

Wolfgang Durner

List of Publications by Year in descending order

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Version: 2024-02-01

88
papers

4,181
citations

126708

33
h-index

118652

62
g-index

104
all docs

104
docs citations

104
times ranked

3084
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydraulic conductivity estimation for soils with heterogeneous pore structure. <i>Water Resources Research</i> , 1994, 30, 211-223.	1.7	824
2	Simplified evaporation method for determining soil hydraulic properties. <i>Journal of Hydrology</i> , 2008, 356, 147-162.	2.3	248
3	Prediction of capillary hysteresis in a porous material using lattice-Boltzmann methods and comparison to experimental data and a morphological pore network model. <i>Advances in Water Resources</i> , 2008, 31, 1151-1173.	1.7	164
4	Evaporation Method for Measuring Unsaturated Hydraulic Properties of Soils: Extending the Measurement Range. <i>Soil Science Society of America Journal</i> , 2010, 74, 1071-1083.	1.2	164
5	Lateral solute mixing processes – A key for understanding field-scale transport of water and solutes. <i>Geoderma</i> , 1996, 70, 165-183.	2.3	128
6	The evaporation method: Extending the measurement range of soil hydraulic properties using the air-entry pressure of the ceramic cup. <i>Journal of Plant Nutrition and Soil Science</i> , 2010, 173, 563-572.	1.1	127
7	Closed-Form Expression for the Multi-Modal Unsaturated Conductivity Function. <i>Vadose Zone Journal</i> , 2006, 5, 121-124.	1.3	104
8	A simple model for describing hydraulic conductivity in unsaturated porous media accounting for film and capillary flow. <i>Water Resources Research</i> , 2008, 44, .	1.7	104
9	Revisiting the simplified evaporation method: Identification of hydraulic functions considering vapor, film and corner flow. <i>Journal of Hydrology</i> , 2015, 527, 531-542.	2.3	98
10	Water retention characteristics of soils over the whole moisture range: a comparison of laboratory methods. <i>European Journal of Soil Science</i> , 2013, 64, 814-821.	1.8	90
11	Comment on “Simple consistent models for water retention and hydraulic conductivity in the complete moisture range” by A. Peters. <i>Water Resources Research</i> , 2014, 50, 7530-7534.	1.7	87
12	Estimating Precipitation and Actual Evapotranspiration from Precision Lysimeter Measurements. <i>Procedia Environmental Sciences</i> , 2013, 19, 543-552.	1.3	80
13	The integral suspension pressure method (ISP) for precise particle size analysis by gravitational sedimentation. <i>Water Resources Research</i> , 2017, 53, 33-48.	1.7	79
14	Dynamic Nonequilibrium of Water Flow in Porous Media: A Review. <i>Vadose Zone Journal</i> , 2012, 11, vzj2011.0197.	1.3	76
15	Determination of Parameters for Bimodal Hydraulic Functions by Inverse Modeling. <i>Soil Science Society of America Journal</i> , 1998, 62, 874-880.	1.2	69
16	Lead removal from aqueous solutions by raw sawdust and magnesium pretreated biochar: Experimental investigations and numerical modelling. <i>Journal of Environmental Management</i> , 2016, 180, 439-449.	3.8	65
17	Extended multistep outflow method for the accurate determination of soil hydraulic properties near water saturation. <i>Water Resources Research</i> , 2011, 47, .	1.7	63
18	Does water repellency of pyrochars and hydrochars counter their positive effects on soil hydraulic properties?. <i>Geoderma</i> , 2015, 245-246, 31-39.	2.3	60

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19	Modeling Transient Water and Solute Transport in a Biporous Soil. <i>Water Resources Research</i> , 1996, 32, 819-829.	1.7	59
20	Biofilm effect on soil hydraulic properties: Experimental investigation using soil-grown real biofilm. <i>Water Resources Research</i> , 2016, 52, 5813-5828.	1.7	54
21	Free-form estimation of the unsaturated soil hydraulic properties by inverse modeling using global optimization. <i>Water Resources Research</i> , 2007, 43, .	1.7	53
22	Water retention properties of a sandy soil with superabsorbent polymers as affected by aging and water quality. <i>Journal of Plant Nutrition and Soil Science</i> , 2015, 178, 798-806.	1.1	52
23	Analysis of the Agreement of Soil Hydraulic Properties Obtained from Multistep Outflow and Evaporation Methods. <i>Vadose Zone Journal</i> , 2010, 9, 1080-1091.	1.3	49
24	Improved estimation of soil water retention characteristics from hydrostatic column experiments. <i>Water Resources Research</i> , 2006, 42, .	1.7	48
25	Unsaturated hydraulic properties of <i>Sphagnum</i> moss and peat reveal trimodal pore-size distributions. <i>Water Resources Research</i> , 2017, 53, 415-434.	1.7	45
26	Consistent parameter constraints for soil hydraulic functions. <i>Advances in Water Resources</i> , 2011, 34, 1352-1365.	1.7	44
27	Inverse modeling of dynamic nonequilibrium in water flow with an effective approach. <i>Water Resources Research</i> , 2012, 48, .	1.7	39
28	Effective hydraulic properties of layered soils at the lysimeter scale determined by inverse modelling. <i>European Journal of Soil Science</i> , 2007, 59, 071026202618002-???	1.8	38
29	Effect of soil water repellency on soil hydraulic properties estimated under dynamic conditions. <i>Journal of Hydrology</i> , 2013, 486, 175-186.	2.3	38
30	Inverse Estimation of the Unsaturated Soil Hydraulic Properties from Column Outflow Experiments Using Free-Form Parameterizations. <i>Vadose Zone Journal</i> , 2004, 3, 971-981.	1.3	37
31	Changes in the molecular composition of organic matter leached from an agricultural topsoil following addition of biomass-derived black carbon (biochar). <i>Organic Geochemistry</i> , 2014, 69, 52-60.	0.9	36
32	Towards an unbiased filter routine to determine precipitation and evapotranspiration from high precision lysimeter measurements. <i>Journal of Hydrology</i> , 2017, 549, 731-740.	2.3	35
33	Soil moisture and matric potential " an open field comparison of sensor systems. <i>Earth System Science Data</i> , 2020, 12, 683-697.	3.7	35
34	Effects of Bentonite, Hydrogel and Biochar Amendments on Soil Hydraulic Properties from Saturation to Oven Dryness. <i>Pedosphere</i> , 2019, 29, 598-607.	2.1	33
35	Multi-domain model for pore-size dependent transport of solutes in soils. <i>Geoderma</i> , 1996, 70, 281-297.	2.3	32
36	A Modular Framework for Modeling Unsaturated Soil Hydraulic Properties Over the Full Moisture Range. <i>Water Resources Research</i> , 2019, 55, 4994-5011.	1.7	32

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37	A comprehensive filtering scheme for high-resolution estimation of the water balance components from high-precision lysimeters. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 3405-3418.	1.9	30
38	Virtual Soils: Assessment of the Effects of Soil Structure on the Hydraulic Behavior of Cultivated Soils. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0174.	1.3	29
39	Influence of Stone Content on Soil Hydraulic Properties: Experimental Investigation and Test of Existing Model Concepts. <i>Vadose Zone Journal</i> , 2019, 18, 1-10.	1.3	28
40	Physically-based model of soil hydraulic properties accounting for variable contact angle and its effect on hysteresis. <i>Advances in Water Resources</i> , 2013, 59, 169-180.	1.7	27
41	Measurement and estimation of the soil water retention curve using the evaporation method and the pseudo continuous pedotransfer function. <i>Journal of Hydrology</i> , 2018, 563, 251-259.	2.3	27
42	Combined Transient Method for Determining Soil Hydraulic Properties in a Wide Pressure Head Range. <i>Soil Science Society of America Journal</i> , 2011, 75, 1681-1693.	1.2	26
43	Inverse Estimation of Soil Hydraulic and Root Distribution Parameters from Lysimeter Data. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0169.	1.3	26
44	Improving prediction of hydraulic conductivity by constraining capillary bundle models to a maximum pore size. <i>Advances in Water Resources</i> , 2015, 85, 86-92.	1.7	26
45	3.6.2. Inverse Methods. <i>Soil Science Society of America Book Series</i> , 0, , 963-1008.	0.3	26
46	From the pore scale to the lab scale: 3-D lab experiment and numerical simulation of drainage in heterogeneous porous media. <i>Advances in Water Resources</i> , 2008, 31, 1253-1268.	1.7	25
47	Spatial variability of arsenic and chromium in the soil water at a former wood preserving site. <i>Journal of Contaminant Hydrology</i> , 2006, 85, 159-178.	1.6	23
48	A pore-size classification for peat bogs derived from unsaturated hydraulic properties. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 6185-6200.	1.9	22
49	Spatial and temporal variability of water repellency in a sandy soil contaminated with tar oil and heavy metals. <i>Journal of Contaminant Hydrology</i> , 2006, 88, 249-268.	1.6	20
50	Virtual Soils: Moisture Measurements and Their Interpretation by Inverse Modeling. <i>Vadose Zone Journal</i> , 2013, 12, 1-12.	1.3	20
51	Determination of the Soil Water Retention Curve around the Wilting Point: Optimized Protocol for the Dewpoint Method. <i>Soil Science Society of America Journal</i> , 2019, 83, 288-299.	1.2	20
52	Large zero-tension plate lysimeters for soil water and solute collection in undisturbed soils. <i>Hydrology and Earth System Sciences</i> , 2009, 13, 1671-1683.	1.9	19
53	Transport of phthalate-esters in undisturbed and unsaturated soil columns. <i>Journal of Contaminant Hydrology</i> , 1991, 8, 111-133.	1.6	18
54	Simultaneous Estimation of Soil Hydraulic and Root Distribution Parameters from Lysimeter Data by Inverse Modeling. <i>Procedia Environmental Sciences</i> , 2013, 19, 564-573.	1.3	18

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55	Numerical test of the laboratory evaporation method using coupled water, vapor and heat flow modelling. <i>Journal of Hydrology</i> , 2019, 570, 574-583.	2.3	18
56	Modeling dynamic non-equilibrium water flow observations under various boundary conditions. <i>Journal of Hydrology</i> , 2015, 529, 1851-1858.	2.3	17
57	The improved integral suspension pressure method (ISP+) for precise particle size analysis of soil and sedimentary materials. <i>Soil and Tillage Research</i> , 2021, 213, 105086.	2.6	17
58	Studying Unimodal, Bimodal, PDI and Bimodal-PDI Variants of Multiple Soil Water Retention Models: I. Direct Model Fit Using the Extended Evaporation and Dewpoint Methods. <i>Water (Switzerland)</i> , 2020, 12, 900.	1.2	16
59	A Simple Model to Predict Hydraulic Conductivity in Medium to Dry Soil From the Water Retention Curve. <i>Water Resources Research</i> , 2021, 57, e2020WR029211.	1.7	16
60	Closed-Form Model for Hydraulic Properties Based on Angular Pores with Lognormal Size Distribution. <i>Vadose Zone Journal</i> , 2015, 14, 1-7.	1.3	15
61	Modified Feddes type stress reduction function for modeling root water uptake: Accounting for limited aeration and low water potential. <i>Agricultural Water Management</i> , 2017, 185, 126-136.	2.4	14
62	Simulation of chromium transport in the unsaturated zone for predicting contaminant entries into the groundwater. <i>Journal of Plant Nutrition and Soil Science</i> , 2004, 167, 284-292.	1.1	13
63	Free-Form estimation of soil hydraulic properties using Wind's method. <i>European Journal of Soil Science</i> , 2008, 59, 1228-1240.	1.8	13
64	Multiple batch extraction test to estimate contaminant release parameters using a Bayesian approach. <i>Journal of Contaminant Hydrology</i> , 2008, 95, 168-182.	1.6	13
65	Comparing Methods for Measuring Water Retention of Peat Near Permanent Wilting Point. <i>Soil Science Society of America Journal</i> , 2018, 82, 601-605.	1.2	11
66	Capillary, Film, and Vapor Flow in Transient Bare Soil Evaporation (1): Identifiability Analysis of Hydraulic Conductivity in the Medium to Dry Moisture Range. <i>Water Resources Research</i> , 2021, 57, e2020WR028513.	1.7	11
67	Assessing Contaminant Mobilization from Waste Materials: Application of Bayesian Parameter Estimation to Batch Extraction Tests at Varying Liquid-to-Solid Ratios. <i>Environmental Science & Technology</i> , 2008, 42, 3717-3723.	4.6	9
68	Relationships between soil hydraulic parameters and induced polarization spectra. <i>Near Surface Geophysics</i> , 2016, 14, 23-37.	0.6	9
69	Prediction of capillary air-liquid interfacial area vs. saturation function from relationship between capillary pressure and water saturation. <i>Advances in Water Resources</i> , 2016, 97, 219-223.	1.7	9
70	Developing Pseudo Continuous Pedotransfer Functions for International Soils Measured with the Evaporation Method and the HYPROP System: I. The Soil Water Retention Curve. <i>Water (Switzerland)</i> , 2020, 12, 3425.	1.2	9
71	Studying Unimodal, Bimodal, PDI and Bimodal-PDI Variants of Multiple Soil Water Retention Models: II. Evaluation of Parametric Pedotransfer Functions Against Direct Fits. <i>Water (Switzerland)</i> , 2020, 12, 896.	1.2	9
72	Measuring near-saturated hydraulic conductivity of soils by quasi-unitary gradient percolation ² . Application of the methodology. <i>Journal of Plant Nutrition and Soil Science</i> , 2019, 182, 535-540.	1.1	8

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73	Capillary, Film, and Vapor Flow in Transient Bare Soil Evaporation (2): Experimental Identification of Hydraulic Conductivity in the Medium to Dry Moisture Range. <i>Water Resources Research</i> , 2021, 57, e2020WR028514.	1.7	8
74	Reply to comment by N. Shokri and D. Or on "A simple model for describing hydraulic conductivity in unsaturated porous media accounting for film and capillary flow". <i>Water Resources Research</i> , 2010, 46, .	1.7	6
75	Temperature Dependence of Soil Hydraulic Properties: Transient Measurements and Modeling. <i>Soil Science Society of America Journal</i> , 2019, 83, 1628-1636.	1.2	6
76	Effective hydraulic conductivity of stony soils: General effective medium theory. <i>Advances in Water Resources</i> , 2020, 146, 103765.	1.7	6
77	The effect of temperature-induced soil water repellency on transient capillary pressure-water content relations during capillary rise. <i>European Journal of Soil Science</i> , 2014, 65, 369-376.	1.8	5
78	Robust Inverse Modeling of Growing Season Net Ecosystem Exchange in a Mountainous Peatland: Influence of Distributional Assumptions on Estimated Parameters and Total Carbon Fluxes. <i>Journal of Advances in Modeling Earth Systems</i> , 2018, 10, 1319-1336.	1.3	5
79	Measuring near-saturated hydraulic conductivity of soils by quasi unit-gradient percolation-1. Theory and numerical analysis. <i>Journal of Plant Nutrition and Soil Science</i> , 2019, 182, 524-534.	1.1	5
80	Local Solute Sinks and Sources Cause Erroneous Dispersion Fluxes in Transport Simulations with the Convection-Dispersion Equation. <i>Vadose Zone Journal</i> , 2019, 18, 190064.	1.3	5
81	Eddy covariance based surface-atmosphere exchange and crop coefficient determination in a mountainous peatland. <i>Ecohydrology</i> , 2019, 12, e2047.	1.1	5
82	Emerging Measurement Methods for Soil Hydrological Studies. <i>Springer Water</i> , 2016, , 345-363.	0.2	4
83	Estimating Freundlich isotherm parameters of heavy metals from multiple batch extraction tests using a Bayesian approach. <i>Geoderma</i> , 2012, 173-174, 42-49.	2.3	3
84	Hydraulic Properties and Non-equilibrium Water Flow in Soils. , 2014, , 403-434.		3
85	Developing Pseudo Continuous Pedotransfer Functions for International Soils Measured with the Evaporation Method and the HYPROP System: II. The Soil Hydraulic Conductivity Curve. <i>Water (Switzerland)</i> , 2021, 13, 878.	1.2	3
86	Effective hydraulic properties of 3D virtual stony soils identified by inverse modeling. <i>Soil</i> , 2022, 8, 99-112.	2.2	3
87	Innovative method for installing soil moisture probes in a large-scale undisturbed gravel lysimeter. <i>Vadose Zone Journal</i> , 2021, 20, e20106.	1.3	2
88	Advanced Soil Hydrological Studies in Different Scales for Sustainable Agriculture. <i>Agriculture and Agricultural Science Procedia</i> , 2016, 11, 14-19.	0.6	0