

# Massimiliano Zappa

## List of Publications by Year in descending order

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102  
papers

5,756  
citations

94433

37  
h-index

85541

71  
g-index

169  
all docs

169  
docs citations

169  
times ranked

6612  
citing authors

#	ARTICLE	IF	CITATIONS
1	Tercile forecasts for extending the horizon of skillful hydrological predictions. Journal of Hydrometeorology, 2022, , .	1.9	2
2	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
3	Large-scale early-wilting response of Central European forests to the 2018 extreme drought. Global Change Biology, 2020, 26, 7021-7035.	9.5	80
4	Estimating Ensemble Flood Forecasts's™ Uncertainty: A Novel "Peak-Box" Approach for Detecting Multiple Peak-Flow Events. Atmosphere, 2020, 11, 2.	2.3	3
5	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
6	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
7	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
8	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
9	Hydrological Ensemble Prediction Systems Around the Globe. , 2019, , 1187-1221.		2
10	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
11	Future Trends in the Interdependence Between Flood Peaks and Volumes: Hydro-climatological Drivers and Uncertainty. Water Resources Research, 2019, 55, 4745-4759.	4.2	19
12	Ensemble flood forecasting considering dominant runoff processes " Part 1: Set-up and application to nested basins (Emme, Switzerland). Natural Hazards and Earth System Sciences, 2019, 19, 19-40.	3.6	20
13	Flash Flood Forecasting Based on Rainfall Thresholds. , 2019, , 1223-1260.		3
14	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
15	Future shifts in extreme flow regimes in Alpine regions. Hydrology and Earth System Sciences, 2019, 23, 4471-4489.	4.9	44
16	The Value of Subseasonal Hydrometeorological Forecasts to Hydropower Operations: How Much Does Preprocessing Matter?. Water Resources Research, 2019, 55, 10159-10178.	4.2	28
17	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
18	Scale matters: Effects of temporal and spatial data resolution on water scarcity assessments. Advances in Water Resources, 2019, 123, 134-144.	3.8	19

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19	Subjective modeling decisions can significantly impact the simulation of flood and drought events. Journal of Hydrology, 2019, 568, 1093-1104.	5.4	37
20	Verification of Short-Range Hydrological Forecasts. , 2019, , 953-975.		3
21	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
22	Thematic Issue on Snow Resources and Hydrological Cycle. Journal of Hydrology and Hydromechanics, 2019, 67, 1-3.	2.0	3
23	Introduction to Ensemble Forecast Applications and Showcases. , 2019, , 1181-1185.		1
24	Sensitivity of forest water balance and physiological drought predictions to soil and vegetation parameters – A model-based study. Environmental Modelling and Software, 2018, 102, 213-232.	4.5	13
25	Skill of Hydrological Extended Range Forecasts for Water Resources Management in Switzerland. Water Resources Management, 2018, 32, 969-984.	3.9	11
26	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
27	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
28	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
29	Tributaries affect the thermal response of lakes to climate change. Hydrology and Earth System Sciences, 2018, 22, 31-51.	4.9	33
30	Introduction to Ensemble Forecast Applications and Showcases. , 2018, , 1-5.		2
31	Error Correcting and Combining Multi-model Flood Forecasting Systems. Springer Water, 2018, , 569-578.	0.3	2
32	Process-based hydrological modelling: The potential of a bottom-up approach for runoff predictions in ungauged catchments. Hydrological Processes, 2017, 31, 2902-2920.	2.6	13
33	Technical note: Combining quantile forecasts and predictive distributions of streamflows. Hydrology and Earth System Sciences, 2017, 21, 5493-5502.	4.9	17
34	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
35	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
36	Post-Processing of Stream Flows in Switzerland with an Emphasis on Low Flows and Floods. Water (Switzerland), 2016, 8, 115.	2.7	33

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37	The influence of site characteristics on the leaf-to-sapwood area relationship in chestnut trees ( <i>Castanea sativa</i> Mill.). <i>Trees - Structure and Function</i> , 2016, 30, 2217-2226.	1.9	5
38	From calibration to real-time operations: an assessment of three precipitation benchmarks for a Swiss river system. <i>Meteorological Applications</i> , 2016, 23, 448-461.	2.1	7
39	Rethinking Pumped Storage Hydropower in the European Alps. <i>Mountain Research and Development</i> , 2016, 36, 222-232.	1.0	32
40	Hydrological Ensemble Prediction Systems Around the Globe. , 2016, , 1-35.		12
41	Importance of maximum snow accumulation for summer low flows in humid catchments. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 859-874.	4.9	60
42	Verification of Short-Range Hydrological Forecasts. , 2016, , 1-24.		0
43	Flash Flood Forecasting Based on Rainfall Thresholds. , 2015, , 1-38.		9
44	The benefit of climatological and calibrated reforecast data for simulating hydrological droughts in Switzerland. <i>Meteorological Applications</i> , 2015, 22, 444-458.	2.1	12
45	Climate change impacts on bedload transport in alpine drainage basins with hydropower exploitation. <i>Earth Surface Processes and Landforms</i> , 2015, 40, 1587-1599.	2.5	23
46	KULTURisk regional risk assessment methodology for water-related natural hazards – Part 2: Application to the Zurich case study. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 1561-1576.	4.9	26
47	Application of bivariate mapping for hydrological classification and analysis of temporal change and scale effects in Switzerland. <i>Journal of Hydrology</i> , 2015, 523, 804-821.	5.4	45
48	Does model performance improve with complexity? A case study with three hydrological models. <i>Journal of Hydrology</i> , 2015, 523, 147-159.	5.4	132
49	Validation of and comparison between a semidistributed rainfall-runoff hydrological model (PREVAH) and a spatially distributed snow evolution model (SnowModel) for snow cover prediction in mountain ecosystems. <i>Ecohydrology</i> , 2015, 8, 1181-1193.	2.4	5
50	Assessing the impact of climate change on brown trout ( <i>Salmo trutta fario</i> ) recruitment. <i>Hydrobiologia</i> , 2015, 751, 1-21.	2.0	18
51	Probabilistic Forecasts of Snow Water Equivalent and Runoff in Mountainous Areas*. <i>Journal of Hydrometeorology</i> , 2015, 16, 2169-2186.	1.9	46
52	A framework for the science contribution in climate adaptation: Experiences from science-policy processes in the Andes. <i>Environmental Science and Policy</i> , 2015, 47, 80-94.	4.9	45
53	Homogenisation of a gridded snow water equivalent climatology for Alpine terrain: methodology and applications. <i>Cryosphere</i> , 2014, 8, 471-485.	3.9	17
54	Water resources and climate change impact modelling on a daily time scale in the Peruvian Andes. <i>Hydrological Sciences Journal</i> , 2014, 59, 2043-2059.	2.6	19

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55	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
56	Probabilistic evaluation of ensemble discharge nowcasts in two nested Alpine basins prone to flash floods. Hydrological Processes, 2013, 27, 5-17.	2.6	35
57	Simultaneous calibration of ensemble river flow predictions over an entire range of lead times. Water Resources Research, 2013, 49, 6744-6755.	4.2	29
58	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
59	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
60	Quantifying uncertainty sources in an ensemble of hydrological climateâ€‘impact projections. Water Resources Research, 2013, 49, 1523-1536.	4.2	284
61	Monthly hydrometeorological ensemble prediction of streamflow droughts and corresponding drought indices. Hydrology and Earth System Sciences, 2013, 17, 395-407.	4.9	57
62	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
63	Swiss prealpine Rietholzbach research catchment and lysimeter: 32 year time series and 2003 drought event. Water Resources Research, 2012, 48, .	4.2	96
64	Hydrological ensemble forecasting in mesoscale catchments: Sensitivity to initial conditions and value of reforecasts. Water Resources Research, 2011, 47, .	4.2	41
65	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
66	The COST 731 Action: A review on uncertainty propagation in advanced hydro-meteorological forecast systems. Atmospheric Research, 2011, 100, 150-167.	4.1	76
67	Superposition of three sources of uncertainties in operational flood forecasting chains. Atmospheric Research, 2011, 100, 246-262.	4.1	119
68	Editorial â€‘On recent progresses in uncertainty propagation in end-to-end hydro-meteorological forecasting chainsâ€™. Atmospheric Research, 2011, 100, 147-149.	4.1	0
69	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
70	One century of hydrological monitoring in two small catchments with different forest coverage. Environmental Monitoring and Assessment, 2011, 174, 91-106.	2.7	18
71	IFKIS-Hydro: an early warning and information system for floods and debris flows. Natural Hazards, 2011, 56, 509-527.	3.4	34
72	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

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73	Glaciermelt of a small basin contributing to runoff under the extreme climate conditions in the summer of 2003. <i>Hydrological Processes</i> , 2009, 23, 1010-1018.	2.6	25
74	REAL-Ensemble radar precipitation estimation for hydrology in a mountainous region. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2009, 135, 445-456.	2.7	196
75	Climate change and plant distribution: local models predict high-elevation persistence. <i>Global Change Biology</i> , 2009, 15, 1557-1569.	9.5	450
76	An introduction to the hydrological modelling system PREVAH and its pre- and post-processing-tools. <i>Environmental Modelling and Software</i> , 2009, 24, 1209-1222.	4.5	218
77	MAP D-PHASE: Real-Time Demonstration of Weather Forecast Quality in the Alpine Region. <i>Bulletin of the American Meteorological Society</i> , 2009, 90, 1321-1336.	3.3	121
78	Supplement to MAP D-PHASE: Real-Time Demonstration of Weather Forecast Quality in the Alpine Region: Additional Applications of the D-Phase Datasets. <i>Bulletin of the American Meteorological Society</i> , 2009, 90, S28-S32.	3.3	9
79	Real-time demonstration of hydrological ensemble forecasts in map d-phase. <i>Houille Blanche</i> , 2009, 95, 95-104.	0.3	10
80	Application of the Alpine 3D model for glacier mass balance and glacier runoff studies at Goldbergkees, Austria. <i>Hydrological Processes</i> , 2008, 22, 3941-3949.	2.6	64
81	Runoff modelling of the glacierized Alpine Upper Salzach basin (Austria): multi-criteria result validation. <i>Hydrological Processes</i> , 2008, 22, 3950-3964.	2.6	63
82	MAP D-PHASE: real-time demonstration of hydrological ensemble prediction systems. <i>Atmospheric Science Letters</i> , 2008, 9, 80-87.	1.9	102
83	Regional parameter allocation and predictive uncertainty estimation of a rainfall-runoff model in the poorly gauged Three Gorges Area (PR China). <i>Physics and Chemistry of the Earth</i> , 2008, 33, 1095-1104.	2.9	8
84	Objective quantitative spatial verification of distributed snow cover simulations – an experiment for the whole of Switzerland / Vérification quantitative spatiale objective de simulations distribuées de la couche de neige – une étude pour l'ensemble de la Suisse. <i>Hydrological Sciences Journal</i> , 2008, 53, 179-191.	2.6	32
85	Contribution of glacier melt to stream runoff: if the climatically extreme summer of 2003 had happened in 1979. <i>Annals of Glaciology</i> , 2007, 46, 303-308.	1.4	28
86	Extreme heat and runoff extremes in the Swiss Alps. <i>Natural Hazards and Earth System Sciences</i> , 2007, 7, 375-389.	3.6	97
87	Hydrological aspects of the Mesoscale Alpine Programme: findings from field experiments and simulations. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2007, 133, 867-880.	2.7	24
88	Verification of a coupled hydrometeorological modelling approach for alpine tributaries in the Rhine basin. <i>Journal of Hydrology</i> , 2006, 324, 224-238.	5.4	62
89	Technical Note: Updating procedure for flood forecasting with conceptual HBV-type models. <i>Hydrology and Earth System Sciences</i> , 2006, 10, 783-788.	4.9	37
90	Are niche-based species distribution models transferable in space?. <i>Journal of Biogeography</i> , 2006, 33, 1689-1703.	3.0	638

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91	ALPINE3D: a detailed model of mountain surface processes and its application to snow hydrology. Hydrological Processes, 2006, 20, 2111-2128.	2.6	352
92	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
93	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
94	A comparative study in modelling runoff and its components in two mountainous catchments. Hydrological Processes, 2003, 17, 297-311.	2.6	134
95	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
96	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
97	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
98	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
99	Integrated assessment and adaptation to climate change impacts in the Peruvian Andes. Advances in Geosciences, 0, 22, 35-39.	12.0	25
100	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
101	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
102	Crash tests for forward-looking flood control in the city of Zürich (Switzerland). Proceedings of the International Association of Hydrological Sciences, 0, 370, 235-242.	1.0	6