Ralf Merz

List of Publications by Year
in descending order

80 papers	8,336 citations	76196 40 h-index	60497 81 g-index
114 all docs	114 docs citations	114 times ranked	6727 citing authors

#	Article	IF	Citations
1	Changing climate both increases and decreases European river floods. Nature, 2019, 573, 108-111.	13.7	639
2	Changing climate shifts timing of European floods. Science, 2017, 357, 588-590.	6.0	584
3	Regionalisation of catchment model parameters. Journal of Hydrology, 2004, 287, 95-123.	2.3	549
4	Understanding flood regime changes in Europe: a state-of-the-art assessment. Hydrology and Earth System Sciences, 2014, 18, 2735-2772.	1.9	423
5	A process typology of regional floods. Water Resources Research, 2003, 39, .	1.7	347
6	Time stability of catchment model parameters: Implications for climate impact analyses. Water Resources Research, 2011, 47, .	1.7	334
7	A comparison of regionalisation methods for catchment model parameters. Hydrology and Earth System Sciences, 2005, 9, 157-171.	1.9	309
8	Floods and climate: emerging perspectives for flood risk assessment and management. Natural Hazards and Earth System Sciences, 2014, 14, 1921-1942.	1.5	239
9	Flood frequency regionalisationâ€"spatial proximity vs. catchment attributes. Journal of Hydrology, 2005, 302, 283-306.	2.3	218
10	A regional analysis of event runoff coefficients with respect to climate and catchment characteristics in Austria. Water Resources Research, 2009, 45, .	1.7	218
11	Spatio-temporal variability of event runoff coefficients. Journal of Hydrology, 2006, 331, 591-604.	2.3	212
12	Flood frequency hydrology: 1. Temporal, spatial, and causal expansion of information. Water Resources Research, 2008, 44, .	1.7	197
13	Seasonal characteristics of flood regimes across the Alpineâ€"Carpathian range. Journal of Hydrology, 2010, 394, 78-89.	2.3	181
14	Top-kriging - geostatistics on stream networks. Hydrology and Earth System Sciences, 2006, 10, 277-287.	1.9	171
15	Linking flood frequency to long-term water balance: Incorporating effects of seasonality. Water Resources Research, 2005, 41, .	1.7	161
16	Managing the effects of multiple stressors on aquatic ecosystems under water scarcity. The GLOBAQUA project. Science of the Total Environment, 2015, 503-504, 3-9.	3.9	161
17	Uncertainty and multiple objective calibration in regional water balance modelling: case study in 320 Austrian catchments. Hydrological Processes, 2007, 21, 435-446.	1.1	157
18	Flood timescales: Understanding the interplay of climate and catchment processes through comparative hydrology. Water Resources Research, 2012, 48, .	1.7	156

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19	Controls on event runoff coefficients in the eastern Italian Alps. Journal of Hydrology, 2009, 375, 312-325.	2.3	149
20	Assimilating scatterometer soil moisture data into conceptual hydrologic models at the regional scale. Hydrology and Earth System Sciences, 2006, 10, 353-368.	1.9	142
21	Flood frequency hydrology: 3. A Bayesian analysis. Water Resources Research, 2013, 49, 675-692.	1.7	137
22	Driver detection of water quality trends in three large European river basins. Science of the Total Environment, 2018, 612, 49-62.	3.9	126
23	Scale effects in conceptual hydrological modeling. Water Resources Research, 2009, 45, .	1.7	124
24	Regional calibration of catchment models: Potential for ungauged catchments. Water Resources Research, 2007, 43, .	1.7	118
25	Catchment classification by runoff behaviour with self-organizing maps (SOM). Hydrology and Earth System Sciences, 2011, 15, 2947-2962.	1.9	109
26	Hydrology under change: an evaluation protocol to investigate how hydrological models deal with changing catchments. Hydrological Sciences Journal, 2015, 60, 1184-1199.	1.2	105
27	Flood frequency hydrology: 2. Combining data evidence. Water Resources Research, 2008, 44, .	1.7	95
28	The Bode hydrological observatory: a platform for integrated, interdisciplinary hydro-ecological research within the TERENO Harz/Central German Lowland Observatory. Environmental Earth Sciences, 2017, 76, 1.	1.3	93
29	Causative classification of river flood events. Wiley Interdisciplinary Reviews: Water, 2019, 6, e1353.	2.8	86
30	Runoff models and flood frequency statistics for design flood estimation in Austria â€“ Do they tell a consistent story?. Journal of Hydrology, 2012, 456-457, 30-43.	2.3	84
31	On the role of the runoff coefficient in the mapping of rainfall to flood return periods. Hydrology and Earth System Sciences, 2009, 13, 577-593.	1.9	76
32	Exploring Controls on Rainfallâ€Runoff Events: 1. Time Seriesâ€Based Event Separation and Temporal Dynamics of Event Runoff Response in Germany. Water Resources Research, 2018, 54, 7711-7732.	1.7	75
33	Comparative analysis of the seasonality of hydrological characteristics in Slovakia and Austria / Analyse comparative de la saisonnalitÃ© de caractÃ©ristiques hydrologiques en Slovaquie et en Autriche. Hydrological Sciences Journal, 2009, 54, 456-473.	1.2	68
34	Hydroclimatic and water quality trends across three Mediterranean river basins. Science of the Total Environment, 2016, 571, 1392-1406.	3.9	68
35	National flood discharge mapping in Austria. Natural Hazards, 2008, 46, 53-72.	1.6	67
36	Dependence between flood peaks and volumes: a case study on climate and hydrological controls. Hydrological Sciences Journal, 2015, 60, 968-984.	1.2	67

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37	Step changes in the flood frequency curve: Process controls. Water Resources Research, 2012, 48, .	1.7	63
38	Process controls on the statistical flood moments â€•a data based analysis. Hydrological Processes, 2009, 23, 675-696.	1.1	56
39	Spatial Patterns of Water Age: Using Young Water Fractions to Improve the Characterization of Transit Times in Contrasting Catchments. Water Resources Research, 2018, 54, 4767-4784.	1.7	52
40	The SCALEX Campaign: Scale-Crossing Land Surface and Boundary Layer Processes in the TERENO-preAlpine Observatory. Bulletin of the American Meteorological Society, 2017, 98, 1217-1234.	1.7	49
41	Modelling the hydrological impacts of rural land use change. Hydrology Research, 2014, 45, 737-754.	1.1	44
42	Combined uncertainty of hydrological model complexity and satellite-based forcing data evaluated in two data-scarce semi-arid catchments in Ethiopia. Journal of Hydrology, 2014, 519, 2049-2066.	2.3	40
43	A Processâ€Based Framework to Characterize and Classify Runoff Events: The Event Typology of Germany. Water Resources Research, 2020, 56, e2019WR026951.	1.7	37
44	Probabilistic envelope curves for extreme rainfall events. Journal of Hydrology, 2009, 378, 263-271.	2.3	36
45	Processâ€based interpretation of conceptual hydrological model performance using a multinational catchment set. Water Resources Research, 2017, 53, 7247-7268.	1.7	36
46	Groundwater evaporation from salt pans: Examples from the eastern Arabian Peninsula. Journal of Hydrology, 2015, 531, 792-801.	2.3	35
47	Uncertainty of modelled flow regime for flow-ecological assessment in Southern Europe. Science of the Total Environment, 2018, 615, 1028-1047.	3.9	35
48	Discharge Driven Nitrogen Dynamics in a Mesoscale River Basin As Constrained by Stable Isotope Patterns. Environmental Science & Technology, 2016, 50, 9187-9196.	4.6	34
49	New perspectives on interdisciplinary earth science at the Dead Sea: The DESERVE project. Science of the Total Environment, 2016, 544, 1045-1058.	3.9	34
50	Localisation and temporal variability of groundwater discharge into the Dead Sea using thermal satellite data. Environmental Earth Sciences, 2013, 69, 587-603.	1.3	33
51	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	32
52	Multi-response calibration of a conceptual hydrological model in the semiarid catchment of Wadi al Arab, Jordan. Journal of Hydrology, 2014, 509, 193-206.	2.3	31
53	Exploring Controls on Rainfallâ€Runoff Events: 2. Regional Patterns and Spatial Controls of Event Characteristics in Germany. Water Resources Research, 2018, 54, 7688-7710.	1.7	29
54	Challenges to estimate surface- and groundwater flow in arid regions: The Dead Sea catchment. Science of the Total Environment, 2014, 485-486, 828-841.	3.9	28

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55	Groundwater protection under water scarcity; from regional risk assessment to local wastewater treatment solutions in Jordan. Science of the Total Environment, 2020, 706, 136066.	3.9	28
56	The role of station density for predicting daily runoff by top-kriging interpolation in Austria. Journal of Hydrology and Hydromechanics, 2015, 63, 228-234.	0.7	27
57	How to identify groundwater-caused thermal anomalies in lakes based on multi-temporal satellite data in semi-arid regions. Hydrology and Earth System Sciences, 2014, 18, 2773-2787.	1.9	25
58	Effects of input discretization, model complexity, and calibration strategy on model performance in a dataâ€scarce glacierized catchment in Central Asia. Water Resources Research, 2016, 52, 4674-4699.	1.7	25
59	Extreme rainstorms: Comparing regional envelope curves to stochastically generated events. Water Resources Research, 2012, 48, .	1.7	23
60	Understanding Heavy Tails of Flood Peak Distributions. Water Resources Research, 2022, 58, .	1.7	23
61	Stable isotopes in river waters in the Tajik Pamirs: regional and temporal characteristics. Isotopes in Environmental and Health Studies, 2013, 49, 542-554.	0.5	22
62	Regional nitrogen dynamics in the TERENO Bode River catchment, Germany, as constrained by stable isotope patterns. Isotopes in Environmental and Health Studies, 2016, 52, 61-74.	0.5	19
63	Transformation of Generation Processes From Small Runoff Events to Large Floods. Geophysical Research Letters, 2020, 47, e2020GL090547.	1.5	19
64	Floods in Austria. , 2019, , 169-177.		18
65	Application of the water balance model J2000 to estimate groundwater recharge in a semi-arid environment: a case study in the Zarqa River catchment, NW-Jordan. Environmental Earth Sciences, 2013, 69, 605-615.	1.3	17
66	Sensitivity analysis of SCHADEX extreme flood estimations to observed hydrometeorological variability. Water Resources Research, 2014, 50, 353-370.	1.7	17
67	Improving large-scale groundwater models by considering fossil gradients. Advances in Water Resources, 2017, 103, 32-43.	1.7	17
68	Parameter's Controls of Distributed Catchment Modelsâ€"How Much Information is in Conventional Catchment Descriptors?. Water Resources Research, 2020, 56, e2019WR026008.	1.7	17
69	Tomography of anthropogenic nitrate contribution along a mesoscale river. Science of the Total Environment, 2018, 615, 773-783.	3.9	14
70	Optimization of the geopotential heights information used in a rainfallâ€based weather patterns classification over Austria. International Journal of Climatology, 2013, 33, 1563-1573.	1.5	12
71	Estimating groundwater recharge for an arid karst system using a combined approach of time-lapse camera monitoring and water balance modelling. Hydrological Processes, 2016, 30, 771-782.	1.1	12
72	The flood cooking book: ingredients and regional flavors of floods across Germany. Environmental Research Letters, 2020, 15, 114024.	2.2	12

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73	Bridging Glaciological and Hydrological Trends in the Pamir Mountains, Central Asia. Water (Switzerland), 2017, 9, 422.	1.2	11
74	PHEV! The PHysically-based Extreme Value distribution of river flows. Environmental Research Letters, 2021, 16, 124065.	2.2	10
75	Drivers of multi-decadal nitrate regime shifts in a large European catchment. Environmental Research Letters, 2022, 17, 064039.	2.2	8
76	Reliable estimation of high floods: A method to select the most suitable ordinary distribution in the Metastatistical extreme value framework. Advances in Water Resources, 2022, 161, 104127.	1.7	7
77	Landform â€" Hydrology Feedbacks. Lecture Notes in Earth Sciences, 2009, , 117-126.	0.5	6
78	FLOODS IN AUSTRIA. , 2006, , 81-90.		3
79	Advances in Regionalising Flood Probabilities. , 2011, , 97-115.		1
80	Flood risk mapping of Austrian railway lines. , 2008, , 1625-1630.		0