Hydrological Sciences Journal, 0, , 1-4.	2.6	8
111	A geostatistical data-assimilation technique for enhancing macro-scale rainfallâ€“runoff simulations. Hydrology and Earth System Sciences, 2018, 22, 4633-4648.	4.9	8
112	Reducing the Flood Risk of Art Cities: The Case of Florence. Journal of Hydraulic Engineering, 2020, 146, .	2.0	8
113	â€œCatchment modelling: towards an improved representation of the hydrological processes in real-world model applicationsâ€• Journal of Hydrology, 2004, 291, 159.	5.5	7
114	A comparison and uncertainty assessment of system analysis techniques for short-term quantitative precipitation nowcasting based on radar images. Journal of Geophysical Research, 2006, 111, .	3.2	7
115	On the future of journal publications in hydrology. Water Resources Research, 2014, 50, 2795-2797.	4.1	7
116	At-site and regional assessment of the possible presence of non-stationarity in extreme rainfall in northern Italy. Physics and Chemistry of the Earth, 2001, 26, 705-710.	0.3	6
117	Reply to comment by Grey Nearing on â€œA blueprint for processâ€based modeling of uncertain hydrological systemsâ€• Water Resources Research, 2014, 50, 6264-6268.	4.1	6
118	Hydraulic modeling of the tributary and the outlet of a Martian paleolake located in the Memnonia quadrangle. Journal of Geophysical Research E: Planets, 2015, 120, 1597-1619.	3.5	6
119	A seasonal long-memory stochastic model for the simulation of daily river flows. Physics and Chemistry of the Earth, 1999, 24, 319-324.	0.3	5
120	Real-time updating of the flood frequency distribution through data assimilation. Hydrology and Earth System Sciences, 2017, 21, 3687-3700.	4.9	5
121	Influence of Urban Areas on Surface Water Loss in the Contiguous United States. AGU Advances, 2022, 3, .	6.1	4
122	KNN vs. Bluecatâ€”Machine Learning vs. Classical Statistics. Hydrology, 2022, 9, 101.	3.0	4
123	Megafloods in Europe can be anticipated from observations in hydrologically similar catchments. Nature Geoscience, 2023, 16, 982-988.	11.7	4
124	Joint Editorial: Fostering innovation and improving impact assessment for journal publications in hydrology. Hydrology and Earth System Sciences, 2016, 20, 1081-1084.	4.9	3
125	Climate Extrapolations in Hydrology: The Expanded Bluecat Methodology. Hydrology, 2022, 9, 86.	3.0	3
126	Landform-driven human reliance on rivers in imperial China. Journal of Hydrology, 2023, 620, 129353.	5.5	3

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127	Joint Editorial "On the future of journal publications in hydrology". Hydrology and Earth System Sciences, 2014, 18, 2433-2435.	4.9	2
128	Joint Editorial â€“ On the future of journal publications in hydrology. Journal of Hydrology, 2014, 513, A1-A3.	5.5	2
129	Debatesâ€”The future of hydrological sciences: A (common) path forward? Introduction. Water Resources Research, 2014, 50, 5334-5334.	4.1	2
130	Satellite Remote Sensing of Hydrological Change. , 0, , 57-71.		2
131	Panta Rhei: an evolving scientific decade with a focus on water systems. Proceedings of the International Association of Hydrological Sciences, 0, 364, 279-284.	1.0	2
132	Human pressure on rivers is increasing worldwide and threatens water security. Proceedings of the International Association of Hydrological Sciences, 0, 366, 109-110.	1.0	2
133	Preface to the special issue: â€œHydrological processes and distributed hydrological modellingâ€• Physics and Chemistry of the Earth, 2003, 28, 225.	3.1	1
134	Corrigendum to "Estimating the suspended sediment yield in a river network by means of geomorphic parameters and regression relationships" published in Hydrol. Earth Syst. Sci., 12, 177â€“191, 2008. Hydrology and Earth System Sciences, 2009, 13, 1937-1937.	4.9	1
135	Joint Editorialâ€”Fostering Innovation and Improving Impact Assessment for Journal Publications in Hydrology. Vadose Zone Journal, 2016, 15, 1-4.	2.4	1
136	Joint editorial â€“ Fostering innovation and improving impact assessment for journal publications in hydrology. Journal of Hydrology, 2016, 537, A1-A4.	5.5	1
137	Should auld acquaintance be forgot? Comment on â€œFarewell,HSJ!â€”address from the retiring editorâ€•by Z.W. Kundzewicz. Hydrological Sciences Journal, 0, , 1-2.	2.6	1
138	Long term prediction of flood occurrence. Proceedings of the International Association of Hydrological Sciences, 0, 373, 189-192.	1.0	1
139	Human signatures derived from nighttime lights along the Eastern Alpine river network in Austria and Italy. Proceedings of the International Association of Hydrological Sciences, 0, 373, 131-136.	1.0	1
140	Uncertainty in environmental and hydrological mathematical modelling. Physics and Chemistry of the Earth, 2012, 42-44, 1-2.	3.1	0
141	Water Resources Research in 2013. Water Resources Research, 2014, 50, 2787-2794.	4.1	0
142	Joint editorialâ€”Fostering innovation and improving impact assessment for journal publications in hydrology. Journal of Hydrology: Regional Studies, 2016, 6, 112-115.	2.5	0
143	Historical rainfall data in northern Italy predict larger meteorological drought hazard than climate projections. Hydrology and Earth System Sciences, 2023, 27, 2847-2863.	4.9	0
144	Monitoring macroplastics in aquatic and terrestrial ecosystems: Expert survey reveals visual and drone-based census as most effective techniques. Science of the Total Environment, 2024, , 176528.	8.1	0