Christian Bernhofer

List of Publications by Year
in descending order

131	20,483	36303 51	13771 129
papers	citations	h-index	g-index

134	134	134	13801
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	Energy balance closure at FLUXNET sites. Agricultural and Forest Meteorology, 2002, 113, 223-243.	4.8	1,877
3	Gap filling strategies for defensible annual sums of net ecosystem exchange. Agricultural and Forest Meteorology, 2001, 107, 43-69.	4.8	1,579
4	Respiration as the main determinant of carbon balance in European forests. Nature, 2000, 404, 861-865.	27.8	1,438
5	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
6	CO₂ balance of boreal, temperate, and tropical forests derived from a global database. Global Change Biology, 2007, 13, 2509-2537.	9.5	863
7	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	5.3	646
8	Seasonality of ecosystem respiration and gross primary production as derived from FLUXNET measurements. Agricultural and Forest Meteorology, 2002, 113, 53-74.	4.8	606
9	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
10	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
11	Gap filling strategies for long term energy flux data sets. Agricultural and Forest Meteorology, 2001, 107, 71-77.	4.8	493
12	Contrasting response of European forest and grassland energy exchange to heatwaves. Nature Geoscience, 2010, 3, 722-727.	12.9	491
13	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
14	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
15	BUBBLE â€“ an Urban Boundary Layer Meteorology Project. Theoretical and Applied Climatology, 2005, 81, 231-261.	2.8	326
16	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
17	The Energy Balance Experiment EBEX-2000. Part I: overview and energy balance. Boundary-Layer Meteorology, 2007, 123, 1-28.	2.3	282
18	Evapotranspiration amplifies European summer drought. Geophysical Research Letters, 2013, 40, 2071-2075.	4.0	264

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19	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
20	ECOSTRESS: NASA's Next Generation Mission to Measure Evapotranspiration From the International Space Station. Water Resources Research, 2020, 56, e2019WR026058.	4.2	220
21	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
22	Quality control of CarboEurope flux data â€“ Part 1: Coupling footprint analyses with flux data quality assessment to evaluate sites in forest ecosystems. Biogeosciences, 2008, 5, 433-450.	3.3	192
23	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
24	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
25	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
26	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
27	The net biome production of full crop rotations in Europe. Agriculture, Ecosystems and Environment, 2010, 139, 336-345.	5.3	152
28	Aboveâ€ground woody carbon sequestration measured from tree rings is coherent with net ecosystem productivity at five eddyâ€covariance sites. New Phytologist, 2014, 201, 1289-1303.	7.3	152
29	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
30	Comparison of horizontal and vertical advective CO2 fluxes at three forest sites. Agricultural and Forest Meteorology, 2008, 148, 12-24.	4.8	136
31	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
32	Changes in temperature and precipitation extremes in Ethiopia, Kenya, and Tanzania. International Journal of Climatology, 2019, 39, 18-30.	3.5	124
33	Land use regulates carbon budgets in eastern Germany: From NEE to NBP. Agricultural and Forest Meteorology, 2010, 150, 1016-1025.	4.8	117
34	Thermal optimality of net ecosystem exchange of carbon dioxide and underlying mechanisms. New Phytologist, 2012, 194, 775-783.	7.3	111
35	Exceptional carbon uptake in European forests during the warm spring of 2007: a dataâ€“model analysis. Global Change Biology, 2009, 15, 1455-1474.	9.5	110
36	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

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37	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
38	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
39	A satellite-based hybrid algorithm to determine the Priestleyâ€“Taylor parameter for global terrestrial latent heat flux estimation across multiple biomes. Remote Sensing of Environment, 2015, 165, 216-233.	11.0	92
40	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
41	Relationships between canopy transpiration, atmospheric conditions and soil water availabilityâ€”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
42	Hydrologic regionalization using wavelet-based multiscale entropy method. Journal of Hydrology, 2016, 538, 22-32.	5.4	86
43	Linking flux network measurements to continental scale simulations: ecosystem carbon dioxide exchange capacity under nonâ€waterâ€stressed conditions. Global Change Biology, 2007, 13, 734-760.	9.5	81
44	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
45	Variability in carbon exchange of European croplands. Agriculture, Ecosystems and Environment, 2010, 139, 325-335.	5.3	71
46	Regional climate projections for impact assessment studies in East Africa. Environmental Research Letters, 2019, 14, 044031.	5.2	69
47	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
48	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
49	Available energy and energy balance closure at four coniferous forest sites across Europe. Theoretical and Applied Climatology, 2009, 98, 397-412.	2.8	58
50	Management effects on European cropland respiration. Agriculture, Ecosystems and Environment, 2010, 139, 346-362.	5.3	58
51	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
52	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
53	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
54	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

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55	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
56	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
57	ORCHIDEE-PEAT (revision 4596), a model for northern peatland CO₂, water, and energy fluxes on daily to annual scales. Geoscientific Model Development, 2018, 11, 497-519.	3.6	43
58	Characterizing ecosystem-atmosphere interactions from short to interannual time scales. Biogeosciences, 2007, 4, 743-758.	3.3	42
59	Statistical analysis of regional climate trends in Saxony, Germany. Climate Research, 2004, 27, 145-150.	1.1	40
60	Large-Eddy Simulation of Inhomogeneous Canopy Flows Using High Resolution Terrestrial Laser Scanning Data. Boundary-Layer Meteorology, 2012, 142, 223-243.	2.3	39
61	The METCRAX II Field Experiment: A Study of Downslope Windstorm-Type Flows in Arizonaâ€™s Meteor Crater. Bulletin of the American Meteorological Society, 2016, 97, 217-235.	3.3	39
62	Urban Rainfall Modification: Observational Climatology Over Berlin, Germany. Journal of Geophysical Research D: Atmospheres, 2019, 124, 731-746.	3.3	39
63	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
64	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
65	Comparison of satellite- and ground-based NDVI above different land-use types. Theoretical and Applied Climatology, 2009, 98, 171-186.	2.8	36
66	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
67	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
68	Effect of grazing intensity on evapotranspiration in the semiarid grasslands ofÂInner Mongolia, China. Journal of Arid Environments, 2012, 83, 15-24.	2.4	34
69	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
70	Trends in temperature and precipitation extremes in historical (1961â€“1990) and projected (2061â€“2090) periods in a data scarce mountain basin, northern Pakistan. Stochastic Environmental Research and Risk Assessment, 2020, 34, 1441-1455.	4.0	32
71	Thermal adaptation of net ecosystem exchange. Biogeosciences, 2011, 8, 1453-1463.	3.3	30
72	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

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73	Estimating forest evapotranspiration at a non-ideal site. Agricultural and Forest Meteorology, 1992, 60, 17-32.	4.8	27
74	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
75	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
76	Effects of measurement uncertainties of meteorological data on estimates of site water balance components. Journal of Hydrology, 2013, 492, 176-189.	5.4	24
77	Constructing wind profiles in forests from limited measurements of wind and vegetation structure. Agricultural and Forest Meteorology, 2010, 150, 724-735.	4.8	23
78	Uncovering the critical soil moisture thresholds of plant water stress for European ecosystems. Global Change Biology, 2022, 28, 2111-2123.	9.5	23
79	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
80	Another Simple Method of Spectral Correction to Obtain Robust Eddy-Covariance Results. Boundary-Layer Meteorology, 2008, 128, 403-422.	2.3	20
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	Introducing Gradient Boosting as a universal gap filling tool for meteorological time series. Meteorologische Zeitschrift, 2018, 27, 369-376.	1.0	20
83	Surface characteristics of grasslands in Inner Mongolia as detected by micrometeorological measurements. International Journal of Biometeorology, 2008, 52, 563-574.	3.0	19
84	Differences between two climatological periods (2001â€“2010 vs. 1971â€“2000) and trend analysis of temperature and precipitation in Central Brazil. Theoretical and Applied Climatology, 2014, 116, 191-202.	2.8	19
85	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
86	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
87	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
88	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
89	Carbon dioxide exchange processes over the grassland ecosystems in semiarid areas of China. Science China Earth Sciences, 2012, 55, 644-655.	5.2	16
90	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

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91	Editorial: Progress in urban climate. Theoretical and Applied Climatology, 2006, 84, 1-2.	2.8	14
92	Exploring Eddy-Covariance Measurements Using a Spatial Approach: The Eddy Matrix. Boundary-Layer Meteorology, 2016, 161, 1-17.	2.3	13
93	Relative importance of climatic variables, soil properties and plant traits to spatial variability in net CO2 exchange across global forests and grasslands. Agricultural and Forest Meteorology, 2021, 307, 108506.	4.8	13
94	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
95	Effect of a coupled soil waterâ€“plant gas exchange on forest energy fluxes: Simulations with the coupled vegetationâ€“boundary layer model HIRVAC. Ecological Modelling, 2008, 214, 75-82.	2.5	12
96	Assessment of GCM capabilities to simulate tropospheric stability on the Arabian Peninsula. International Journal of Climatology, 2015, 35, 1682-1696.	3.5	12
97	Testing different decoupling coefficients with measurements and models of contrasting canopies and soil water conditions. Annales Geophysicae, 2008, 26, 1977-1992.	1.6	11
98	Simulating the net ecosystem CO2 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
99	Global BROOK90 R Package: An Automatic Framework to Simulate the Water Balance at Any Location. Water (Switzerland), 2020, 12, 2037.	2.7	11
100	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
101	Spatial precipitation and evapotranspiration in the typical steppe of Inner Mongolia, China â€“ A model based approach using MODIS data. Journal of Arid Environments, 2013, 88, 184-193.	2.4	10
102	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
103	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
104	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
105	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
106	A method to adapt radar-derived precipitation fields for climatological applications. Meteorological Applications, 2015, 22, 636-649.	2.1	9
107	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
108	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

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109	Extreme rainfall indices in Distrito Federal, Brazil: Trends and links with El NiÃ±o southern oscillation and Maddenâ€“Julian oscillation. International Journal of Climatology, 2018, 38, 4550-4567.	3.5	8
110	Comparison of different approaches to fit log-normal mixtures on radar-derived precipitation data. Meteorological Applications, 2014, 21, 743-754.	2.1	7
111	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
112	Winter respiratory C losses provide explanatory power for net ecosystem productivity. Journal of Geophysical Research G: Biogeosciences, 2017, 122, 243-260.	3.0	7
113	Non-turbulent fluxes of carbon dioxide and sensible heatâ€”A comparison of three forested sites. Agricultural and Forest Meteorology, 2011, 151, 692-708.	4.8	6
114	The TurbEFA Field Experimentâ€”Measuring the Influence of a Forest Clearing on the Turbulent Wind Field. Boundary-Layer Meteorology, 2016, 160, 397-423.	2.3	6
115	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
116	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
117	Multivariate non-parametric Euclidean distance model for hourly disaggregation of daily climate data. Theoretical and Applied Climatology, 2021, 143, 241-265.	2.8	4
118	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
119	Energy balance closure and advective fluxes at ADVEX sites. Theoretical and Applied Climatology, 2021, 143, 761-779.	2.8	3
120	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
121	Assessment of Regional and Historical Climate Records for a Water Budget Approach in Eastern Colombia. Water (Switzerland), 2020, 12, 42.	2.7	2
122	Assessment of TOPKAPI-X Applicability for Flood Events Simulation in Two Small Catchments in Saxony. Hydrology, 2021, 8, 109.	3.0	2
123	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
124	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
125	Applicability of satelliteâ€based rainfall algorithms for estimating floodâ€related rainfall events in the midâ€latitudes. Part <scp>II</scp>: temporal integration. Journal of Flood Risk Management, 2012, 5, 175-186.	3.3	1
126	Pseudo-Spatially-Distributed Modeling of Water Balance Components in the Free State of Saxony. Hydrology, 2020, 7, 84.	3.0	1

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127	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
128	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
129	Special issue on biometeorology. Meteorologische Zeitschrift, 2005, 14, 103-106.	1.0	0
130	Traceflux: a small-scale tracer experiment at a forested site. International Journal of Environment and Pollution, 2005, 25, 25.	0.2	0
131	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