

# Wilfried Brutsaert

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7972674/publications.pdf>

Version: 2024-02-01

104  
papers

11,145  
citations

44069

48  
h-index

45317

90  
g-index

106  
all docs

106  
docs citations

106  
times ranked

6575  
citing authors

#	ARTICLE	IF	CITATIONS
1	Evaporation into the Atmosphere. , 1982, , .		1,823
2	On a derivable formula for longâ€wave radiation from clear skies. Water Resources Research, 1975, 11, 742-744.	4.2	785
3	Regionalized drought flow hydrographs from a mature glaciated plateau. Water Resources Research, 1977, 13, 637-643.	4.2	560
4	Hydrologic cycle explains the evaporation paradox. Nature, 1998, 396, 30-30.	27.8	525
5	An advectionâ€aridity approach to estimate actual regional evapotranspiration. Water Resources Research, 1979, 15, 443-450.	4.2	491
6	PROBABILITY LAWS FOR PORE-SIZE DISTRIBUTIONS. Soil Science, 1966, 101, 85-92.	0.9	228
7	Application of selfâ€preservation in the diurnal evolution of the surface energy budget to determine daily evaporation. Journal of Geophysical Research, 1992, 97, 18377-18382.	3.3	219
8	A theory for local evaporation (or heat transfer) from rough and smooth surfaces at ground level. Water Resources Research, 1975, 11, 543-550.	4.2	213
9	Effective water table depth to describe initial conditions prior to storm rainfall in humid regions. Water Resources Research, 1993, 29, 427-434.	4.2	200
10	The unit response of groundwater outflow from a hillslope. Water Resources Research, 1994, 30, 2759-2763.	4.2	180
11	Basin-scale geohydrologic drought flow features of riparian aquifers in the Southern Great Plains. Water Resources Research, 1998, 34, 233-240.	4.2	179
12	Longâ€term groundwater storage trends estimated from streamflow records: Climatic perspective. Water Resources Research, 2008, 44, .	4.2	165
13	Flux-profile Relationships for Wind Speed and Temperature in the Stable Atmospheric Boundary Layer. Boundary-Layer Meteorology, 2005, 114, 519-538.	2.3	156
14	The Roughness Length for Water Vapor Sensible Heat, and Other Scalars. Journals of the Atmospheric Sciences, 1975, 32, 2028-2031.	1.7	154
15	Daytime evaporation and the self-preservation of the evaporative fraction and the Bowen ratio. Journal of Hydrology, 1996, 178, 241-255.	5.4	152
16	A generalized complementary principle with physical constraints for landâ€surface evaporation. Water Resources Research, 2015, 51, 8087-8093.	4.2	150
17	Daily evaporation over a region from lower boundary layer profiles measured with radiosondes. Water Resources Research, 1991, 27, 747-752.	4.2	148
18	Aspects of bulk atmospheric boundary layer similarity under free-convective conditions. Reviews of Geophysics, 1999, 37, 439-451.	23.0	143

#	ARTICLE	IF	CITATIONS
19	The propagation of elastic waves in unconsolidated unsaturated granular mediums. <i>Journal of Geophysical Research</i> , 1964, 69, 243-257.	3.3	136
20	Complementary relationship between daily evaporation in the environment and pan evaporation. <i>Water Resources Research</i> , 2006, 42, .	4.2	135
21	Recession characteristics of groundwater outflow and base flow from mountainous watersheds. <i>Water Resources Research</i> , 1988, 24, 1651-1658.	4.2	131
22	Indications of increasing land surface evaporation during the second half of the 20th century. <i>Geophysical Research Letters</i> , 2006, 33, .	4.0	105
23	Regional Surface Fluxes From Remotely Sensed Skin Temperature and Lower Boundary Layer Measurements. <i>Water Resources Research</i> , 1990, 26, 2937-2944.	4.2	104
24	Desorption and the two Stages of Drying of Natural Tallgrass Prairie. <i>Water Resources Research</i> , 1995, 31, 1305-1313.	4.2	100
25	Effect of Vegetation Density on the Parameterization of Scalar Roughness to Estimate Spatially Distributed Sensible Heat Fluxes. <i>Water Resources Research</i> , 1996, 32, 645-652.	4.2	92
26	Land-surface water vapor and sensible heat flux: Spatial variability, homogeneity, and measurement scales. <i>Water Resources Research</i> , 1998, 34, 2433-2442.	4.2	92
27	Satellite-Sensed Distribution and Spatial Patterns of Vegetation Parameters over a Tallgrass Prairie. <i>Journals of the Atmospheric Sciences</i> , 1998, 55, 1225-1238.	1.7	88
28	Stability correction functions for the mean wind speed and temperature in the unstable surface layer. <i>Geophysical Research Letters</i> , 1992, 19, 469-472.	4.0	84
29	Cloud effect in the estimation of instantaneous downward longwave radiation. <i>Water Resources Research</i> , 1993, 29, 599-605.	4.2	83
30	A comparison of several evaporation equations. <i>Water Resources Research</i> , 1992, 28, 951-954.	4.2	72
31	A capillarity correction for free surface flow of groundwater. <i>Water Resources Research</i> , 1987, 23, 805-808.	4.2	71
32	Parameterization of Surface Heat Fluxes above Forest with Satellite Thermal Sensing and Boundary-Layer Soundings. <i>Journal of Applied Meteorology and Climatology</i> , 1993, 32, 909-917.	1.7	68
33	The concise formulation of diffusive sorption of water in a dry soil. <i>Water Resources Research</i> , 1976, 12, 1118-1124.	4.2	66
34	Regional roughness of the landes forest and surface shear stress under neutral conditions. <i>Boundary-Layer Meteorology</i> , 1989, 48, 69-81.	2.3	65
35	Groundwater storage trends in the Loess Plateau of China estimated from streamflow records. <i>Journal of Hydrology</i> , 2015, 530, 281-290.	5.4	62
36	Wind profile constants in a neutral atmospheric boundary layer over complex terrain. <i>Boundary-Layer Meteorology</i> , 1986, 34, 35-54.	2.3	61

#	ARTICLE	IF	CITATIONS
37	Regional evaporation estimates in the eastern monsoon region of China: Assessment of a nonlinear formulation of the complementary principle. <i>Water Resources Research</i> , 2016, 52, 9511-9521.	4.2	60
38	Evaporation and cooling of a lake under unstable atmospheric conditions. <i>Water Resources Research</i> , 1973, 9, 1242-1257.	4.2	57
39	The influence of basin morphology on groundwater outflow. <i>Water Resources Research</i> , 1988, 24, 1645-1650.	4.2	57
40	Catchment-scale evaporation and the atmospheric boundary layer. <i>Water Resources Research</i> , 1986, 22, 39S.	4.2	56
41	Estimation of land surface evaporation using a generalized nonlinear complementary relationship. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 1475-1487.	3.3	56
42	Regional surface fluxes from satellite-derived surface temperatures (AVHRR) and radiosonde profiles. <i>Boundary-Layer Meteorology</i> , 1992, 58, 355-366.	2.3	55
43	The velocity of sound in soils near the surface as a function of the moisture content. <i>Journal of Geophysical Research</i> , 1964, 69, 643-652.	3.3	53
44	Vertical infiltration in dry soil. <i>Water Resources Research</i> , 1977, 13, 363-368.	4.2	53
45	Nonlinear advection-aridity method for landscape evaporation and its application during the growing season in the southern Loess Plateau of the Yellow River basin. <i>Water Resources Research</i> , 2017, 53, 270-282.	4.2	53
46	The unstable surface layer above forest: Regional evaporation and heat flux. <i>Water Resources Research</i> , 1992, 28, 3129-3134.	4.2	52
47	On the Use of the Term "Evapotranspiration". <i>Water Resources Research</i> , 2020, 56, e2020WR028055.	4.2	51
48	Regional shear stress of broken forest from radiosonde wind profiles in the unstable surface layer. <i>Boundary-Layer Meteorology</i> , 1993, 64, 355-368.	2.3	49
49	The determination of permafrost thawing trends from long-term streamflow measurements with an application in eastern Siberia. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	49
50	Spatial Distribution of Global Landscape Evaporation in the Early Twenty-First Century by Means of a Generalized Complementary Approach. <i>Journal of Hydrometeorology</i> , 2020, 21, 287-298.	1.9	49
51	Diurnal Variation of Surface Fluxes During Thorough Drying (or Severe Drought) of Natural Prairie. <i>Water Resources Research</i> , 1996, 32, 2013-2019.	4.2	48
52	Measurement of groundwater recharge on eastern Long Island, New York, U.S.A.. <i>Journal of Hydrology</i> , 1985, 79, 145-169.	5.4	47
53	The extent of the unstable Monin-Obukhov layer for temperature and humidity above complex hilly grassland. <i>Boundary-Layer Meteorology</i> , 1990, 51, 383-400.	2.3	47
54	Similarity of scalars under stable conditions. <i>Boundary-Layer Meteorology</i> , 1996, 80, 355-373.	2.3	47

#	ARTICLE	IF	CITATIONS
55	Pathology of Monin-Obukhov similarity in the stable boundary layer. <i>Journal of Geophysical Research</i> , 2005, 110, n/a-n/a.	3.3	47
56	Estimation of urban sensible heat flux using a dense wireless network of observations. <i>Environmental Fluid Mechanics</i> , 2009, 9, 635-653.	1.6	47
57	Turbulence variance characteristics of temperature and humidity in the unstable atmospheric surface layer above a variable pine forest. <i>Water Resources Research</i> , 1999, 35, 515-521.	4.2	46
58	Investigation of a Generalized Nonlinear Form of the Complementary Principle for Evaporation Estimation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 3933-3942.	3.3	46
59	Comments on Surface Roughness Parameters and the Height of Dense Vegetation. <i>Journal of the Meteorological Society of Japan</i> , 1975, 53, 96-98.	1.8	45
60	Comparison of land surface temperatures derived from satellite observations with ground truth during FIFE. <i>International Journal of Remote Sensing</i> , 1993, 14, 1659-1676.	2.9	45
61	Heat and Mass Transfer to and from Surfaces with Dense Vegetation or Similar Permeable Roughness. <i>Boundary-Layer Meteorology</i> , 1979, 16, 365-388.	2.3	44
62	Universal constants for scaling the exponential soil water diffusivity?. <i>Water Resources Research</i> , 1979, 15, 481-483.	4.2	42
63	Optimal Measurement Strategy for Surface Temperature to Determine Sensible Heat Flux From Anisothermal Vegetation. <i>Water Resources Research</i> , 1996, 32, 2129-2134.	4.2	42
64	A model for evaporation as a molecular diffusion process into a turbulent atmosphere. <i>Journal of Geophysical Research</i> , 1965, 70, 5017-5024.	3.3	41
65	Is Mongolia's groundwater increasing or decreasing? The case of the Kherlen River basin / Les eaux souterraines de Mongolie s'accroissent ou décroissent-elles? Cas du bassin versant la Rivière Kherlen. <i>Hydrological Sciences Journal</i> , 2008, 53, 1221-1229.	2.6	41
66	Daily evaporation from drying soil: Universal parameterization with similarity. <i>Water Resources Research</i> , 2014, 50, 3206-3215.	4.2	41
67	Long-term annual groundwater storage trends in Australian catchments. <i>Advances in Water Resources</i> , 2014, 74, 156-165.	3.8	41
68	Automated Selection of Pure Base Flows from Regular Daily Streamflow Data: Objective Algorithm. <i>Journal of Hydrologic Engineering - ASCE</i> , 2016, 21, .	1.9	40
69	Implications of a Type of Empirical Evaporation Formula for Lakes and Pans. <i>Water Resources Research</i> , 1970, 6, 1202-1208.	4.2	39
70	Annual drought flow and groundwater storage trends in the eastern half of the United States during the past two-third century. <i>Theoretical and Applied Climatology</i> , 2010, 100, 93-103.	2.8	37
71	Z-Less stratification under stable conditions. <i>Boundary-Layer Meteorology</i> , 1995, 75, 175-187.	2.3	36
72	Actual evapotranspiration over a summer period in the Hupsel catchment. <i>Journal of Hydrology</i> , 1978, 39, 139-157.	5.4	35

#	ARTICLE	IF	CITATIONS
73	Applicability of Effective Parameters for Unsteady Flow in Nonuniform Aquifers. <i>Water Resources Research</i> , 1985, 21, 183-198.	4.2	35
74	Diagnostics of land surface spatial variability and water vapor flux. <i>Journal of Geophysical Research</i> , 1995, 100, 25595.	3.3	35
75	A bulk similarity approach in the atmospheric boundary layer using radiometric skin temperature to determine regional surface fluxes. <i>Boundary-Layer Meteorology</i> , 1991, 55, 1-23.	2.3	34
76	Inflow Hydrographs from Large Unconfined Aquifers. <i>Journal of the Irrigation and Drainage Division, ASCE</i> , 105 (IR4), Proc Paper, 1965, 91, 21-38.	0.3	34
77	The stability functions in the bulk similarity formulation for the unstable boundary layer. <i>Boundary-Layer Meteorology</i> , 1992, 61, 65-80.	2.3	32
78	Viscoelastic aquifer model applied to subsidence due to pumping. <i>Water Resources Research</i> , 1977, 13, 597-604.	4.2	31
79	Use of pan evaporation to estimate terrestrial evaporation trends: The case of the Tibetan Plateau. <i>Water Resources Research</i> , 2013, 49, 3054-3058.	4.2	30
80	A concise parameterization of the hydraulic conductivity of unsaturated soils. <i>Advances in Water Resources</i> , 2000, 23, 811-815.	3.8	29
81	Variability of surface soil moisture at the watershed scale. <i>Water Resources Research</i> , 2004, 40, .	4.2	29
82	Estimation of wet surface evaporation from sensible heat flux measurements. <i>Water Resources Research</i> , 2009, 45, .	4.2	29
83	Regional surface fluxes under nonuniform soil moisture conditions during drying. <i>Water Resources Research</i> , 1992, 28, 1669-1674.	4.2	27
84	The applicability of planetary boundary layer theory to calculate regional evapotranspiration. <i>Water Resources Research</i> , 1976, 12, 852-858.	4.2	26
85	Some exact solutions for nonlinear desorptive diffusion. <i>Zeitschrift Fur Angewandte Mathematik Und Physik</i> , 1982, 33, 540-546.	1.4	25
86	Drying front in a sloping aquifer: Nonlinear effects. <i>Water Resources Research</i> , 2004, 40, .	4.2	24
87	Global land surface evaporation trend during the past half century: Corroboration by Clausius-Clapeyron scaling. <i>Advances in Water Resources</i> , 2017, 106, 3-5.	3.8	24
88	The Adaptability of an Exact Solution to Horizontal Infiltration. <i>Water Resources Research</i> , 1968, 4, 785-789.	4.2	23
89	Microscale structural aspects of vegetation density variability. <i>Journal of Hydrology</i> , 2003, 276, 128-136.	5.4	22
90	Evaluation of some practical methods of estimating evapotranspiration in arid climates at low latitudes. <i>Water Resources Research</i> , 1965, 1, 187-191.	4.2	21

#	ARTICLE	IF	CITATIONS
91	A nonlinear analysis of the relationship between rainfall and runoff for extreme floods. <i>Water Resources Research</i> , 1978, 14, 75-83.	4.2	20
92	The Effect of Chessboard Variability of the Surface Fluxes on the Aggregated Turbulence Fields in a Convective Atmospheric Surface Layer. <i>Boundary-Layer Meteorology</i> , 1999, 91, 37-50.	2.3	20
93	Inner Region Humidity Characteristics of the Neutral Boundary Layer Over Prairie Terrain. <i>Water Resources Research</i> , 1990, 26, 2931-2936.	4.2	17
94	Regional surface fluxes from remotely sensed skin temperature and lower boundary layer measurements. <i>Water Resources Research</i> , 1990, 26, 2937-2944.	4.2	17
95	Are the North American deserts expanding? Some climate signals from groundwater storage conditions. <i>Ecohydrology</i> , 2012, 5, 541-549.	2.4	15
96	Recent Low-Flow and Groundwater Storage Changes in Upland Watersheds of the Kanto Region, Japan. <i>Journal of Hydrologic Engineering - ASCE</i> , 2009, 14, 280-285.	1.9	14
97	Blending the Evaporation Precipitation Ratio With the Complementary Principle Function for the Prediction of Evaporation. <i>Water Resources Research</i> , 2021, 57, e2021WR029729.	4.2	14
98	Radiative Effects on Temperature in the Stable Surface Layer. <i>Boundary-Layer Meteorology</i> , 1998, 89, 141-159.	2.3	11
99	Mutual Consistency of Groundwater Storage Changes Derived From GRACE and From Baseflow Recessions in the Central Yangtze River Basin. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031467.	3.3	11
100	The daily mean zero-flux plane during soil-controlled evaporation: A Green's function approach. <i>Water Resources Research</i> , 2014, 50, 9405-9413.	4.2	9
101	Analysis of time compression approximations. <i>Water Resources Research</i> , 2011, 47, .	4.2	8
102	Hydrological and meteorological experimentation at the mesoscale. <i>Eos</i> , 1985, 66, 601.	0.1	6
103	Saph and Schoder and the Friction Law of Blasius. <i>Annual Review of Fluid Mechanics</i> , 2017, 49, 575-582.	25.0	5
104	Parameterization of Surface Heat Fluxes Above a Forest with Satellite Thermal Sensing. , 0, , .		0