Axel Bronstert

List of Publications by Year
in descending order

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Version: 2024-02-01

102 papers	5,013 citations	81900 39 h-index	102487 66 g-index

124 all docs	124 docs citations	124 times ranked	5207 citing authors

#	Article	IF	Citations
1	Land-use impacts on storm-runoff generation: scenarios of land-use change and simulation of hydrological response in a meso-scale catchment in SW-Germany. Journal of Hydrology, 2002, 267, 80-93.	5.4	348
2	Effects of climate and land-use change on storm runoff generation: present knowledge and modelling capabilities. Hydrological Processes, 2002, 16, 509-529.	2.6	343
3	Rainfallâ€"runoff response, event-based runoff coefficients and hydrograph separation. Hydrological Sciences Journal, 2007, 52, 843-862.	2.6	202
4	Assessing the impact of land use change on hydrology by ensemble modeling (LUCHEM). I: Model intercomparison with current land use. Advances in Water Resources, 2009, 32, 129-146.	3.8	177
5	Groundwaterâ€"surface water interactions in a North German lowland floodplain â€" Implications for the river discharge dynamics and riparian water balance. Journal of Hydrology, 2007, 347, 404-417.	5.4	162
6	Floods and Climate Change: Interactions and Impacts. Risk Analysis, 2003, 23, 545-557.	2.7	152
7	Plot and field scale soil moisture dynamics and subsurface wetness control on runoff generation in a headwater in the Ore Mountains. Hydrology and Earth System Sciences, 2010, 14, 873-889.	4.9	140
8	Climate change, land use change and runoff prediction in the Rhineâ€"Meuse basins. River Research and Applications, 2004, 20, 229-241.	1.7	130
9	Assessing the impact of land use change on hydrology by ensemble modelling (LUCHEM) II: Ensemble combinations and predictions. Advances in Water Resources, 2009, 32, 147-158.	3.8	128
10	Climate change impacts on the seasonality and generation processes of floods â€" projections and uncertainties for catchments with mixed snowmelt/rainfall regimes. Hydrology and Earth System Sciences, 2015, 19, 913-931.	4.9	118
11	Soil Moisture Estimation Under Low Vegetation Cover Using a Multi-Angular Polarimetric Decomposition. IEEE Transactions on Geoscience and Remote Sensing, 2013, 51, 2201-2215.	6.3	111
12	Modelling of runoff generation and soil moisture dynamics for hillslopes and micro-catchments. Journal of Hydrology, 1997, 198, 177-195.	5.4	110
13	Integrating wetlands and riparian zones in river basin modelling. Ecological Modelling, 2006, 199, 379-392.	2.5	105
14	Representation of landscape variability and lateral redistribution processes for large-scale hydrological modelling in semi-arid areas. Journal of Hydrology, 2004, 297, 136-161.	5.4	99
15	Loss of reservoir volume by sediment deposition and its impact on water availability in semiarid Brazil. Hydrological Sciences Journal, 2006, 51, 157-170.	2.6	99
16	Assessing the impact of land use change on hydrology by ensemble modeling (LUCHEM) III: Scenario analysis. Advances in Water Resources, 2009, 32, 159-170.	3.8	87
17	Rainfall-runoff modelling for assessing impacts of climate and land-use change. Hydrological Processes, 2004, 18, 567-570.	2.6	82
18	Regional integrated modelling of climate change impacts on natural resources and resource usage in semi-arid Northeast Brazil. Environmental Modelling and Software, 2007, 22, 259-268.	4.5	81

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19	Capabilities and limitations of detailed hillslope hydrological modelling. Hydrological Processes, 1999, 13, 21-48.	2.6	70
20	Simple water balance modelling of surface reservoir systems in a large data-scarce semiarid region / ModÃ©lisation simple du bilan hydrologique de systÃ¨mes de rÃ©servoirs de surface dans une grande rÃ©gion semi-aride pauvre en donnÃ©es. Hydrological Sciences Journal, 2004, 49, .	2.6	69
21	Comparison of hydrodynamic models of different complexities to model floods with emergency storage areas. Hydrological Processes, 2008, 22, 4695-4709.	2.6	67
22	A comparative analysis of the effectiveness of flood management measures based on the concept of "retaining water in the landscape" in different European hydro-climatic regions. Natural Hazards and Earth System Sciences, 2012, 12, 3287-3306.	3.6	66
23	Comparison and evaluation of regional climate scenarios for hydrological impact analysis: General scheme and application example. International Journal of Climatology, 2007, 27, 1579-1594.	3.5	64
24	The impact of groundwaterâ€“surface water interactions on the water balance of a mesoscale lowland river catchment in northeastern Germany. Hydrological Processes, 2007, 21, 169-184.	2.6	63
25	Modelling the impacts of land-use and drainage density on the water balance of a lowlandâ€“floodplain landscape in northeast Germany. Ecological Modelling, 2007, 200, 475-492.	2.5	63
26	Assessing the impact of changes in landuse and management practices on the diffuse pollution and retention of nitrate in a riparian floodplain. Science of the Total Environment, 2008, 389, 149-164.	8.0	63
27	Forensic hydro-meteorological analysis of an extreme flash flood: The 2016-05-29 event in Braunsbach, SW Germany. Science of the Total Environment, 2018, 630, 977-991.	8.0	62
28	Integrated modelling of climate, water, soil, agricultural and socio-economic processes: A general introduction of the methodology and some exemplary results from the semi-arid north-east of Brazil. Journal of Hydrology, 2006, 328, 417-431.	5.4	61
29	Projections of climate change impacts on river flood conditions in Germany by combining three different RCMs with a regional eco-hydrological model. Climatic Change, 2013, 116, 631-663.	3.6	61
30	1-, 2- and 3-dimensional modeling of water movement in the unsaturated soil matrix using a fuzzy approach. Advances in Water Resources, 1995, 18, 237-251.	3.8	58
31	Modelling the effects of land-use change on runoff and sediment yield for a meso-scale catchment in the Southern Pyrenees. Catena, 2009, 79, 288-296.	5.0	55
32	Increasing compound warm spells and droughts in the Mediterranean Basin. Weather and Climate Extremes, 2021, 32, 100312.	4.1	54
33	Investigation of runoff generation in a pristine, poorly gauged catchment in the Chilean Andes II: Qualitative and quantitative use of tracers at three spatial scales. Hydrological Processes, 2008, 22, 3676-3688.	2.6	53
34	A channel transmission losses model for different dryland rivers. Hydrology and Earth System Sciences, 2012, 16, 1111-1135.	4.9	52
35	Climate change impact on regional floods in the Carpathian region. Journal of Hydrology: Regional Studies, 2019, 22, 100590.	2.4	48
36	Uncertainty of runoff modelling at the hillslope scale due to temporal variations of rainfall intensity. Physics and Chemistry of the Earth, 2003, 28, 283-288.	2.9	46

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37	Process identification through rejection of model structures in a midâ€mountainous rural catchment: observations of rainfallâ€“runoff response, geophysical conditions and model interâ€comparison. Hydrological Processes, 2009, 23, 702-718.	2.6	46
38	Coping with variability and change: Floods and droughts. Natural Resources Forum, 2002, 26, 263-274.	3.6	45
39	Analysis of channel transmission losses in a dryland river reach in northâ€eastern Brazil using streamflow series, groundwater level series and multiâ€temporal satellite data. Hydrological Processes, 2013, 27, 1046-1060.	2.6	45
40	Investigation of runoff generation in a pristine, poorly gauged catchment in the Chilean Andes I: A multiâ€method experimental study. Hydrological Processes, 2008, 22, 3661-3675.	2.6	43
41	Streamflow response in small upland catchments in the Chilean coastal range to the M_W 8.8 Maule earthquake on 27 February 2010. Journal of Geophysical Research, 2012, 117, .	3.3	40
42	Flood risk reduction by the use of retention areas at the Elbe River. International Journal of River Basin Management, 2005, 3, 21-29.	2.7	37
43	Process-based modelling of erosion, sediment transport and reservoir siltation in mesoscale semi-arid catchments. Journal of Soils and Sediments, 2014, 14, 2001-2018.	3.0	37
44	Multi-objective optimization for stormwater management by green-roofs and infiltration trenches to reduce urban flooding in central Delhi. Journal of Hydrology, 2022, 606, 127455.	5.4	37
45	Shaking water out of soil. Geology, 2015, 43, 207-210.	4.4	36
46	A method to assess hydrological drought in semi-arid environments and its application to the Jaguaribe River basin, Brazil. Water International, 2016, 41, 213-230.	1.0	36
47	Long-term changes in central European river discharge for 1869â€“2016: impact of changing snow covers, reservoir constructions and an intensified hydrological cycle. Hydrology and Earth System Sciences, 2020, 24, 1721-1740.	4.9	36
48	Runoff generation and soil erosion processes after clear cutting. Journal of Geophysical Research F: Earth Surface, 2013, 118, 814-831.	2.8	34
49	Elevationâ€dependent warming in the Swiss Alps 1981â€“2017: Features, forcings and feedbacks. International Journal of Climatology, 2019, 39, 2556-2568.	3.5	33
50	Potentials and constraints of different types of soil moisture observations for flood simulations in headwater catchments. Natural Hazards, 2012, 60, 879-914.	3.4	32
51	Towards Subdaily Rainfall Disaggregation via Clausiusâ€“Clapeyron. Journal of Hydrometeorology, 2014, 15, 1303-1311.	1.9	31
52	Connectivity of sediment transport in a semiarid environment: a synthesis for the Upper Jaguaribe Basin, Brazil. Journal of Soils and Sediments, 2014, 14, 1938-1948.	3.0	31
53	Automated catenaâ€based discretization of landscapes for the derivation of hydrological modelling units. International Journal of Geographical Information Science, 2008, 22, 111-132.	4.8	30
54	Modeling the Effect of Multiple Reservoirs on Water and Sediment Dynamics in a Semiarid Catchment in Brazil. Journal of Hydrologic Engineering - ASCE, 2018, 23, .	1.9	30

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55	Attribution of high resolution streamflow trends in Western Austria â€“ an approach based on climate and discharge station data. Hydrology and Earth System Sciences, 2015, 19, 1225-1245.	4.9	30
56	Hydrodynamic simulation of the operational management of a proposed flood emergency storage area at the Middle Elbe River. River Research and Applications, 2008, 24, 900-913.	1.7	27
57	Spectral fingerprinting: characterizing suspended sediment sources by the use of VNIR-SWIR spectral information. Journal of Soils and Sediments, 2014, 14, 1965-1981.	3.0	27
58	Assessment of Climate Change Impacts on Water Resources in Three Representative Ukrainian Catchments Using Eco-Hydrological Modelling. Water (Switzerland), 2017, 9, 204.	2.7	27
59	Hydrological model parameter (in)stability â€“ â€œcrash testingâ€•the HBV model under contrasting flood seasonality conditions. Hydrological Sciences Journal, 2018, 63, 991-1007.	2.6	23
60	Three perceptions of the evapotranspiration landscape: comparing spatial patterns from a distributed hydrological model, remotely sensed surface temperatures, and sub-basin water balances. Hydrology and Earth System Sciences, 2013, 17, 2947-2966.	4.9	22
61	Seasonal drought prediction for semiarid northeast Brazil: what is the added value of a process-based hydrological model?. Hydrology and Earth System Sciences, 2019, 23, 1951-1971.	4.9	22
62	Towards a more consistent eco-hydrological modelling through multi-objective calibration: a case study in the Andean Vilcanota River basin, Peru. Hydrological Sciences Journal, 2021, 66, 59-74.	2.6	22
63	Detection of regional climate change effects on alpine hydrology by daily resolution trend analysis in Tyrol, Austria. Journal of Water and Climate Change, 2015, 6, 124-143.	2.9	21
64	Brief communication "Using the new Philippine radar network to reconstruct the <i>Habagat of August 2012</i> monsoon event around Metropolitan Manila". Natural Hazards and Earth System Sciences, 2013, 13, 653-657.	3.6	20
65	Evaluating the potential of radar-based rainfall estimates for streamflow and flood simulations in the Philippines. Geomatics, Natural Hazards and Risk, 2016, 7, 1390-1405.	4.3	20
66	Polarimetric rainfall retrieval from a C-Band weather radar in a tropical environment (The) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Td (	2.3	19
67	Projected changes in Rhine River flood seasonality under global warming. Hydrology and Earth System Sciences, 2021, 25, 2353-2371.	4.9	19
68	A quality assessment of Spatial TDR soil moisture measurements in homogenous and heterogeneous media with laboratory experiments. Hydrology and Earth System Sciences, 2010, 14, 1007-1020.	4.9	17
69	Climate change effects on hydrological system conditions influencing generation of storm runoff in small Alpine catchments. Hydrological Processes, 2017, 31, 1314-1330.	2.6	17
70	lumpR 2.0.0: an R package facilitating landscape discretisation for hillslope-based hydrological models. Geoscientific Model Development, 2017, 10, 3001-3023.	3.6	17
71	Monitoring Seasonal Changes in the Water Surface Areas of Reservoirs Using TerraSAR-X Time Series Data in Semiarid Northeastern Brazil. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2014, 7, 3190-3199.	4.9	16
72	Processâ€based modelling of a headwater catchment in a semiâ€arid area: the influence of macropore flow. Hydrological Processes, 2014, 28, 5805-5816.	2.6	15

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73	When timing matters-considering changing temporal structures in runoff response surfaces. Climatic Change, 2017, 142, 213-226.	3.6	15
74	Meteorological and hydrological drought assessment in Lake Malawi and Shire River basins (1970â€“2013). Hydrological Sciences Journal, 2020, 65, 2750-2764.	2.6	14
75	Towards urban flood susceptibility mapping using data-driven models in Berlin, Germany. Geomatics, Natural Hazards and Risk, 2022, 13, 1640-1662.	4.3	14
76	Seasonal logging, process response, and geomorphic work. Earth Surface Dynamics, 2014, 2, 117-125.	2.4	12
77	What Did Really Improve Our Mesoscale Hydrological Model? A Multidimensional Analysis Based on Real Observations. Water Resources Research, 2018, 54, 8594-8612.	4.2	12
78	Susceptibility of Water Resources and Hydropower Production to Climate Change in the Tropics: The Case of Lake Malawi and Shire River Basins, SE Africa. Hydrology, 2020, 7, 54.	3.0	12
79	Efficient Hazard Assessment for Pluvial Floods in Urban Environments: A Benchmarking Case Study for the City of Berlin, Germany. Water (Switzerland), 2021, 13, 2476.	2.7	12
80	Constructed wetland management in urban catchments for mitigating floods. Stochastic Environmental Research and Risk Assessment, 2021, 35, 2105-2124.	4.0	10
81	Simulation of water quality in a flood detention area using models of different spatial discretization. Ecological Modelling, 2009, 220, 1631-1642.	2.5	9
82	Model-Based Attribution of High-Resolution Streamflow Trends in Two Alpine Basins of Western Austria. Hydrology, 2016, 3, 7.	3.0	9
83	How to Tailor My Processâ€Based Hydrological Model? Dynamic Identifiability Analysis of Flexible Model Structures. Water Resources Research, 2020, 56, e2020WR028042.	4.2	9
84	Soil moisture retrieval under agricultural vegetation using fully polarimetric SAR. , 2012, , .		8
85	Verification of short-term runoff forecasts for a small Philippine basin (Marikina). Hydrological Sciences Journal, 2017, 62, 205-216.	2.6	8
86	The effects of global change on floods, fluvial geomorphology and related hazards in mountainous rivers. Science of the Total Environment, 2019, 669, 7-10.	8.0	8
87	Elevation-dependent compensation effects in snowmelt in the Rhine River Basin upstream gauge Basel. Hydrology Research, 2021, 52, 536-557.	2.7	6
88	Special Issue â€œAdvances in Flood Researchâ€• Journal of Hydrology, 2002, 267, 1.	5.4	5
89	Probabilistic flood forecasting for a mountainous headwater catchment using a nonparametric stochastic dynamic approach. Hydrological Sciences Journal, 2012, 57, 10-25.	2.6	5
90	Mapping regional surface water volume variation in reservoirs in northeastern Brazil during 2009â€“2017 using high-resolution satellite images. Science of the Total Environment, 2021, 789, 147711.	8.0	5

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91	Flash-Floods: More Often, More Severe, More Damaging? An Analysis of Hydro-geo-environmental Conditions and Anthropogenic Impacts. Climate Change Management, 2020, , 225-244.	0.8	5
92	Water and sediment fluxes in Mediterranean mountainous regions: comprehensive dataset for hydro-sedimentological analyses and modelling in a mesoscale catchment (River IsÃ¡bena, NE Spain). Earth System Science Data, 2018, 10, 1063-1075.	9.9	4
93	Hochwasser und Sturzfluten an FlÃ¼ssen in Deutschland. , 2017, , 87-101.		4
94	Soil moisture estimation using a multi-angular modified three component polarimetric decomposition. , 2009, , .		3
95	Comparison of approaches for water surface area segmentation using high resolution TerraSAR-X data for reservoir monitoring in a large semi-arid catchment in northeastern Brazil. , 2013, , .		3
96	Suspended sediment and discharge dynamics in a glaciated alpine environment: identifying crucial areas and time periods on several spatial and temporal scales in the Ã–tztal, Austria. Earth Surface Dynamics, 2022, 10, 653-669.	2.4	3
97	Seasonal variability of groundwaterâ€"surface exchange and its implications for riparian groundwater nitrate retention at the Havel River. International Journal of River Basin Management, 2009, 7, 329-343.	2.7	2
98	Increasing life expectancy of water resources literature. Water Resources Research, 2014, 50, 5019-5028.	4.2	2
99	Hydro Explorer: An interactive web app to investigate changes in runoff timing and runoff seasonality all over the world. River Research and Applications, 2021, 37, 544-554.	1.7	2
100	Discussion of the article: Calder, I. R. & Aylward, B. (2006) Forest and Floods: Moving to an Evidencebased Approach to Watershed and Integrated Flood Management. Water International, 2006, 31, 427-431.	1.0	1
101	The effects of climate change on flooding. , 2005, , 77-91.		1
102	Overview of current perspectives on climate change. , 2005, , 60-75.		1