Wolfgang Durner

List of Publications by Year
in descending order

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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	Effective hydraulic properties of 3D virtual stony soils identified by inverse modeling. Soil, 2022, 8, 99-112.	2.2	3
2	Innovative method for installing soil moisture probes in a largeâ€scale undisturbed gravel lysimeter. Vadose Zone Journal, 2021, 20, e20106.	1.3	2
3	Developing Pseudo Continuous Pedotransfer Functions for International Soils Measured with the Evaporation Method and the HYPROP System: II. The Soil Hydraulic Conductivity Curve. Water (Switzerland), 2021, 13, 878.	1.2	3
4	A Simple Model to Predict Hydraulic Conductivity in Medium to Dry Soil From the Water Retention Curve. Water Resources Research, 2021, 57, e2020WR029211.	1.7	16
5	Capillary, Film, and Vapor Flow in Transient Bare Soil Evaporation (2): Experimental Identification of Hydraulic Conductivity in the Medium to Dry Moisture Range. Water Resources Research, 2021, 57, e2020WR028514.	1.7	8
6	Capillary, Film, and Vapor Flow in Transient Bare Soil Evaporation (1): Identifiability Analysis of Hydraulic Conductivity in the Medium to Dry Moisture Range. Water Resources Research, 2021, 57, e2020WR028513.	1.7	11
7	The improved integral suspension pressure method (ISP+) for precise particle size analysis of soil and sedimentary materials. Soil and Tillage Research, 2021, 213, 105086.	2.6	17
8	Developing Pseudo Continuous Pedotransfer Functions for International Soils Measured with the Evaporation Method and the HYPROP System: I. The Soil Water Retention Curve. Water (Switzerland), 2020, 12, 3425.	1.2	9
9	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. Water (Switzerland), 2020, 12, 900.	1.2	16
10	Studying Unimodal, Bimodal, PDI and Bimodal-PDI Variants of Multiple Soil Water Retention Models: II. Evaluation of Parametric Pedotransfer Functions Against Direct Fits. Water (Switzerland), 2020, 12, 896.	1.2	9
11	Soil moisture and matric potential â€“ an open field comparison of sensor systems. Earth System Science Data, 2020, 12, 683-697.	3.7	35
12	Effective hydraulic conductivity of stony soils: General effective medium theory. Advances in Water Resources, 2020, 146, 103765.	1.7	6
13	Temperature Dependence of Soil Hydraulic Properties: Transient Measurements and Modeling. Soil Science Society of America Journal, 2019, 83, 1628-1636.	1.2	6
14	Measuring nearâ€saturated hydraulic conductivity of soils by quasi unitâ€gradient percolationâ€”2. Application of the methodology. Journal of Plant Nutrition and Soil Science, 2019, 182, 535-540.	1.1	8
15	Measuring near-saturated hydraulic conductivity of soils by quasi unit-gradient percolation-1. Theory and numerical analysis. Journal of Plant Nutrition and Soil Science, 2019, 182, 524-534.	1.1	5
16	Determination of the Soil Water Retention Curve around the Wilting Point: Optimized Protocol for the Dewpoint Method. Soil Science Society of America Journal, 2019, 83, 288-299.	1.2	20
17	A Modular Framework for Modeling Unsaturated Soil Hydraulic Properties Over the Full Moisture Range. Water Resources Research, 2019, 55, 4994-5011.	1.7	32
18	Influence of Stone Content on Soil Hydraulic Properties: Experimental Investigation and Test of Existing Model Concepts. Vadose Zone Journal, 2019, 18, 1-10.	1.3	28

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19	Local Solute Sinks and Sources Cause Erroneous Dispersion Fluxes in Transport Simulations with the Convectionâ€“Dispersion Equation. Vadose Zone Journal, 2019, 18, 190064.	1.3	5
20	Eddy covariance based surfaceâ€“atmosphere exchange and crop coefficient determination in a mountainous peatland. Ecohydrology, 2019, 12, e2047.	1.1	5
21	Numerical test of the laboratory evaporation method using coupled water, vapor and heat flow modelling. Journal of Hydrology, 2019, 570, 574-583.	2.3	18
22	Effects of Bentonite, Hydrogel and Biochar Amendments on Soil Hydraulic Properties from Saturation to Oven Dryness. Pedosphere, 2019, 29, 598-607.	2.1	33
23	Comparing Methods for Measuring Water Retention of Peat Near Permanent Wilting Point. Soil Science Society of America Journal, 2018, 82, 601-605.	1.2	11
24	Robust Inverse Modeling of Growing Season Net Ecosystem Exchange in a Mountainous Peatland: Influence of Distributional Assumptions on Estimated Parameters and Total Carbon Fluxes. Journal of Advances in Modeling Earth Systems, 2018, 10, 1319-1336.	1.3	5
25	Measurement and estimation of the soil water retention curve using the evaporation method and the pseudo continuous pedotransfer function. Journal of Hydrology, 2018, 563, 251-259.	2.3	27
26	The integral suspension pressure method (<scp>ISP</scp>) for precise particleâ€size analysis by gravitational sedimentation. Water Resources Research, 2017, 53, 33-48.	1.7	79
27	Modified Feddes type stress reduction function for modeling root water uptake: Accounting for limited aeration and low water potential. Agricultural Water Management, 2017, 185, 126-136.	2.4	14
28	Towards an unbiased filter routine to determine precipitation and evapotranspiration from high precision lysimeter measurements. Journal of Hydrology, 2017, 549, 731-740.	2.3	35
29	Unsaturated hydraulic properties of Sphagnum moss and peat reveal trimodal poreâ€size distributions. Water Resources Research, 2017, 53, 415-434.	1.7	45
30	A pore-size classification for peat bogs derived from unsaturated hydraulic properties. Hydrology and Earth System Sciences, 2017, 21, 6185-6200.	1.9	22
31	Relationships between soil hydraulic parameters and induced polarization spectra. Near Surface Geophysics, 2016, 14, 23-37.	0.6	9
32	Advanced Soil Hydrological Studies in Different Scales for Sustainable Agriculture. Agriculture and Agricultural Science Procedia, 2016, 11, 14-19.	0.6	0
33	Prediction of capillary air-liquid interfacial area vs. saturation function from relationship between capillary pressure and water saturation. Advances in Water Resources, 2016, 97, 219-223.	1.7	9
34	Biofilm effect on soil hydraulic properties: Experimental investigation using soilâ€grown real biofilm. Water Resources Research, 2016, 52, 5813-5828.	1.7	54
35	Lead removal from aqueous solutions by raw sawdust and magnesium pretreated biochar: Experimental investigations and numerical modelling. Journal of Environmental Management, 2016, 180, 439-449.	3.8	65
36	Emerging Measurement Methods for Soil Hydrological Studies. Springer Water, 2016, , 345-363.	0.2	4

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37	Water retention properties of a sandy soil with superabsorbent polymers as affected by aging and water quality. Journal of Plant Nutrition and Soil Science, 2015, 178, 798-806.	1.1	52
38	A comprehensive filtering scheme for high-resolution estimation of the water balance components from high-precision lysimeters. Hydrology and Earth System Sciences, 2015, 19, 3405-3418.	1.9	30
39	Closedâ€Form Model for Hydraulic Properties Based on Angular Pores with Lognormal Size Distribution. Vadose Zone Journal, 2015, 14, 1-7.	1.3	15
40	Improving prediction of hydraulic conductivity by constraining capillary bundle models to a maximum pore size. Advances in Water Resources, 2015, 85, 86-92.	1.7	26
41	Does water repellency of pyrochars and hydrochars counter their positive effects on soil hydraulic properties?. Geoderma, 2015, 245-246, 31-39.	2.3	60
42	Revisiting the simplified evaporation method: Identification of hydraulic functions considering vapor, film and corner flow. Journal of Hydrology, 2015, 527, 531-542.	2.3	98
43	Modeling dynamic non-equilibrium water flow observations under various boundary conditions. Journal of Hydrology, 2015, 529, 1851-1858.	2.3	17
44	The effect of temperatureâ€induced soil water repellency on transient capillary pressureâ€“water content relations during capillary rise. European Journal of Soil Science, 2014, 65, 369-376.	1.8	5
45	Hydraulic Properties and Non-equilibrium Water Flow in Soils. , 2014, , 403-434.		3
46	Changes in the molecular composition of organic matter leached from an agricultural topsoil following addition of biomass-derived black carbon (biochar). Organic Geochemistry, 2014, 69, 52-60.	0.9	36
47	Comment on â€œSimple consistent models for water retention and hydraulic conductivity in the complete moisture rangeâ€• by A. Peters. Water Resources Research, 2014, 50, 7530-7534.	1.7	87
48	Estimating Precipitation and Actual Evapotranspiration from Precision Lysimeter Measurements. Procedia Environmental Sciences, 2013, 19, 543-552.	1.3	80
49	Simultaneous Estimation of Soil Hydraulic and Root Distribution Parameters from Lysimeter Data by Inverse Modeling. Procedia Environmental Sciences, 2013, 19, 564-573.	1.3	18
50	Effect of soil water repellency on soil hydraulic properties estimated under dynamic conditions. Journal of Hydrology, 2013, 486, 175-186.	2.3	38
51	Physically-based model of soil hydraulic properties accounting for variable contact angle and its effect on hysteresis. Advances in Water Resources, 2013, 59, 169-180.	1.7	27
52	Water retention characteristics of soils over the whole moisture range: a comparison of laboratory methods. European Journal of Soil Science, 2013, 64, 814-821.	1.8	90
53	Virtual Soils: Moisture Measurements and Their Interpretation by Inverse Modeling. Vadose Zone Journal, 2013, 12, 1-12.	1.3	20
54	Estimating Freundlich isotherm parameters of heavy metals from multiple batch extraction tests using a Bayesian approach. Geoderma, 2012, 173-174, 42-49.	2.3	3

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55	Dynamic Nonequilibrium of Water Flow in Porous Media: A Review. Vadose Zone Journal, 2012, 11, vzj2011.0197.	1.3	76
56	Inverse modeling of dynamic nonequilibrium in water flow with an effective approach. Water Resources Research, 2012, 48, .	1.7	39
57	Virtual Soils: Assessment of the Effects of Soil Structure on the Hydraulic Behavior of Cultivated Soils. Vadose Zone Journal, 2012, 11, vzj2011.0174.	1.3	29
58	Inverse Estimation of Soil Hydraulic and Root Distribution Parameters from Lysimeter Data. Vadose Zone Journal, 2012, 11, vzj2011.0169.	1.3	26
59	Extended multistep outflow method for the accurate determination of soil hydraulic properties near water saturation. Water Resources Research, 2011, 47, .	1.7	63
60	Consistent parameter constraints for soil hydraulic functions. Advances in Water Resources, 2011, 34, 1352-1365.	1.7	44
61	Combined Transient Method for Determining Soil Hydraulic Properties in a Wide Pressure Head Range. Soil Science Society of America Journal, 2011, 75, 1681-1693.	1.2	26
62	Analysis of the Agreement of Soil Hydraulic Properties Obtained from Multistepâ€Outflow and Evaporation Methods. Vadose Zone Journal, 2010, 9, 1080-1091.	1.3	49
63	Evaporation Method for Measuring Unsaturated Hydraulic Properties of Soils: Extending the Measurement Range. Soil Science Society of America Journal, 2010, 74, 1071-1083.	1.2	164
64	Reply to comment by N. Shokri and D. Or on â€œA simple model for describing hydraulic conductivity in unsaturated porous media accounting for film and capillary flowâ€• Water Resources Research, 2010, 46, .	1.7	6
65	The evaporation method: Extending the measurement range of soil hydraulic properties using the airâ€entry pressure of the ceramic cup. Journal of Plant Nutrition and Soil Science, 2010, 173, 563-572.	1.1	127
66	Large zero-tension plate lysimeters for soil water and solute collection in undisturbed soils. Hydrology and Earth System Sciences, 2009, 13, 1671-1683.	1.9	19
67	From the pore scale to the lab scale: 3-D lab experiment and numerical simulation of drainage in heterogeneous porous media. Advances in Water Resources, 2008, 31, 1253-1268.	1.7	25
68	Prediction of capillary hysteresis in a porous material using lattice-Boltzmann methods and comparison to experimental data and a morphological pore network model. Advances in Water Resources, 2008, 31, 1151-1173.	1.7	164
69	Freeâ€Form estimation of soil hydraulic properties using Windâ€™s method. European Journal of Soil Science, 2008, 59, 1228-1240.	1.8	13
70	Multiple batch extraction test to estimate contaminant release parameters using a Bayesian approach. Journal of Contaminant Hydrology, 2008, 95, 168-182.	1.6	13
71	Simplified evaporation method for determining soil hydraulic properties. Journal of Hydrology, 2008, 356, 147-162.	2.3	248
72	A simple model for describing hydraulic conductivity in unsaturated porous media accounting for film and capillary flow. Water Resources Research, 2008, 44, .	1.7	104

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73	Assessing Contaminant Mobilization from Waste Materials: Application of Bayesian Parameter Estimation to Batch Extraction Tests at Varying Liquid-to-Solid Ratios. Environmental Science & Technology, 2008, 42, 3717-3723.	4.6	9
74	Freeâ€form estimation of the unsaturated soil hydraulic properties by inverse modeling using global optimization. Water Resources Research, 2007, 43, .	1.7	53
75	Effective hydraulic properties of layered soils at the lysimeter scale determined by inverse modelling. European Journal of Soil Science, 2007, 59, 071026202618002-???.	1.8	38
76	Improved estimation of soil water retention characteristics from hydrostatic column experiments. Water Resources Research, 2006, 42, .	1.7	48
77	Closed-Form Expression for the Multi-Modal Unsaturated Conductivity Function. Vadose Zone Journal, 2006, 5, 121-124.	1.3	104
78	Spatial variability of arsenic and chromium in the soil water at a former wood preserving site. Journal of Contaminant Hydrology, 2006, 85, 159-178.	1.6	23
79	Spatial and temporal variability of water repellency in a sandy soil contaminated with tar oil and heavy metals. Journal of Contaminant Hydrology, 2006, 88, 249-268.	1.6	20
80	Inverse Estimation of the Unsaturated Soil Hydraulic Properties from Column Outflow Experiments Using Freeâ€Form Parameterizations. Vadose Zone Journal, 2004, 3, 971-981.	1.3	37
81	Simulation of chromium transport in the unsaturated zone for predicting contaminant entries into the groundwater. Journal of Plant Nutrition and Soil Science, 2004, 167, 284-292.	1.1	13
82	Determination of Parameters for Bimodal Hydraulic Functions by Inverse Modeling. Soil Science Society of America Journal, 1998, 62, 874-880.	1.2	69
83	Modeling Transient Water and Solute Transport in a Biporous Soil. Water Resources Research, 1996, 32, 819-829.	1.7	59
84	Lateral solute mixing processes â€" A key for understanding field-scale transport of water and solutes. Geoderma, 1996, 70, 165-183.	2.3	128
85	Multi-domain model for pore-size dependent transport of solutes in soils. Geoderma, 1996, 70, 281-297.	2.3	32
86	Hydraulic conductivity estimation for soils with heterogeneous pore structure. Water Resources Research, 1994, 30, 211-223.	1.7	824
87	Transport of phthalate-esters in undisturbed and unsaturated soil columns. Journal of Contaminant Hydrology, 1991, 8, 111-133.	1.6	18
88	3.6.2. Inverse Methods. Soil Science Society of America Book Series, 0, , 963-1008.	0.3	26