Christian Bernhofer

List of Publications by Year
in descending order

131 papers	20,483 citations	36303 51 h-index	13771 129 g-index
134 all docs	134 docs citations	134 times ranked	13801 citing authors

#	Article	IF	Citations
1	Linking different drought types in a small catchment from a statistical perspective â€" Case study of the Wernersbach catchment, Germany. Journal of Hydrology X, 2022, 15, 100122.	1.6	1
2	The Namib Turbulence Experiment: Investigating Surfaceâ€"Atmosphere Heat Transfer in Three Dimensions. Bulletin of the American Meteorological Society, 2022, 103, E741-E760.	3.3	1
3	Uncovering the critical soil moisture thresholds of plant water stress for European ecosystems. Global Change Biology, 2022, 28, 2111-2123.	9.5	23
4	Modelling evaporation with local, regional and global BROOK90 frameworks: importance of parameterization and forcing. Hydrology and Earth System Sciences, 2022, 26, 3177-3239.	4.9	4
5	Climate change projections and extremes for Costa Rica using tailored predictors from <scp>CORDEX</scp> model output through statistical downscaling with artificial neural networks. International Journal of Climatology, 2021, 41, 211-232.	3.5	11
6	Energy balance closure and advective fluxes at ADVEX sites. Theoretical and Applied Climatology, 2021, 143, 761-779.	2.8	3
7	Multivariate non-parametric Euclidean distance model for hourly disaggregation of daily climate data. Theoretical and Applied Climatology, 2021, 143, 241-265.	2.8	4
8	An analysis of temporal scaling behaviour of extreme rainfall in Germany based on radar precipitation QPE data. Natural Hazards and Earth System Sciences, 2021, 21, 1195-1207.	3.6	10
9	Rainfall Threshold for Flash Flood Warning Based on Model Output of Soil Moisture: Case Study Wernersbach, Germany. Water (Switzerland), 2021, 13, 1061.	2.7	10
10	Assessment of TOPKAPI-X Applicability for Flood Events Simulation in Two Small Catchments in Saxony. Hydrology, 2021, 8, 109.	3.0	2
11	REAL-Fog part 2: A novel approach to calculate high resoluted spatio-temporal fog deposition: A daily fog deposition data set for entire Germany for 1949â€"2018. Journal of Hydrology, 2021, 599, 126360.	5.4	2
12	Relative importance of climatic variables, soil properties and plant traits to spatial variability in net CO_2 exchange across global forests and grasslands. Agricultural and Forest Meteorology, 2021, 307, 108506.	4.8	13
13	A Season of Eddy-Covariance Fluxes Above an Extensive Water Body Based on Observations from a Floating Platform. Boundary-Layer Meteorology, 2020, 174, 433-464.	2.3	5
14	Climate change impact assessment on the hydrology of a large river basin in Ethiopia using a local-scale climate modelling approach. Science of the Total Environment, 2020, 742, 140504.	8.0	49
15	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	5.3	646
16	Pseudo-Spatially-Distributed Modeling of Water Balance Components in the Free State of Saxony. Hydrology, 2020, 7, 84.	3.0	1
17	Global BROOK90 R Package: An Automatic Framework to Simulate the Water Balance at Any Location. Water (Switzerland), 2020, 12, 2037.	2.7	11
18	Evaluation the Performance of Several Gridded Precipitation Products over the Highland Region of Yemen for Water Resources Management. Remote Sensing, 2020, 12, 2984.	4.0	19

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19	Altered energy partitioning across terrestrial ecosystems in the European drought year 2018. Philosophical Transactions of the Royal Society B: Biological Sciences, 2020, 375, 20190524.	4.0	35
20	Trends in temperature and precipitation extremes in historical (1961–1990) and projected (2061–2090) periods in a data scarce mountain basin, northern Pakistan. Stochastic Environmental Research and Risk Assessment, 2020, 34, 1441-1455.	4.0	32
21	Assessment of Regional and Historical Climate Records for a Water Budget Approach in Eastern Colombia. Water (Switzerland), 2020, 12, 42.	2.7	2
22	Analysis of climate variability and droughts in East Africa using high-resolution climate data products. Global and Planetary Change, 2020, 186, 103130.	3.5	38
23	ECOSTRESS: NASA's Next Generation Mission to Measure Evapotranspiration From the International Space Station. Water Resources Research, 2020, 56, e2019WR026058.	4.2	220
24	Simulating the Impact of Climate Change on the Hydrological Regimes of a Sparsely Gauged Mountainous Basin, Northern Pakistan. Water (Switzerland), 2019, 11, 2141.	2.7	22
25	Urban Rainfall Modification: Observational Climatology Over Berlin, Germany. Journal of Geophysical Research D: Atmospheres, 2019, 124, 731-746.	3.3	39
26	Impacts of projected change in climate on water balance in basins of East Africa. Science of the Total Environment, 2019, 682, 160-170.	8.0	35
27	Changes in temperature and precipitation extremes in Ethiopia, Kenya, and Tanzania. International Journal of Climatology, 2019, 39, 18-30.	3.5	124
28	Downscaling of CMIP5 Models Output by Using Statistical Models in a Data Scarce Mountain Environment (Mangla Dam Watershed), Northern Pakistan. Asia-Pacific Journal of Atmospheric Sciences, 2019, 55, 719-735.	2.3	15
29	Regional climate projections for impact assessment studies in East Africa. Environmental Research Letters, 2019, 14, 044031.	5.2	69
30	Introducing Gradient Boosting as a universal gap filling tool for meteorological time series. Meteorologische Zeitschrift, 2018, 27, 369-376.	1.0	20
31	Extreme rainfall indices in Distrito Federal, Brazil: Trends and links with El Niño southern oscillation and Madden–Julian oscillation. International Journal of Climatology, 2018, 38, 4550-4567.	3.5	8
32	Evaluation of multiple climate data sources for managing environmental resources in East Africa. Hydrology and Earth System Sciences, 2018, 22, 4547-4564.	4.9	101
33	ORCHIDEE-PEAT (revision 4596), a model for northern peatland CO_2, water, and energy fluxes on daily to annual scales. Geoscientific Model Development, 2018, 11, 497-519.	3.6	43
34	Response of carbon dioxide exchange to grazing intensity over typical steppes in a semi-arid area of Inner Mongolia. Theoretical and Applied Climatology, 2017, 128, 719-730.	2.8	8
35	Extended predictor screening, application and added value of statistical downscaling of a CMIP5 ensemble for single-site projections in Distrito Federal, Brazil. International Journal of Climatology, 2017, 37, 46-65.	3.5	10
36	Improving global terrestrial evapotranspiration estimation using support vector machine by integrating three process-based algorithms. Agricultural and Forest Meteorology, 2017, 242, 55-74.	4.8	96

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37	Climate controls over the net carbon uptake period and amplitude of net ecosystem production in temperate and boreal ecosystems. Agricultural and Forest Meteorology, 2017, 243, 9-18.	4.8	64
38	Winter respiratory C losses provide explanatory power for net ecosystem productivity. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 243-260.	3.0	7
39	ORCHIDEE-CROP (v0), a new process-based agro-land surface model: model description and evaluation over Europe. Geoscientific Model Development, 2016, 9, 857-873.	3.6	51
40	Grazing intensity effects on the partitioning of evapotranspiration in the semiarid typical steppe ecosystems in Inner Mongolia. International Journal of Climatology, 2016, 36, 4130-4140.	3.5	18
41	Hydrologic regionalization using wavelet-based multiscale entropy method. Journal of Hydrology, 2016, 538, 22-32.	5.4	86
42	Simulating the net ecosystem CO_2 exchange and its components over winter wheat cultivation sites across a large climate gradient in Europe using the ORCHIDEE-STICS generic model. Agriculture, Ecosystems and Environment, 2016, 226, 1-17.	5.3	11
43	The METCRAX II Field Experiment: A Study of Downslope Windstorm-Type Flows in Arizona's Meteor Crater. Bulletin of the American Meteorological Society, 2016, 97, 217-235.	3.3	39
44	The TurbEFA Field Experiment—Measuring the Influence of a Forest Clearing on the Turbulent Wind Field. Boundary-Layer Meteorology, 2016, 160, 397-423.	2.3	6
45	Exploring Eddy-Covariance Measurements Using a Spatial Approach: The Eddy Matrix. Boundary-Layer Meteorology, 2016, 161, 1-17.	2.3	13
46	Comparison of spatial interpolation methods for the estimation of precipitation distribution in Distrito Federal, Brazil. Theoretical and Applied Climatology, 2016, 123, 335-348.	2.8	94
47	Assessment of GCM capabilities to simulate tropospheric stability on the Arabian Peninsula. International Journal of Climatology, 2015, 35, 1682-1696.	3.5	12
48	A method to adapt radar-derived precipitation fields for climatological applications. Meteorological Applications, 2015, 22, 636-649.	2.1	9
49	How to predict hydrological effects of local land use change: how the vegetation parameterisation for short rotation coppices influences model results. Hydrology and Earth System Sciences, 2015, 19, 3457-3474.	4.9	7
50	Large-Eddy Simulation Study of the Effects on Flow of a Heterogeneous Forest at Sub-Tree Resolution. Boundary-Layer Meteorology, 2015, 154, 27-56.	2.3	32
51	A satellite-based hybrid algorithm to determine the Priestley–Taylor parameter for global terrestrial latent heat flux estimation across multiple biomes. Remote Sensing of Environment, 2015, 165, 216-233.	11.0	92
52	The uncertain climate footprint of wetlands under human pressure. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 4594-4599.	7.1	171
53	Detection of potential areas of changing climatic conditions at a regional scale until 2100 for Saxony, Germany. Meteorology Hydrology and Water Management, 2015, 3, 17-26.	0.4	5
54	Separating the effects of changes in land cover and climate: a hydro-meteorological analysis of the past 60 yr in Saxony, Germany. Hydrology and Earth System Sciences, 2014, 18, 389-405.	4.9	43

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55	Comparison of different approaches to fit log-normal mixtures on radar-derived precipitation data. Meteorological Applications, 2014, 21, 743-754.	2.1	7
56	Differences between two climatological periods (2001–2010 vs. 1971–2000) and trend analysis of temperature and precipitation in Central Brazil. Theoretical and Applied Climatology, 2014, 116, 191-202.	2.8	19
57	Above-ground woody carbon sequestration measured from tree rings is coherent with net ecosystem productivity at five eddy-covariance sites. New Phytologist, 2014, 201, 1289-1303.	7.3	152
58	Spatial precipitation and evapotranspiration in the typical steppe of Inner Mongolia, China – A model based approach using MODIS data. Journal of Arid Environments, 2013, 88, 184-193.	2.4	10
59	Effects of measurement uncertainties of meteorological data on estimates of site water balance components. Journal of Hydrology, 2013, 492, 176-189.	5.4	24
60	A data-driven analysis of energy balance closure across FLUXNET research sites: The role of landscape scale heterogeneity. Agricultural and Forest Meteorology, 2013, 171-172, 137-152.	4.8	424
61	Rainfall Space-Time Organization and Orographic Control on Flash Flood Response: The Weisseritz Event of August 13, 2002. Journal of Hydrologic Engineering - ASCE, 2013, 18, 183-193.	1.9	18
62	How relevant is urban planning for the thermal comfort of pedestrians? Numerical case studies in two districts of the City of Dresden (Saxony/Germany). Meteorologische Zeitschrift, 2013, 22, 739-751.	1.0	28
63	Evapotranspiration amplifies European summer drought. Geophysical Research Letters, 2013, 40, 2071-2075.	4.0	264
64	Circulation pattern based parameterization of a multiplicative random cascade for disaggregation of observed and projected daily rainfall time series. Hydrology and Earth System Sciences, 2013, 17, 2487-2500.	4.9	18
65	Applying simple water-energy balance frameworks to predict the climate sensitivity of streamflow over the continental United States. Hydrology and Earth System Sciences, 2012, 16, 2531-2546.	4.9	53
66	Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. New Phytologist, 2012, 194, 775-783.	7.3	111
67	Effect of grazing intensity on evapotranspiration in the semiarid grasslands of Inner Mongolia, China. Journal of Arid Environments, 2012, 83, 15-24.	2.4	34
68	Climate and vegetation controls on the surface water balance: Synthesis of evapotranspiration measured across a global network of flux towers. Water Resources Research, 2012, 48, .	4.2	254
69	Carbon dioxide exchange processes over the grassland ecosystems in semiarid areas of China. Science China Earth Sciences, 2012, 55, 644-655.	5.2	16
70	Evaluation of water-energy balance frameworks to predict the sensitivity of streamflow to climate change. Hydrology and Earth System Sciences, 2012, 16, 1419-1433.	4.9	73
71	Applicability of satellite-based rainfall algorithms for estimating flood-related rainfall events in the mid-latitudes. Part II: temporal integration. Journal of Flood Risk Management, 2012, 5, 175-186.	3.3	1
72	Large-Eddy Simulation of Inhomogeneous Canopy Flows Using High Resolution Terrestrial Laser Scanning Data. Boundary-Layer Meteorology, 2012, 142, 223-243.	2.3	39

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73	Non-turbulent fluxes of carbon dioxide and sensible heat—A comparison of three forested sites. Agricultural and Forest Meteorology, 2011, 151, 692-708.	4.8	6
74	Relationships between canopy transpiration, atmospheric conditions and soil water availability—Analyses of long-term sap-flow measurements in an old Norway spruce forest at the Ore Mountains/Germany. Agricultural and Forest Meteorology, 2011, 151, 1023-1034.	4.8	86
75	Thermal adaptation of net ecosystem exchange. Biogeosciences, 2011, 8, 1453-1463.	3.3	30
76	Long term variability of the annual hydrological regime and sensitivity to temperature phase shifts in Saxony/Germany. Hydrology and Earth System Sciences, 2011, 15, 1819-1833.	4.9	27
77	Dissolved carbon leaching from soil is a crucial component of the net ecosystem carbon balance. Global Change Biology, 2011, 17, 1167-1185.	9.5	374
78	Applicability of satellite-based rainfall algorithms for estimating flood-related rainfall events in the mid-latitudes. Part I: spatial integration. Journal of Flood Risk Management, 2011, 4, 176-188.	3.3	2
79	Summer drought influence on CO2 and water fluxes of extensively managed grassland in Germany. Agriculture, Ecosystems and Environment, 2011, 141, 67-76.	5.3	58
80	Grazing effects on seasonal dynamics and interannual variabilities of spectral reflectance in semi-arid grassland in Inner Mongolia. Plant and Soil, 2011, 340, 169-180.	3.7	8
81	Spatiotemporal variability of grassland vegetation cover in a catchment in Inner Mongolia, China, derived from MODIS data products. Plant and Soil, 2011, 340, 181-198.	3.7	20
82	Characteristics of Momentum and Heat Transfer over Semiarid Grasslands with Different Grazing Intensities in Inner Mongolia, China. Atmospheric and Oceanic Science Letters, 2011, 4, 264-269.	1.3	1
83	Variability in carbon exchange of European croplands. Agriculture, Ecosystems and Environment, 2010, 139, 325-335.	5.3	71
84	The net biome production of full crop rotations in Europe. Agriculture, Ecosystems and Environment, 2010, 139, 336-345.	5.3	152
85	Management effects on European cropland respiration. Agriculture, Ecosystems and Environment, 2010, 139, 346-362.	5.3	58
86	Contrasting response of European forest and grassland energy exchange to heatwaves. Nature Geoscience, 2010, 3, 722-727.	12.9	491
87	Use of past precipitation data for regionalisation of hourly rainfall in the low mountain ranges of Saxony, Germany. Natural Hazards and Earth System Sciences, 2010, 10, 353-370.	3.6	9
88	Constructing wind profiles in forests from limited measurements of wind and vegetation structure. Agricultural and Forest Meteorology, 2010, 150, 724-735.	4.8	23
89	Direct advection measurements do not help to solve the night-time CO2 closure problem: Evidence from three different forests. Agricultural and Forest Meteorology, 2010, 150, 655-664.	4.8	126
90	Land use regulates carbon budgets in eastern Germany: From NEE to NBP. Agricultural and Forest Meteorology, 2010, 150, 1016-1025.	4.8	117

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91	An approach to combine radar and gauge based rainfall data under consideration of their qualities in low mountain ranges of Saxony. Natural Hazards and Earth System Sciences, 2010, 10, 429-446.	3.6	13
92	Comparison of satellite- and ground-based NDVI above different land-use types. Theoretical and Applied Climatology, 2009, 98, 171-186.	2.8	36
93	Available energy and energy balance closure at four coniferous forest sites across Europe. Theoretical and Applied Climatology, 2009, 98, 397-412.	2.8	58
94	Exceptional carbon uptake in European forests during the warm spring of 2007: a data–model analysis. Global Change Biology, 2009, 15, 1455-1474.	9.5	110
95	A novel approach in model-based mapping of soil water conditions at forest sites. Forest Ecology and Management, 2009, 258, 2163-2174.	3.2	45
96	Soil water content measurements deliver reliable estimates of water fluxes: A comparative study in a beech and a spruce stand in the Tharandt forest (Saxony, Germany). Agricultural and Forest Meteorology, 2009, 149, 1994-2006.	4.8	59
97	Another Simple Method of Spectral Correction to Obtain Robust Eddy-Covariance Results. Boundary-Layer Meteorology, 2008, 128, 403-422.	2.3	20
98	Surface characteristics of grasslands in Inner Mongolia as detected by micrometeorological measurements. International Journal of Biometeorology, 2008, 52, 563-574.	3.0	19
99	Effect of a coupled soil water–plant gas exchange on forest energy fluxes: Simulations with the coupled vegetation–boundary layer model HIRVAC. Ecological Modelling, 2008, 214, 75-82.	2.5	12
100	Comparison of horizontal and vertical advective CO_2 fluxes at three forest sites. Agricultural and Forest Meteorology, 2008, 148, 12-24.	4.8	136
101	Quality control of CarboEurope flux data – Part 1: Coupling footprint analyses with flux data quality assessment to evaluate sites in forest ecosystems. Biogeosciences, 2008, 5, 433-450.	3.3	192
102	Testing different decoupling coefficients with measurements and models of contrasting canopies and soil water conditions. Annales Geophysicae, 2008, 26, 1977-1992.	1.6	11
103	Deriving a light use efficiency model from eddy covariance flux data for predicting daily gross primary production across biomes. Agricultural and Forest Meteorology, 2007, 143, 189-207.	4.8	547
104	Evidence for soil water control on carbon and water dynamics in European forests during the extremely dry year: 2003. Agricultural and Forest Meteorology, 2007, 143, 123-145.	4.8	509
105	Characterizing ecosystem-atmosphere interactions from short to interannual time scales. Biogeosciences, 2007, 4, 743-758.	3.3	42
106	Linking flux network measurements to continental scale simulations: ecosystem carbon dioxide exchange capacity under non–water–stressed conditions. Global Change Biology, 2007, 13, 734-760.	9.5	81
107	CO_2 balance of boreal, temperate, and tropical forests derived from a global database. Global Change Biology, 2007, 13, 2509-2537.	9.5	863
108	A decade of carbon, water and energy flux measurements of an old spruce forest at the Anchor Station Tharandt. Tellus, Series B: Chemical and Physical Meteorology, 2007, 59, 387-396.	1.6	193

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109	Partitioning European grassland net ecosystem CO2 exchange into gross primary productivity and ecosystem respiration using light response function analysis. Agriculture, Ecosystems and Environment, 2007, 121, 93-120.	5.3	305
110	Estimating the components of the sensible heat budget of a tall forest canopy in complex terrain. Boundary-Layer Meteorology, 2007, 123, 99-120.	2.3	24
111	The energy balance experiment EBEX-2000. Part II: Intercomparison of eddy-covariance sensors and post-field data processing methods. Boundary-Layer Meteorology, 2007, 123, 29-54.	2.3	166
112	The Energy Balance Experiment EBEX-2000. Part I: overview and energy balance. Boundary-Layer Meteorology, 2007, 123, 1-28.	2.3	282
113	Towards a standardized processing of Net Ecosystem Exchange measured with eddy covariance technique: algorithms and uncertainty estimation. Biogeosciences, 2006, 3, 571-583.	3.3	1,206
114	Editorial: Progress in urban climate. Theoretical and Applied Climatology, 2006, 84, 1-2.	2.8	14
115	Special issue on biometeorology. Meteorologische Zeitschrift, 2005, 14, 103-106.	1.0	0
116	Traceflux: a small-scale tracer experiment at a forested site. International Journal of Environment and Pollution, 2005, 25, 25.	0.2	0
117	On the separation of net ecosystem exchange into assimilation and ecosystem respiration: review and improved algorithm. Global Change Biology, 2005, 11, 1424-1439.	9.5	2,778
118	Comparison of surface energy exchange models with eddy flux data in forest and grassland ecosystems of Germany. Ecological Modelling, 2005, 188, 174-216.	2.5	86
119	Quality analysis applied on eddy covariance measurements at complex forest sites using footprint modelling. Theoretical and Applied Climatology, 2005, 80, 121-141.	2.8	173
120	BUBBLE â€" an Urban Boundary Layer Meteorology Project. Theoretical and Applied Climatology, 2005, 81, 231-261.	2.8	326
121	GIS-based regionalisation of radiation, temperature and coupling measures in complex terrain for low mountain ranges. Meteorological Applications, 2005, 12, 33-42.	2.1	36
122	Statistical analysis of regional climate trends in Saxony, Germany. Climate Research, 2004, 27, 145-150.	1.1	40
123	Energy partitioning between latent and sensible heat flux during the warm season at FLUXNET sites. Water Resources Research, 2002, 38, 30-1-30-11.	4.2	169
124	Seasonality of ecosystem respiration and gross primary production as derived from FLUXNET measurements. Agricultural and Forest Meteorology, 2002, 113, 53-74.	4.8	606
125	Phase and amplitude of ecosystem carbon release and uptake potentials as derived from FLUXNET measurements. Agricultural and Forest Meteorology, 2002, 113, 75-95.	4.8	145
126	Energy balance closure at FLUXNET sites. Agricultural and Forest Meteorology, 2002, 113, 223-243.	4.8	1,877

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127	Gap filling strategies for defensible annual sums of net ecosystem exchange. Agricultural and Forest Meteorology, 2001, 107, 43-69.	4.8	1,579
128	Gap filling strategies for long term energy flux data sets. Agricultural and Forest Meteorology, 2001, 107, 71-77.	4.8	493
129	Respiration as the main determinant of carbon balance in European forests. Nature, 2000, 404, 861-865.	27.8	1,438
130	Der EinfluÃŸ der optischen Tiefe von Wolken auf die langwellige Ausstrahlung eines Fichtenbestandes fÃ¼r verschiedene Wolkentypen. Meteorologische Zeitschrift, 1999, 8, 22-27.	1.0	0
131	Estimating forest evapotranspiration at a non-ideal site. Agricultural and Forest Meteorology, 1992, 60, 17-32.	4.8	27