Massimiliano Zappa

List of Publications by Year
in descending order

102	5,756	94433 37	85541 71
papers	citations	h-index	g-index

169	169	169	6612
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Are niche-based species distribution models transferable in space?. Journal of Biogeography, 2006, 33, 1689-1703.	3.0	638
2	Climate change and plant distribution: local models predict highâ€elevation persistence. Global Change Biology, 2009, 15, 1557-1569.	9.5	450
3	ALPINE3D: a detailed model of mountain surface processes and its application to snow hydrology. Hydrological Processes, 2006, 20, 2111-2128.	2.6	352
4	Quantifying uncertainty sources in an ensemble of hydrological climateâ€impact projections. Water Resources Research, 2013, 49, 1523-1536.	4.2	284
5	An introduction to the hydrological modelling system PREVAH and its pre- and post-processing-tools. Environmental Modelling and Software, 2009, 24, 1209-1222.	4.5	218
6	REALâ€”Ensemble radar precipitation estimation for hydrology in a mountainous region. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 445-456.	2.7	196
7	The hydrological role of snow and glaciers in alpine river basins and their distributed modeling. Journal of Hydrology, 2003, 282, 36-55.	5.4	152
8	A comparative study in modelling runoff and its components in two mountainous catchments. Hydrological Processes, 2003, 17, 297-311.	2.6	134
9	Does model performance improve with complexity? A case study with three hydrological models. Journal of Hydrology, 2015, 523, 147-159.	5.4	132
10	MAP D-PHASE: Real-Time Demonstration of Weather Forecast Quality in the Alpine Region. Bulletin of the American Meteorological Society, 2009, 90, 1321-1336.	3.3	121
11	Superposition of three sources of uncertainties in operational flood forecasting chains. Atmospheric Research, 2011, 100, 246-262.	4.1	119
12	An operational hydrological ensemble prediction system for the city of Zurich (Switzerland): skill, case studies and scenarios. Hydrology and Earth System Sciences, 2011, 15, 2327-2347.	4.9	107
13	Seasonal Water Balance of an Alpine Catchment as Evaluated by Different Methods for Spatially Distributed Snowmelt Modelling. Hydrology Research, 2003, 34, 179-202.	2.7	105
14	MAP Dâ€PHASE: realâ€time demonstration of hydrological ensemble prediction systems. Atmospheric Science Letters, 2008, 9, 80-87.	1.9	102
15	Extreme heat and runoff extremes in the Swiss Alps. Natural Hazards and Earth System Sciences, 2007, 7, 375-389.	3.6	97
16	Swiss prealpine Rietholzbach research catchment and lysimeter: 32 year time series and 2003 drought event. Water Resources Research, 2012, 48, .	4.2	96
17	Largeâ€scale earlyâ€wilting response of Central European forests to the 2018 extreme drought. Global Change Biology, 2020, 26, 7021-7035.	9.5	80
18	Turbulence Structure and Exchange Processes in an Alpine Valley: The Riviera Project. Bulletin of the American Meteorological Society, 2004, 85, 1367-1386.	3.3	76

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19	Continuous simulation for flood estimation in ungauged mesoscale catchments of Switzerland â€“ Part I: Modelling framework and calibration results. Journal of Hydrology, 2009, 377, 191-207.	5.4	76
20	The COST 731 Action: A review on uncertainty propagation in advanced hydro-meteorological forecast systems. Atmospheric Research, 2011, 100, 150-167.	4.1	76
21	Present and future water scarcity in Switzerland: Potential for alleviation through reservoirs and lakes. Science of the Total Environment, 2019, 666, 1033-1047.	8.0	74
22	Application of the Alpine 3D model for glacier mass balance and glacier runoff studies at Goldbergkees, Austria. Hydrological Processes, 2008, 22, 3941-3949.	2.6	64
23	Representation of spatial and temporal variability in large-domain hydrological models: case study for a mesoscale pre-Alpine basin. Hydrology and Earth System Sciences, 2016, 20, 2207-2226.	4.9	64
24	Runoff modelling of the glacierized Alpine Upper Salzach basin (Austria): multiâ€criteria result validation. Hydrological Processes, 2008, 22, 3950-3964.	2.6	63
25	Verification of a coupled hydrometeorological modelling approach for alpine tributaries in the Rhine basin. Journal of Hydrology, 2006, 324, 224-238.	5.4	62
26	Importance of maximum snow accumulation for summer low flows in humid catchments. Hydrology and Earth System Sciences, 2016, 20, 859-874.	4.9	60
27	Monthly hydrometeorological ensemble prediction of streamflow droughts and corresponding drought indices. Hydrology and Earth System Sciences, 2013, 17, 395-407.	4.9	57
28	Future runoff from a partly glacierized watershed in Central Switzerland: A two-model approach. Advances in Water Resources, 2013, 55, 204-214.	3.8	52
29	The response of the water fluxes of the boreal forest region at the Volga's source area to climatic and land-use changes. Physics and Chemistry of the Earth, 2002, 27, 675-690.	2.9	47
30	The potential of radar-based ensemble forecasts for flash-flood early warning in the southern Swiss Alps. Hydrology and Earth System Sciences, 2013, 17, 3853-3869.	4.9	46
31	Probabilistic Forecasts of Snow Water Equivalent and Runoff in Mountainous Areas*. Journal of Hydrometeorology, 2015, 16, 2169-2186.	1.9	46
32	Application of bivariate mapping for hydrological classification and analysis of temporal change and scale effects in Switzerland. Journal of Hydrology, 2015, 523, 804-821.	5.4	45
33	A framework for the science contribution in climate adaptation: Experiences from science-policy processes in the Andes. Environmental Science and Policy, 2015, 47, 80-94.	4.9	45
34	Future shifts in extreme flow regimes in Alpine regions. Hydrology and Earth System Sciences, 2019, 23, 4471-4489.	4.9	44
35	Hydrological ensemble forecasting in mesoscale catchments: Sensitivity to initial conditions and value of reforecasts. Water Resources Research, 2011, 47, .	4.2	41
36	A â€˜Peakâ€Boxâ€™ approach for supporting interpretation and verification of operational ensemble peakâ€flow forecasts. Hydrological Processes, 2013, 27, 117-131.	2.6	39

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37	Technical Note: Updating procedure for flood forecasting with conceptual HBV-type models. Hydrology and Earth System Sciences, 2006, 10, 783-788.	4.9	37
38	Hydrological Climate-Impact Projections for the Rhine River: GCMâ€“RCM Uncertainty and Separate Temperature and Precipitation Effects*. Journal of Hydrometeorology, 2014, 15, 697-713.	1.9	37
39	Subjective modeling decisions can significantly impact the simulation of flood and drought events. Journal of Hydrology, 2019, 568, 1093-1104.	5.4	37
40	Probabilistic evaluation of ensemble discharge nowcasts in two nested Alpine basins prone to flash floods. Hydrological Processes, 2013, 27, 5-17.	2.6	35
41	IFKIS-Hydro: an early warning and information system for floods and debris flows. Natural Hazards, 2011, 56, 509-527.	3.4	34
42	Post-Processing of Stream Flows in Switzerland with an Emphasis on Low Flows and Floods. Water (Switzerland), 2016, 8, 115.	2.7	33
43	Tributaries affect the thermal response of lakes to climate change. Hydrology and Earth System Sciences, 2018, 22, 31-51.	4.9	33
44	Simulation of soil moisture and evapotranspiration in a soil profile during the 1999 MAP-Riviera Campaign. Hydrology and Earth System Sciences, 2003, 7, 903-919.	4.9	32
45	Objective quantitative spatial verification of distributed snow cover simulationsâ€”an experiment for the whole of Switzerland / VÃ©rification quantitative spatiale objective de simulations distribuÃ©es de la couche de neigeâ€”une Ã©tude pour l'ensemble de la Suisse. Hydrological Sciences Journal, 2008, 53, 179-191.	2.6	32
46	Rethinking Pumped Storage Hydropower in the European Alps. Mountain Research and Development, 2016, 36, 222-232.	1.0	32
47	Simultaneous calibration of ensemble river flow predictions over an entire range of lead times. Water Resources Research, 2013, 49, 6744-6755.	4.2	29
48	Extremeness of recent drought events in Switzerland: dependence on variable and return period choice. Natural Hazards and Earth System Sciences, 2019, 19, 2311-2323.	3.6	29
49	Contribution of glacier melt to stream runoff: if the climatically extreme summer of 2003 had happened in 1979â€¦. Annals of Glaciology, 2007, 46, 303-308.	1.4	28
50	The Value of Subseasonal Hydrometeorological Forecasts to Hydropower Operations: How Much Does Preprocessing Matter?. Water Resources Research, 2019, 55, 10159-10178.	4.2	28
51	KULTURisk regional risk assessment methodology for water-related natural hazards â€“ Part 2: Application to the Zurich case study. Hydrology and Earth System Sciences, 2015, 19, 1561-1576.	4.9	26
52	Glaciermelt of a small basin contributing to runoff under the extreme climate conditions in the summer of 2003. Hydrological Processes, 2009, 23, 1010-1018.	2.6	25
53	Integrated assessment and adaptation to climate change impacts in the Peruvian Andes. Advances in Geosciences, 0, 22, 35-39.	12.0	25
54	Hydrological aspects of the Mesoscale Alpine Programme: findings from field experiments and simulations. Quarterly Journal of the Royal Meteorological Society, 2007, 133, 867-880.	2.7	24

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55	Machine Learning Techniques for Predicting the Energy Consumption/Production and Its Uncertainties Driven by Meteorological Observations and Forecasts. Sustainability, 2019, 11, 3328.	3.2	24
56	Climate change effects on snow melt and discharge of a partly glacierized watershed in Central Switzerland (SoilTrec Critical Zone Observatory). Applied Geochemistry, 2011, 26, S60-S62.	3.0	23
57	Climate change impacts on bedload transport in alpine drainage basins with hydropower exploitation. Earth Surface Processes and Landforms, 2015, 40, 1587-1599.	2.5	23
58	How can expert knowledge increase the realism of conceptual hydrological models? A case study based on the concept of dominant runoff process in the Swiss Pre-Alps. Hydrology and Earth System Sciences, 2018, 22, 4425-4447.	4.9	22
59	Subseasonal hydrometeorological ensemble predictions in small- and medium-sized mountainous catchments: benefits of the NWP approach. Hydrology and Earth System Sciences, 2019, 23, 493-513.	4.9	22
60	Mapping dominant runoff processes: an evaluation of different approaches using similarity measures and synthetic runoff simulations. Hydrology and Earth System Sciences, 2016, 20, 2929-2945.	4.9	21
61	An Optimized Snowmelt Lysimeter System for Monitoring Melt Rates and Collecting Samples for Stable Water Isotope Analysis. Journal of Hydrology and Hydromechanics, 2019, 67, 20-31.	2.0	21
62	Ensemble flood forecasting considering dominant runoff processes â€“ Part 1: Set-up and application to nested basins (Emme, Switzerland). Natural Hazards and Earth System Sciences, 2019, 19, 19-40.	3.6	20
63	Understanding dominant controls on streamflow spatial variability to set up a semi-distributed hydrological model: the case study of the Thur catchment. Hydrology and Earth System Sciences, 2020, 24, 1319-1345.	4.9	20
64	Water resources and climate change impact modelling on a daily time scale in the Peruvian Andes. Hydrological Sciences Journal, 2014, 59, 2043-2059.	2.6	19
65	Future Trends in the Interdependence Between Flood Peaks and Volumes: Hydroâ€Climatological Drivers and Uncertainty. Water Resources Research, 2019, 55, 4745-4759.	4.2	19
66	Scale matters: Effects of temporal and spatial data resolution on water scarcity assessments. Advances in Water Resources, 2019, 123, 134-144.	3.8	19
67	One century of hydrological monitoring in two small catchments with different forest coverage. Environmental Monitoring and Assessment, 2011, 174, 91-106.	2.7	18
68	Assessing the impact of climate change on brown trout (Salmo trutta fario) recruitment. Hydrobiologia, 2015, 751, 1-21.	2.0	18
69	Homogenisation of a gridded snow water equivalent climatology for Alpine terrain: methodology and applications. Cryosphere, 2014, 8, 471-485.	3.9	17
70	Technical note: Combining quantile forecasts and predictive distributions of streamflows. Hydrology and Earth System Sciences, 2017, 21, 5493-5502.	4.9	17
71	Reconstruction and simulation of an extreme flood event in the Lago Maggiore catchment in 1868. Natural Hazards and Earth System Sciences, 2018, 18, 2717-2739.	3.6	17
72	A prototype platform for water resources monitoring and early recognition of critical droughts in Switzerland. Proceedings of the International Association of Hydrological Sciences, 0, 364, 492-498.	1.0	14

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73	Processâ€based hydrological modelling: The potential of a bottomâ€up approach for runoff predictions in ungauged catchments. Hydrological Processes, 2017, 31, 2902-2920.	2.6	13
74	Sensitivity of forest water balance and physiological drought predictions to soil and vegetation parameters â€“ A model-based study. Environmental Modelling and Software, 2018, 102, 213-232.	4.5	13
75	FORests and HYdrology under Climate Change in Switzerland v1.0: a spatially distributed model combining hydrology and forest dynamics. Geoscientific Model Development, 2020, 13, 537-564.	3.6	13
76	The benefit of climatological and calibrated reforecast data for simulating hydrological droughts in Switzerland. Meteorological Applications, 2015, 22, 444-458.	2.1	12
77	Testing an optimality-based model of rooting zone water storage capacity in temperate forests. Hydrology and Earth System Sciences, 2018, 22, 4097-4124.	4.9	12
78	Hydrological Ensemble Prediction Systems Around the Globe. , 2016, , 1-35.		12
79	Skill of Hydrological Extended Range Forecasts for Water Resources Management in Switzerland. Water Resources Management, 2018, 32, 969-984.	3.9	11
80	Real-time demonstration of hydrological ensemble forecasts in map d-phase. Houille Blanche, 2009, 95, 95-104.	0.3	10
81	Supplement to MAP D-PHASE: Real-Time Demonstration of Weather Forecast Quality in the Alpine Region: Additional Applications of the D-Phase Datasets. Bulletin of the American Meteorological Society, 2009, 90, S28-S32.	3.3	9
82	Flash Flood Forecasting Based on Rainfall Thresholds. , 2015, , 1-38.		9
83	Regional parameter allocation and predictive uncertainty estimation of a rainfall-runoff model in the poorly gauged Three Gorges Area (PR China). Physics and Chemistry of the Earth, 2008, 33, 1095-1104.	2.9	8
84	Four years of daily stable water isotope data in stream water and precipitation from three Swiss catchments. Scientific Data, 2022, 9, 46.	5.3	8
85	From calibration to realâ€time operations: an assessment of three precipitation benchmarks for a Swiss river system. Meteorological Applications, 2016, 23, 448-461.	2.1	7
86	A Tri-National program for estimating the link between snow resources and hydrological droughts. Proceedings of the International Association of Hydrological Sciences, 0, 369, 25-30.	1.0	7
87	Crash tests for forward-looking flood control in the city of ZÃ¼rich (Switzerland). Proceedings of the International Association of Hydrological Sciences, 0, 370, 235-242.	1.0	6
88	Validation of and comparison between a semidistributed rainfallâ€“runoff hydrological model (PREVAH) and a spatially distributed snowâ€evolution model (SnowModel) for snow cover prediction in mountain ecosystems. Ecohydrology, 2015, 8, 1181-1193.	2.4	5
89	The influence of site characteristics on the leaf-to-sapwood area relationship in chestnut trees (Castanea sativa Mill.). Trees - Structure and Function, 2016, 30, 2217-2226.	1.9	5
90	The Use of Hydrological Models for the Simulation of Climate Change Impacts on Mountain Hydrology. Advances in Global Change Research, 2005, , 343-354.	1.6	5

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91	Flash Flood Forecasting Based on Rainfall Thresholds. , 2019, , 1223-1260.		3
92	Estimating Ensemble Flood Forecastsâ€™ Uncertainty: A Novel â€œPeak-Boxâ€•Approach for Detecting Multiple Peak-Flow Events. Atmosphere, 2020, 11, 2.	2.3	3
93	Verification of Short-Range Hydrological Forecasts. , 2019, , 953-975.		3
94	Thematic Issue on Snow Resources and Hydrological Cycle. Journal of Hydrology and Hydromechanics, 2019, 67, 1-3.	2.0	3
95	Averaging over spatiotemporal heterogeneity substantially biases evapotranspiration rates in a mechanistic large-scale land evaporation model. Hydrology and Earth System Sciences, 2020, 24, 5015-5025.	4.9	3
96	Hydrological Ensemble Prediction Systems Around the Globe. , 2019, , 1187-1221.		2
97	Introduction to Ensemble Forecast Applications and Showcases. , 2018, , 1-5.		2
98	Error Correcting and Combining Multi-model Flood Forecasting Systems. Springer Water, 2018, , 569-578.	0.3	2
99	Tercile forecasts for extending the horizon of skillful hydrological predictions. Journal of Hydrometeorology, 2022, , .	1.9	2
100	Introduction to Ensemble Forecast Applications and Showcases. , 2019, , 1181-1185.		1
101	Editorial â€œOn recent progresses in uncertainty propagation in end-to-end hydro-meteorological forecasting chainsâ€• Atmospheric Research, 2011, 100, 147-149.	4.1	0
102	Verification of Short-Range Hydrological Forecasts. , 2016, , 1-24.		0