Alberto Montanari

List of Publications by Citations

131 papers	9,080 citations	46 h-index	94 g-index
180 ext. papers	10,387 ext. citations	5.2 avg, IF	6.45 L-index

#	Paper	IF	Citations
131	A decade of Predictions in Ungauged Basins (PUB)– review. *Hydrological Sciences Journal*, **2013**, 58, 1198-1255	3.5	627
130	"Panta Rhei–Everything Flows": Change in hydrology and society—the IAHS Scientific Decade 2013–2022. *Hydrological Sciences Journal*, **2013**, 58, 1256-1275	3.5	452
129	Uncertainty in river discharge observations: a quantitative analysis. *Hydrology and Earth System Sciences*, **2009**, 13, 913-921	5.5	409
128	Changing climate shifts timing of European floods. *Science*, **2017**, 357, 588-590	33.3	402
127	Changing climate both increases and decreases European river floods. *Nature*, **2019**, 573, 108-111	50.4	344
126	Understanding flood regime changes in Europe: a state-of-the-art assessment. *Hydrology and Earth System Sciences*, **2014**, 18, 2735-2772	5.5	334
125	Comparison of short-term rainfall prediction models for real-time flood forecasting. *Journal of Hydrology*, **2000**, 239, 132-147	6	327
124	Twenty-three unsolved problems in hydrology (UPH) – a community perspective. *Hydrological Sciences Journal*, **2019**, 64, 1141-1158	3.5	259
123	Flood fatalities in Africa: From diagnosis to mitigation. *Geophysical Research Letters*, **2010**, 37, n/a-n/a	4.9	225
122	Statistical analysis of hydroclimatic time series: Uncertainty and insights. *Water Resources Research*, **2007**, 43,	5.4	210
121	Assessing the effect on flood frequency of land use change via hydrological simulation (with uncertainty). *Journal of Hydrology*, **2006**, 324, 141-153	6	202
120	A stochastic approach for assessing the uncertainty of rainfall-runoff simulations. *Water Resources Research*, **2004**, 40,	5.4	192
119	Fractionally differenced ARIMA models applied to hydrologic time series: Identification, estimation, and simulation. *Water Resources Research*, **1997**, 33, 1035-1044	5.4	191
118	Regional flow-duration curves: reliability for ungauged basins. *Advances in Water Resources*, **2004**, 27, 953-965	4.7	177
117	What do we mean by "uncertainty"? The need for a consistent wording about uncertainty assessment in hydrology. *Hydrological Processes*, **2007**, 21, 841-845	3.3	168
116	Large sample behaviors of the generalized likelihood uncertainty estimation (GLUE) in assessing the uncertainty of rainfall-runoff simulations. *Water Resources Research*, **2005**, 41,	5.4	168
115	Modeling and mitigating natural hazards: Stationarity is immortal!. *Water Resources Research*, **2014**, 50, 9748-9756	5.4	161

114	Global and Regional Increase of Precipitation Extremes Under Global Warming. *Water Resources Research*, **2019**, 55, 4901	5.4	160
113	Large-sample hydrology: a need to balance depth with breadth. *Hydrology and Earth System Sciences*, **2014**, 18, 463-477	5.5	152
112	On the calibration of hydrological models in ungauged basins: A framework for integrating hard and soft hydrological information. *Water Resources Research*, **2009**, 45,	5.4	139
111	A blueprint for process-based modeling of uncertain hydrological systems. *Water Resources Research*, **2012**, 48,	5.4	129
110	Negligent killing of scientific concepts: the stationarity case. *Hydrological Sciences Journal*, **2015**, 60, 1174-1183	3.5	123
109	Model selection techniques for the frequency analysis of hydrological extremes. *Water Resources Research*, **2009**, 45,	5.4	123
108	Climate change impacts□throwing the dice?. *Hydrological Processes*, **2009**, 24, n/a-n/a	3.3	121
107	A seasonal fractional ARIMA Model applied to the Nile River monthly flows at Aswan. *Water Resources Research*, **2000**, 36, 1249-1259	5.4	120
106	Convergence of approaches toward reducing uncertainty in predictions in ungauged basins. *Water Resources Research*, **2011**, 47,	5.4	118
105	Estimating long-range dependence in the presence of periodicity: An empirical study. *Mathematical and Computer Modelling*, **1999**, 29, 217-228		108
104	Developing predictive insight into changing water systems: use-inspired hydrologic science for the Anthropocene. *Hydrology and Earth System Sciences*, **2013**, 17, 5013-5039	5.5	103
103	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	6	99
102	A look at the links between drainage density and flood statistics. *Hydrology and Earth System Sciences*, **2009**, 13, 1019-1029	5.5	97
101	Estimating the uncertainty of hydrological forecasts: A statistical approach. *Water Resources Research*, **2008**, 44,	5.4	94
100	Probability-weighted hazard maps for comparing different flood risk management strategies: a case study. *Natural Hazards*, **2009**, 50, 479-496	3	85
99	Uncertainty in hydrological signatures for gauged and ungauged catchments. *Water Resources Research*, **2016**, 52, 1847-1865	5.4	82
98	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	82
97	Hydrology of the Po River: looking for changing patterns in river discharge. *Hydrology and Earth System Sciences*, **2012**, 16, 3739-3747	5.5	82

96	Satellite nighttime lights reveal increasing human exposure to floods worldwide. *Geophysical Research Letters*, **2014**, 41, 7184-7190	4.9	76
95	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	5.5	76
94	Calibration of hydrological models in the spectral domain: An opportunity for scarcely gauged basins?. *Water Resources Research*, **2007**, 43,	5.4	73
93	Climate, hydrology and freshwater: towards an interactive incorporation of hydrological experience into climate research. *Hydrological Sciences Journal*, **2009**, 54, 394-405	3.5	72
92	Introduction to special section on Uncertainty Assessment in Surface and Subsurface Hydrology: An overview of issues and challenges. *Water Resources Research*, **2009**, 45,	5.4	65
91	Relation Between the North-Atlantic Oscillation and Hydroclimatic Conditions in Mediterranean Areas. *Water Resources Management*, **2011**, 25, 1269-1279	3.7	63
90	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	5.5	56
89	Calibration of rainfall-runoff models in ungauged basins: A regional maximum likelihood approach. *Advances in Water Resources*, **2010**, 33, 1235-1242	4.7	55
88	Prediction of low-flow indices in ungauged basins through physiographical space-based interpolation. *Journal of Hydrology*, **2009**, 378, 272-280	6	53
87	Design flood estimation using model selection criteria. *Physics and Chemistry of the Earth*, **2009**, 34, 606-611	3	52
86	Virtual laboratories: new opportunities for collaborative water science. *Hydrology and Earth System Sciences*, **2015**, 19, 2101-2117	5.5	49
85	Assessing the reliability of regional depth-duration-frequency equations for gaged and ungaged sites. *Water Resources Research*, **2003**, 39,	5.4	46
84	Smooth regional estimation of low-flow indices: physiographical space based interpolation and top-kriging. *Hydrology and Earth System Sciences*, **2011**, 15, 715-727	5.5	46
83	Panta Rhei 2013–2015: global perspectives on hydrology, society and change. *Hydrological Sciences Journal*, **2016**, 1-18	3.5	44
82	Estimating the Uncertainty of Hydrological Predictions through Data-Driven Resampling Techniques. *Journal of Hydrologic Engineering - ASCE*, **2015**, 20,	1.8	43
81	The scientific legacy of Harold Edwin Hurst (1880–1978). *Hydrological Sciences Journal*, **2016**, 61, 1571-1590	3.5	43
80	Application of a barrier island translation model to the millennial-scale evolution of Sand Key, Florida. *Continental Shelf Research*, **2008**, 28, 1116-1126	2.4	42
79	Detection of trends in magnitude and frequency of flood peaks across Europe. *Hydrological Sciences Journal*, **2018**, 63, 493-512	3.5	40

78	Data errors and hydrological modelling: The role of model structure to propagate observation uncertainty. *Advances in Water Resources*, **2013**, 51, 498-504	4.7	40
77	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	3.5	40
76	Some long-run properties of rainfall records in Italy. *Journal of Geophysical Research*, **1996**, 101, 29431-29438		39
75	Hydrologic controls on basin-scale distribution of benthic invertebrates. *Water Resources Research*, **2014**, 50, 2903-2920	5.4	38
74	Human-impacted waters: New perspectives from global high-resolution monitoring. *Water Resources Research*, **2015**, 51, 7064-7079	5.4	37
73	Probabilistic Hydrological Post-Processing at Scale: Why and How to Apply Machine-Learning Quantile Regression Algorithms. *Water (Switzerland)*, **2019**, 11, 2126	3	36
72	Uncertainty of Hydrological Predictions **2011**, 459-478		35
71	Efficiency of Storm Detention Tanks for Urban Drainage Systems under Climate Variability. *Journal of Water Resources Planning and Management - ASCE*, **2012**, 138, 36-46	2.8	34
70	AFFDEF: A spatially distributed grid based rainfall–runoff model for continuous time simulations of river discharge. *Environmental Modelling and Software*, **2007**, 22, 823-836	5.2	33
69	A reflection on the first 50 years of Water Resources Research. *Water Resources Research*, **2015**, 51, 7829-7837	5.4	32
68	Stochastic Flow Analysis for Predicting River Scour of Cohesive Soils. *Journal of Hydraulic Engineering*, **2006**, 132, 493-500	1.8	30
67	Real-time flood forecasting via combined use of conceptual and stochastic models. *Physics and Chemistry of the Earth*, **1999**, 24, 793-798		30
66	Effect of observation errors on the uncertainty of design floods. *Physics and Chemistry of the Earth*, **2012**, 42-44, 85-90	3	29
65	Emerging Approaches to Hydrological Risk Management in a Changing World **2013**, 3-10		27
64	Can a simple stochastic model generate rich patterns of rainfall events?. *Journal of Hydrology*, **2011**, 411, 279-289	6	27
63	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	5.5	27
62	Assessing the effects of land-use changes on annual average gross erosion. *Hydrology and Earth System Sciences*, **2002**, 6, 255-265	5.5	27
61	Estimating the flood frequency distribution at seasonal and annual time scales. *Hydrology and Earth System Sciences*, **2012**, 16, 4651-4660	5.5	25

60	Stochastic rainfall analysis for storm tank performance evaluation. *Hydrology and Earth System Sciences*, **2010**, 14, 1221-1232	5.5	25
59	Reliability of different depth-duration-frequency equations for estimating short-duration design storms. *Water Resources Research*, **2006**, 42,	5.4	24
58	The effects of the spatial variability of soil infiltration capacity in distributed flood modelling. *Hydrological Processes*, **2000**, 14, 2779-2794	3.3	24
57	Globally Universal Fractal Pattern of Human Settlements in River Networks. *Earth's Future*, **2018**, 6, 1134-1145	7.5	23
56	Deseasonalisation of hydrological time series through the normal quantile transform. *Journal of Hydrology*, **2005**, 313, 274-282	6	23
55	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	5.5	22
54	Uncertainty in river discharge observations: a quantitative analysis		22
53	A European Flood Database: facilitating comprehensive flood research beyond administrative boundaries. *Proceedings of the International Association of Hydrological Sciences*,370, 89-95		22
52	Fifty years of Water Resources Research: Legacy and perspectives for the science of hydrology. *Water Resources Research*, **2015**, 51, 6797-6803	5.4	20
51	Climate and hydrological variability: the catchment filtering role. *Hydrology and Earth System Sciences*, **2015**, 19, 379-387	5.5	19
50	An ecohydrological model of malaria outbreaks. *Hydrology and Earth System Sciences*, **2012**, 16, 2759-2769	5.5	18
49	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	5.4	18
48	Forecasting of storm rainfall by combined use of radar, rain gages and linear models. *Atmospheric Research*, **1996**, 42, 199-216	5.4	18
47	Topography- and nightlight-based national flood risk assessment in Canada. *Hydrology and Earth System Sciences*, **2017**, 21, 2219-2232	5.5	16
46	Evaluating the Effects of Urbanization Evolution on Air Temperature Trends Using Nightlight Satellite Data. *Atmosphere*, **2019**, 10, 117	2.7	15
45	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	4.7	15
44	Perennial springs provide information to predict low flows in mountain basins. *Hydrological Sciences Journal*, **2017**, 62, 2469-2481	3.5	15
43	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	4.7	15

42	Characterizing and Modeling Seasonality in Extreme Rainfall. *Water Resources Research*, **2018**, 54, 6242-6258	5.4	14
41	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	5.5	13
40	Toward a theoretical framework for integrated modeling of hydrological change. *Wiley Interdisciplinary Reviews: Water*, **2014**, 1, 427-438	5.7	11
39	Calibration of a rainfall□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	11
38	Understanding flood regime changes in Europe: a state of the art assessment		11
37	The effects of non-stationarity on the evaluation of critical design storms. *Water Science and Technology*, **1998**, 37, 187-193	2.2	9
36	Large-sample hydrology: a need to balance depth with breadth		9
35	Global-scale human pressure evolution imprints on sustainability of river systems. *Hydrology and Earth System Sciences*, **2019**, 23, 3933-3944	5.5	8
34	Joint editorial □Fostering innovation and improving impact assessment for journal publications in hydrology. *Hydrological Sciences Journal*, **2016**, 1-4	3.5	8
33	Modelling hydrological data with and without long memory. *Meccanica*, **1996**, 31, 87-101	2.1	8
32	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	4.7	8
31	On the future of journal publications in hydrology **2014**, 45, 515-518		7
30	Knickpoints and hillslope failures: Interactions in a steady-state experimental landscape **2006**,		7
29	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	7
28	A look at the links between drainage density and flood statistics		7
27	Reply to comment by Grey Nearing on □A blueprint for process-based modeling of uncertain hydrological systems□*Water Resources Research*, **2014**, 50, 6264-6268	5.4	6
26	A probabilistic approach to the analysis of contraction scour. *Journal of Hydraulic Research/De Recherches Hydrauliques*, **2006**, 44, 654-662	1.9	6
25	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,		6

24	Bluecat: A Local Uncertainty Estimator for Deterministic Simulations and Predictions. *Water Resources Research*, **2022**, 58,	5.4	6
23	On the future of journal publications in hydrology. *Water Resources Research*, **2014**, 50, 2795-2797	5.4	5
22	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	4.1	5
21	Joint Editorial On the future of journal publications in hydrology. *Hydrological Sciences Journal*, **2014**, 59, 955-958	3.5	5
20	A seasonal long-memory stochastic model for the simulation of daily river flows. *Physics and Chemistry of the Earth*, **1999**, 24, 319-324		5
19	Saving a World Treasure: Protecting Florence from Flooding. *Proceedings E Report*,		5
18	A geostatistical data-assimilation technique for enhancing macro-scale rainfall Runoff simulations. *Hydrology and Earth System Sciences*, **2018**, 22, 4633-4648	5.5	5
17	Real-time updating of the flood frequency distribution through data assimilation. *Hydrology and Earth System Sciences*, **2017**, 21, 3687-3700	5.5	4
16	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		4
15	Inferring the flood frequency distribution for an ungauged basin using a spatially distributed rainfall-runoff model		4
14	Reducing the Flood Risk of Art Cities: The Case of Florence. *Journal of Hydraulic Engineering*, **2020**, 146, 02520001	1.8	3
13	Virtual laboratories: new opportunities for collaborative water science		3
12	Debates The future of hydrological sciences: A (common) path forward? Introduction. *Water Resources Research*, **2014**, 50, 5334-5334	5.4	2
11	Joint Editorial "On the future of journal publications in hydrology". *Hydrology and Earth System Sciences*, **2014**, 18, 2433-2435	5.5	2
10	Developing predictive insight into changing water systems: use-inspired hydrologic science for the Anthropocene		2
9	Climate and hydrological variability: the catchment filtering role		2
8	Geostatistical regionalization of low-flow indices: PSBI and Top-Kriging		2
7	Panta Rhei: an evolving scientific decade with a focus on water systems. *Proceedings of the International Association of Hydrological Sciences*,364, 279-284		2

6	Joint Editorial: Fostering innovation and improving impact assessment for journal publications in hydrology. *Hydrology and Earth System Sciences*, **2016**, 20, 1081-1084	5.5	2
5	Joint Editorial: Fostering Innovation and Improving Impact Assessment for Journal Publications in Hydrology. *Vadose Zone Journal*, **2016**, 15, vzj2016.01.0002ed	2.7	1
4	Long term prediction of flood occurrence. *Proceedings of the International Association of Hydrological Sciences*,373, 189-192		1
3	Satellite Remote Sensing of Hydrological Change57-71		1
2	Climate Extrapolations in Hydrology: The Expanded Bluecat Methodology. *Hydrology*, **2022**, 9, 86	2.8	0
1	Human signatures derived from nighttime lights along the Eastern Alpine river network in Austria and Italy. *Proceedings of the International Association of Hydrological Sciences*,373, 131-136		