

Jan Vanderborght

List of Publications by Year in descending order

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226
papers

10,181
citations

47006

47
h-index

48315

88
g-index

270
all docs

270
docs citations

270
times ranked

8165
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigating Soil-Root Interactions with the Numerical Model R-SWMS. <i>Methods in Molecular Biology</i> , 2022, 2395, 259-283.	0.9	0
2	How to Define the Appropriate Spatial Resolution of Root Segments When Solving in Root System Hydraulic. <i>Methods in Molecular Biology</i> , 2022, 2395, 285-291.	0.9	1
3	Linking rhizosphere processes across scales: Opinion. <i>Plant and Soil</i> , 2022, 478, 5-42.	3.7	25
4	Parasite inversion for determining the coefficients and time-validity of Philip's two-term infiltration equation. <i>Vadose Zone Journal</i> , 2022, 21, .	2.2	6
5	Tropical Peatland Hydrology Simulated With a Global Land Surface Model. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	3.8	9
6	Root System Scale Models Significantly Overestimate Root Water Uptake at Drying Soil Conditions. <i>Frontiers in Plant Science</i> , 2022, 13, 798741.	3.6	8
7	Root hairs matter at field scale for maize shoot growth and nutrient uptake, but root trait plasticity is primarily triggered by texture and drought. <i>Plant and Soil</i> , 2022, 478, 119-141.	3.7	14
8	Detection of Tracer Plumes Using Full-Waveform Inversion of Time-Lapse Ground Penetrating Radar Data: A Numerical Study in a High-Resolution Aquifer Model. <i>Water Resources Research</i> , 2022, 58, .	4.2	10
9	Same soil, different climate: Crop model intercomparison on translocated lysimeters. <i>Vadose Zone Journal</i> , 2022, 21, .	2.2	4
10	On Infiltration and Infiltration Characteristic Times. <i>Water Resources Research</i> , 2022, 58, .	4.2	5
11	Development and Validation of a Deep Learning Based Automated Minirhizotron Image Analysis Pipeline. <i>Plant Phenomics</i> , 2022, 2022, .	5.9	14
12	Quantification of water stress induced within-field variability of carbon dioxide fluxes in a sugar beet stand. <i>Agricultural and Forest Meteorology</i> , 2021, 297, 108242.	4.8	6
13	Prediction of soil evaporation measured with weighable lysimeters using the FAO Penman-Monteith method in combination with Richards' equation. <i>Vadose Zone Journal</i> , 2021, 20, e20102.	2.2	10
14	Toward high-resolution agronomic soil information and management zones delineated by ground-based electromagnetic induction and aerial drone data. <i>Vadose Zone Journal</i> , 2021, 20, e20099.	2.2	10
15	Modeling the Impact of Rhizosphere Bulk Density and Mucilage Gradients on Root Water Uptake. <i>Frontiers in Agronomy</i> , 2021, 3, .	3.3	20
16	Mechanistic modeling of pesticide uptake with a 3D plant architecture model. <i>Environmental Science and Pollution Research</i> , 2021, 28, 55678-55689.	5.3	6
17	Root architecture development in stony soils. <i>Vadose Zone Journal</i> , 2021, 20, e20133.	2.2	12
18	Bayesian inference of root architectural model parameters from synthetic field data. <i>Plant and Soil</i> , 2021, 467, 67-89.	3.7	5

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19	From hydraulic root architecture models to macroscopic representations of root hydraulics in soil water flow and land surface models. <i>Hydrology and Earth System Sciences</i> , 2021, 25, 4835-4860.	4.9	14
20	Simulating rhizodeposition patterns around growing and exuding root systems. In <i>Silico Plants</i> , 2021, 3, .	1.9	11
21	Have land use and land cover change affected soil thickness and weathering degree in a subtropical region in Southern Brazil? Insights from applied mid-infrared spectroscopy. <i>Catena</i> , 2021, 207, 105698.	5.0	4
22	Tracing root-felt sodium concentrations under different transpiration rates and salinity levels. <i>Plant and Soil</i> , 2020, 447, 55-71.	3.7	10
23	Quantitative imaging of sodium concentrations in soil-root systems using magnetic resonance imaging (MRI). <i>Plant and Soil</i> , 2020, 454, 171-185.	3.7	7
24	The effect of the top soil layer on moisture and evaporation dynamics. <i>Vadose Zone Journal</i> , 2020, 19, e20049.	2.2	12
25	Soil hydraulic properties estimation from one-dimensional infiltration experiments using characteristic time concept. <i>Vadose Zone Journal</i> , 2020, 19, e20068.	2.2	17
26	Measuring vertical soil water content profiles by combining horizontal borehole and dispersive surface ground penetrating radar data. <i>Near Surface Geophysics</i> , 2020, 18, 275-294.	1.2	12
27	On the impact of increasing drought on the relationship between soil water content and evapotranspiration of a grassland. <i>Vadose Zone Journal</i> , 2020, 19, e20029.	2.2	17
28	A functional structural model of upland rice root systems reveals the importance of laterals and growing root tips for phosphate uptake from wet and dry soils. <i>Annals of Botany</i> , 2020, 126, 789-806.	2.9	28
29	CPlantBox, a whole-plant modelling framework for the simulation of water- and carbon-related processes. In <i>Silico Plants</i> , 2020, 2, .	1.9	37
30	Investigating Atrazine Concentrations in the Zwischenscholle Aquifer Using MODFLOW with the HYDRUS-1D Package and MT3DMS. <i>Water (Switzerland)</i> , 2020, 12, 1019.	2.7	12
31	Call for Participation: Collaborative Benchmarking of Functional-Structural Root Architecture Models. The Case of Root Water Uptake. <i>Frontiers in Plant Science</i> , 2020, 11, 316.	3.6	18
32	Responses of soil water storage and crop water use efficiency to changing climatic conditions: a lysimeter-based space-for-time approach. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 1211-1225.	4.9	22
33	Comparison of root water uptake models in simulating CO ₂ and H ₂ O fluxes and growth of wheat. <i>Hydrology and Earth System Sciences</i> , 2020, 24, 4943-4969.	4.9	15
34	Infiltration from the Pedon to Global Grid Scales: An Overview and Outlook for Land Surface Modeling. <i>Vadose Zone Journal</i> , 2019, 18, 1-53.	2.2	56
35	Scale-dependent parameterization of groundwater surface water interactions in a regional hydrogeological model. <i>Journal of Hydrology</i> , 2019, 576, 494-507.	5.4	6
36	Modeling the Impact of Biopores on Root Growth and Root Water Uptake. <i>Vadose Zone Journal</i> , 2019, 18, 1-20.	2.2	36

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37	Quantification and Prediction of Nighttime Evapotranspiration for Two Distinct Grassland Ecosystems. <i>Water Resources Research</i> , 2019, 55, 2961-2975.	4.2	38
38	Parameter sensitivity analysis of a root system architecture model based on virtual field sampling. <i>Plant and Soil</i> , 2019, 438, 101-126.	3.7	9
39	Functional structural root-system model validation using a soil MRI experiment. <i>Journal of Experimental Botany</i> , 2019, 70, 2797-2809.	4.8	22
40	Incorporating a root water uptake model based on the hydraulic architecture approach in terrestrial systems simulations. <i>Agricultural and Forest Meteorology</i> , 2019, 269-270, 28-45.	4.8	28
41	Monitoring Soil Water Content Using Time-lapse Horizontal Borehole GPR Data at the Field Plot Scale. <i>Vadose Zone Journal</i> , 2019, 18, 190044.	2.2	24
42	Connecting the dots between computational tools to analyse soil-root water relations. <i>Journal of Experimental Botany</i> , 2019, 70, 2345-2357.	4.8	22
43	Continuum multiscale model of root water and nutrient uptake from soil with explicit consideration of the 3D root architecture and the rhizosphere gradients. <i>Plant and Soil</i> , 2019, 439, 273-292.	3.7	35
44	Evaluation of Model Concepts to Describe Water Transport in Shallow Subsurface Soil and Across the Soil-Air Interface. <i>Transport in Porous Media</i> , 2019, 128, 945-976.	2.6	17
45	Measuring root system traits of wheat in 2D images to parameterize 3D root architecture models. <i>Plant and Soil</i> , 2018, 425, 457-477.	3.7	21
46	CRootBox: a structural-functional modelling framework for root systems. <i>Annals of Botany</i> , 2018, 121, 1033-1053.	2.9	123
47	Measuring and Modeling Hydraulic Lift of <i>Lolium multiflorum</i> Using Stable Water Isotopes. <i>Vadose Zone Journal</i> , 2018, 17, 1-15.	2.2	31
48	Reconstruction of Three-Dimensional Aquifer Heterogeneity from Two-Dimensional Geophysical Data. <i>Mathematical Geosciences</i> , 2018, 50, 53-75.	2.4	28
49	Correspondence of measured soil carbon fractions and RothC pools for equilibrium and non-equilibrium states. <i>Geoderma</i> , 2018, 314, 37-46.	5.1	17
50	Parameterization of Root Water Uptake Models Considering Dynamic Root Distributions and Water Uptake Compensation. <i>Vadose Zone Journal</i> , 2018, 17, 1-21.	2.2	47
51	Magnetic Resonance Monitoring and Numerical Modeling of Soil Moisture during Evaporation. <i>Vadose Zone Journal</i> , 2018, 17, 1-15.	2.2	7
52	Presentation of CPlantBox: a whole functional-structural plant model (root and shoot) coupled with a mechanistic resolution of carbon and water flows. , 2018, , .		1
53	Time-lapse horizontal borehole GPR measurements to investigate spatial and temporal soil-water content changes. , 2018, , .		0
54	Investigation of Kinetic Isotopic Fractionation of Water During Bare Soil Evaporation. <i>Water Resources Research</i> , 2018, 54, 6909-6928.	4.2	19

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55	Inverse Estimation of Soil Hydraulic and Transport Parameters of Layered Soils from Water Stable Isotope and Lysimeter Data. <i>Vadose Zone Journal</i> , 2018, 17, 1-19.	2.2	57
56	The Root Zone: Soil Physics and Beyond. <i>Vadose Zone Journal</i> , 2018, 17, 1-6.	2.2	15
57	Exploring Osmotic Stress and Differences between Soil–Root Interface and Bulk Salinities. <i>Vadose Zone Journal</i> , 2018, 17, 1-13.	2.2	13
58	Impacts of forest conversion and agriculture practices on water pathways in Southern Brazil. <i>Hydrological Processes</i> , 2018, 32, 2304-2317.	2.6	17
59	Root growth, water uptake, and sap flow of winter wheat in response to different soil water conditions. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 2449-2470.	4.9	44
60	Spatial variability of soil water content and soil electrical conductivity across scales derived from Electromagnetic Induction and Time Domain Reflectometry. <i>Geoderma</i> , 2018, 314, 160-174.	5.1	38
61	Time-lapse ground-penetrating radar full-waveform inversion to detect tracer plumes: A numerical study. , 2018, , .		2
62	Development and analysis of the Soil Water Infiltration Global database. <i>Earth System Science Data</i> , 2018, 10, 1237-1263.	9.9	85
63	Heat and water transport in soils and across the soil–atmosphere interface: 1. Theory and different model concepts. <i>Water Resources Research</i> , 2017, 53, 1057-1079.	4.2	67
64	Heat and water transport in soils and across the soil–atmosphere interface: 2. Numerical analysis. <i>Water Resources Research</i> , 2017, 53, 1080-1100.	4.2	37
65	High resolution aquifer characterization using crosshole GPR full-waveform tomography: Comparison with direct-push and tracer test data. <i>Water Resources Research</i> , 2017, 53, 49-72.	4.2	39
66	A new model for root growth in soil with macropores. <i>Plant and Soil</i> , 2017, 415, 99-116.	3.7	32
67	A hybrid analytical-numerical method for solving water flow equations in root hydraulic architectures. <i>Applied Mathematical Modelling</i> , 2017, 52, 648-663.	4.2	36
68	Pedotransfer Functions in Earth System Science: Challenges and Perspectives. <i>Reviews of Geophysics</i> , 2017, 55, 1199-1256.	23.0	316
69	Towards quantitative root hydraulic phenotyping: novel mathematical functions to calculate plant-scale hydraulic parameters from root system functional and structural traits. <i>Journal of Mathematical Biology</i> , 2017, 75, 1133-1170.	1.9	38
70	Quantitative mapping of solute accumulation in a soil–root system by magnetic resonance imaging. <i>Water Resources Research</i> , 2017, 53, 7469-7480.	4.2	13
71	Water movement through plant roots – exact solutions of the water flow equation in roots with linear or exponential piecewise hydraulic properties. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 6519-6540.	4.9	16
72	How to Control the Lysimeter Bottom Boundary to Investigate the Effect of Climate Change on Soil Processes?. <i>Vadose Zone Journal</i> , 2016, 15, 1-15.	2.2	46

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73	Construction of Minirhizotron Facilities for Investigating Root Zone Processes. <i>Vadose Zone Journal</i> , 2016, 15, 1-13.	2.2	43
74	Comparison of smoothness-constrained and geostatistically based cross-borehole electrical resistivity tomography for characterization of solute tracer plumes. <i>Water Science and Engineering</i> , 2016, 9, 274-286.	3.2	2
75	A new model for optimizing the water acquisition of root hydraulic architectures over full crop cycles. , 2016, , .		7
76	Modeling Soil Processes: Review, Key Challenges, and New Perspectives. <i>Vadose Zone Journal</i> , 2016, 15, 1-57.	2.2	445
77	Solute Transport in Heterogeneous Soil with Time-Dependent Boundary Conditions. <i>Vadose Zone Journal</i> , 2016, 15, 1-17.	2.2	18
78	Isotopic composition of plant water sources. <i>Nature</i> , 2016, 536, E1-E3.	27.8	21
79	TERENO-SOILCan: a lysimeter-network in Germany observing soil processes and plant diversity influenced by climate change. <i>Environmental Earth Sciences</i> , 2016, 75, 1.	2.7	73
80	Simulating the mobility of meteoric ¹⁰ Be in the landscape through a coupled soil-hillslope model (Be2D). <i>Earth and Planetary Science Letters</i> , 2016, 439, 143-157.	4.4	32
81	Predicting subgrid variability of soil water content from basic soil information. <i>Geophysical Research Letters</i> , 2015, 42, 789-796.	4.0	56
82	Soil Hydraulic Parameters of Bare Soil Plots with Different Soil Structure Inversely Derived from L _a and Brightness Temperatures. <i>Vadose Zone Journal</i> , 2015, 14, 1-23.	2.2	11
83	Monitoring and Modeling the Terrestrial System from Pores to Catchments: The Transregional Collaborative Research Center on Patterns in the Soil-Vegetation-Atmosphere System. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1765-1787.	3.3	80
84	Long-term and high-frequency non-destructive monitoring of water stable isotope profiles in an evaporating soil column. <i>Hydrology and Earth System Sciences</i> , 2015, 19, 4067-4080.	4.9	67
85	Unraveling the hydrodynamics of split root water uptake experiments using CT scanned root architectures and three dimensional flow simulations. <i>Frontiers in Plant Science</i> , 2015, 6, 370.	3.6	24
86	Transition of stage I to stage II evaporation regime in the topmost soil: High-resolution NMR imaging, profiling and numerical simulation. <i>Microporous and Mesoporous Materials</i> , 2015, 205, 3-6.	4.4	6
87	Simulating transpiration and leaf water relations in response to heterogeneous soil moisture and different stomatal control mechanisms. <i>Plant and Soil</i> , 2015, 394, 109-126.	3.7	15
88	Imaging and characterization of facies heterogeneity in an alluvial aquifer using GPR full-waveform inversion and cone penetration tests. <i>Journal of Hydrology</i> , 2015, 524, 680-695.	5.4	53
89	Combining ¹³ C measurements and ERT imaging: improving our understanding of competition at the crop-soil-hedge interface. <i>Plant and Soil</i> , 2015, 393, 1-20.	3.7	20
90	Soil hydrology: Recent methodological advances, challenges, and perspectives. <i>Water Resources Research</i> , 2015, 51, 2616-2633.	4.2	149

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91	Numerical calculation of soil water potential in an irrigated "conference" pear orchard. <i>Agricultural Water Management</i> , 2015, 148, 113-122.	5.6	8
92	Solute transport in aquifers with evolving scale heterogeneity. <i>Analele Stiintifice Ale Universitatii Ovidius Constanta, Seria Matematica</i> , 2015, 23, 167-186.	0.3	5
93	Horizontal soil water potential heterogeneity: simplifying approaches for crop water dynamics models. <i>Hydrology and Earth System Sciences</i> , 2014, 18, 1723-1743.	4.9	48
94	Estimation of the near surface soil water content during evaporation using air-launched ground-penetrating radar. <i>Near Surface Geophysics</i> , 2014, 12, 623-634.	1.2	12
95	Identifying the Transport Pathways of Dissolved Organic Carbon in Contrasting Catchments. <i>Vadose Zone Journal</i> , 2014, 13, 1-14.	2.2	21
96	Soil Hydraulic Parameters and Surface Soil Moisture of a Tilled Bare Soil Plot Inversely Derived from "Band Brightness Temperatures. <i>Vadose Zone Journal</i> , 2014, 13, 1-18.	2.2	21
97	Moisture profiles of the upper soil layer during evaporation monitored by NMR. <i>Water Resources Research</i> , 2014, 50, 5184-5195.	4.2	30
98	Dynamic aspects of soil water availability for isohydric plants: Focus on root hydraulic resistances. <i>Water Resources Research</i> , 2014, 50, 8891-8906.	4.2	70
99	Atrazine Soil Core Residue Analysis from an Agricultural Field 21 Years after Its Ban. <i>Journal of Environmental Quality</i> , 2014, 43, 1450-1459.	2.0	62
100	Linking transpiration reduction to rhizosphere salinity using a 3D coupled soil-plant model. <i>Plant and Soil</i> , 2014, 377, 277-293.	3.7	29
101	Reactive Transport of lomeprol during Stream-Groundwater Interactions. <i>Environmental Science & Technology</i> , 2014, 48, 199-207.	10.0	20
102	20 years of long-term atrazine monitoring in a shallow aquifer in western Germany. <i>Water Research</i> , 2014, 50, 294-306.	11.3	137
103	Modelling the impact of heterogeneous rootzone water distribution on the regulation of transpiration by hormone transport and/or hydraulic pressures. <i>Plant and Soil</i> , 2014, 384, 93-112.	3.7	34
104	Controls on dissolved organic carbon export through surface runoff from loamy agricultural soils. <i>Geoderma</i> , 2014, 226-227, 387-396.	5.1	37
105	On the spatio-temporal dynamics of soil moisture at the field scale. <i>Journal of Hydrology</i> , 2014, 516, 76-96.	5.4	369
106	Delineating spring recharge areas in a fractured sandstone aquifer (Luxembourg) based on pesticide mass balance. <i>Hydrogeology Journal</i> , 2013, 21, 799-812.	2.1	10
107	Can We Use Electrical Resistivity Tomography to Measure Root Zone Dynamics in Fields with Multiple Crops?. <i>Procedia Environmental Sciences</i> , 2013, 19, 403-410.	1.4	9
108	Nutrient acquisition from arable subsoils in temperate climates: A review. <i>Soil Biology and Biochemistry</i> , 2013, 57, 1003-1022.	8.8	239

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109	Visualization of transport pathways for organic compounds in undisturbed soil monoliths. <i>Geoderma</i> , 2013, 195-196, 70-78.	5.1	7
110	Brightness Temperature and Soil Moisture Validation at Different Scales During the SMOS Validation Campaign in the Rur and Erft Catchments, Germany. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2013, 51, 1728-1743.	6.3	61
111	European scenarios for exposure of soil organisms to pesticides. <i>Journal of Environmental Science and Health - Part B Pesticides, Food Contaminants, and Agricultural Wastes</i> , 2013, 48, 703-716.	1.5	12
112	Using the long-term memory effect of pesticide and metabolite soil residues to estimate field degradation half-life and test leaching predictions. <i>Geoderma</i> , 2013, 207-208, 15-24.	5.1	29
113	Noninvasive Monitoring of Soil Water Dynamics in Mixed Cropping Systems: A Case Study in Ratchaburi Province, Thailand. <i>Vadose Zone Journal</i> , 2013, 12, 1-12.	2.2	49
114	Combined Impact of Soil Heterogeneity and Vegetation Type on the Annual Water Balance at the Field Scale. <i>Vadose Zone Journal</i> , 2013, 12, 1-17.	2.2	14
115	Virtual Soils: Moisture Measurements and Their Interpretation by Inverse Modeling. <i>Vadose Zone Journal</i> , 2013, 12, 1-12.	2.2	20
116	WATER STRESS DETECTION IN A 'CONFERENCE' PEAR ORCHARD IN A TEMPERATE CLIMATE USING SAP FLOW MONITORING. <i>Acta Horticulturae</i> , 2013, , 425-432.	0.2	1
117	Root Water Uptake: From Threeâ€³Dimensional Biophysical Processes to Macroscopic Modeling Approaches. <i>Vadose Zone Journal</i> , 2013, 12, 1-16.	2.2	128
118	Effects of Near Surface Soil Moisture Profiles During Evaporation on Farâ€³Field Groundâ€³Penetrating Radar Data: A Numerical Study. <i>Vadose Zone Journal</i> , 2013, 12, 1-11.	2.2	18
119	Evaluating Experimental Design of ERT for Soil Moisture Monitoring in Contour Hedgerow Intercropping Systems. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0186.	2.2	30
120	Dynamics of Fluid Interfaces and Flow and Transport across Material Interfaces in Porous Media-Modeling and Observations. <i>Vadose Zone Journal</i> , 2012, 11, vzt2012.0105.	2.2	5
121	Parameterizing a Dynamic Architectural Model of the Root System of Spring Barley from Minirhizotron Data. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0179.	2.2	22
122	New improved algorithm for sky calibration of L-band radiometers JÜLBARA and ELBARA II. , 2012, , .		3
123	Hydraulic non-equilibrium during infiltration induced by structural connectivity. <i>Advances in Water Resources</i> , 2012, 44, 101-112.	3.8	20
124	Upward Transport in a Threeâ€³Dimensional Heterogeneous Laboratory Soil under Evaporation Conditions. <i>Vadose Zone Journal</i> , 2012, 11, vzt2011.0066.	2.2	18
125	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.	2.2	29
126	Effect of Root Water and Solute Uptake on Apparent Soil Dispersivity: A Simulation Study. <i>Vadose Zone Journal</i> , 2012, 11, vzt2012.0009.	2.2	29

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127	A simple three-dimensional macroscopic root water uptake model based on the hydraulic architecture approach. <i>Hydrology and Earth System Sciences</i> , 2012, 16, 2957-2971.	4.9	164
128	Efficient random walk particle tracking algorithm for advectiveâ€dispersive transport in media with discontinuous dispersion coefficients and water contents. <i>Water Resources Research</i> , 2011, 47, .	4.2	58
129	Near-surface solute redistribution during evaporation. <i>Geophysical Research Letters</i> , 2011, 38, n/a-n/a.	4.0	26
130	Do Lab-Derived Distribution Coefficient Values of Pesticides Match Distribution Coefficient Values Determined from Column and Field-Scale Experiments? A Critical Analysis of Relevant Literature. <i>Journal of Environmental Quality</i> , 2011, 40, 879-898.	2.0	29
131	Uncertainty in Pesticide Monitoring Using Suction Cups: Evidence from Numerical Simulations. <i>Vadose Zone Journal</i> , 2011, 10, 1287-1298.	2.2	8
132	Threeâ€Dimensional Electrical Resistivity Tomography to Monitor Root Zone Water Dynamics. <i>Vadose Zone Journal</i> , 2011, 10, 412-424.	2.2	102
133	Effect of pesticide fate parameters and their uncertainty on the selection of â€worstâ€caseâ€™ scenarios of pesticide leaching to groundwater. <i>Pest Management Science</i> , 2011, 67, 294-306.	3.4	18
134	Improving uncertainty analysis in kinetic evaluations using iteratively reweighted least squares. <i>Environmental Toxicology and Chemistry</i> , 2011, 30, 2363-2371.	4.3	7
135	Estimation of radiative transfer parameters for soil moisture retrieval from SMOS brightness temperatures - a synthetic 1D experiment with the Particle Filter. , 2011, , .		1
136	Closed loop brightness temperature data inversion for the retrieval of soil hydraulic properties. , 2011, , .		0
137	Radio brightness validation on different spatial scales during the SMOS validation campaign 2010 in the Rur catchment, Germany. , 2011, , .		4
138	Investigating Preferential Flow Processes in a Forest Soil Using Time Domain Reflectometry and Electrical Resistivity Tomography. <i>Vadose Zone Journal</i> , 2010, 9, 350-361.	2.2	42
139	Estimating Soil Hydraulic Properties from Infrared Measurements of Soil Surface Temperatures and TDR Data. <i>Vadose Zone Journal</i> , 2010, 9, 910-924.	2.2	35
140	Electromagnetic induction calibration using apparent electrical conductivity modelling based on electrical resistivity tomography. <i>Near Surface Geophysics</i> , 2010, 8, 553-561.	1.2	93
141	Fate of Two Herbicides in Zeroâ€Tension Lysimeters and in Field Soil. <i>Journal of Environmental Quality</i> , 2010, 39, 1451-1466.	2.0	11
142	Comparison of Heterogeneous Transport Processes Observed with Electrical Resistivity Tomography in Two Soils. <i>Vadose Zone Journal</i> , 2010, 9, 336-349.	2.2	49
143	Withinâ€Field Variability of Bare Soil Evaporation Derived from Eddy Covariance Measurements. <i>Vadose Zone Journal</i> , 2010, 9, 943-954.	2.2	22
144	Proof of concept of regional scale hydrologic simulations at hydrologic resolution utilizing massively parallel computer resources. <i>Water Resources Research</i> , 2010, 46, .	4.2	178

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145	Transformation and Sorption of the Veterinary Antibiotic Sulfadiazine in Two Soils: A Short-Term Batch Study. <i>Environmental Science & Technology</i> , 2010, 44, 4651-4657.	10.0	42
146	Multivariate conditional stochastic simulation of soil heterotrophic respiration at plot scale. <i>Geoderma</i> , 2010, 160, 74-82.	5.1	18
147	Imaging and characterization of solute transport during two tracer tests in a shallow aquifer using electrical resistivity tomography and multilevel groundwater samplers. <i>Water Resources Research</i> , 2010, 46, .	4.2	88
148	Investigating Preferential Flow Processes in a Forest Soil Using Time Domain Reflectometry and Electrical Resistivity Tomography. <i>Vadose Zone Journal</i> , 2010, 9, 350-361.	2.2	5
149	Noninvasive 3D Transport Characterization in a Sandy Soil Using ERT: 1. Investigating the Validity of ERT-derived Transport Parameters. <i>Vadose Zone Journal</i> , 2009, 8, 711-722.	2.2	40
150	Implementation of a Microscopic Soil-root Hydraulic Conductivity Drop Function in a Three-dimensional Soil-root Architecture Water Transfer Model. <i>Vadose Zone Journal</i> , 2009, 8, 783-792.	2.2	48
151	Noninvasive 3D Transport Characterization in a Sandy Soil Using ERT: 2. Transport Process Inference. <i>Vadose Zone Journal</i> , 2009, 8, 723-734.	2.2	28
152	Research at the Agrosphere Institute: From the Process Scale to the Catchment Scale. <i>Vadose Zone Journal</i> , 2009, 8, 664-669.	2.2	7
153	A grid refinement approach for a three-dimensional soil-root water transfer model. <i>Water Resources Research</i> , 2009, 45, .	4.2	21
154	Inverse Modeling of Pesticide Leaching in Lysimeters: Local versus Global and Sequential Single-objective versus Multiobjective Approaches. <i>Vadose Zone Journal</i> , 2009, 8, 793-804.	2.2	19
155	Solute Spreading under Transient Conditions in a Field Soil. <i>Vadose Zone Journal</i> , 2009, 8, 690-702.	2.2	6
156	Characterization and Understanding of Bare Soil Respiration Spatial Variability at Plot Scale. <i>Vadose Zone Journal</i> , 2009, 8, 762-771.	2.2	67
157	Estimating Dose Rates from Activated Groundwater at Accelerator Sites. <i>Nuclear Technology</i> , 2009, 168, 924-930.	1.2	0
158	Field study on colloid transport using fluorescent microspheres. <i>European Journal of Soil Science</i> , 2008, 59, 82-93.	3.9	33
159	FOSMEX: Forest Soil Moisture Experiments With Microwave Radiometry. <i>IEEE Transactions on Geoscience and Remote Sensing</i> , 2008, 46, 727-735.	6.3	75
160	On preconditioning for a parallel solution of the Richards equation. <i>Computers and Geosciences</i> , 2008, 34, 1958-1963.	4.2	12
161	Multiyear heterotrophic soil respiration: Evaluation of a coupled CO ₂ transport and carbon turnover model. <i>Ecological Modelling</i> , 2008, 214, 271-283.	2.5	64
162	Characterization of subsoil heterogeneity, estimation of grain size distribution and hydraulic conductivity at the Krauthausen test site using Cone Penetration Test. <i>Journal of Contaminant Hydrology</i> , 2008, 95, 57-75.	3.3	32

#	ARTICLE	IF	CITATIONS
163	Leaching surfaces to characterize transport in a heterogeneous aquifer: Comparison between flux concentrations, resident concentrations, and flux concentrations estimated from temporal moment analysis. <i>Water Resources Research</i> , 2008, 44, .	4.2	12
164	Effect of Local Soil Hydraulic Conductivity Drop Using a Three-Dimensional Root Water Uptake Model. <i>Vadose Zone Journal</i> , 2008, 7, 1089-1098.	2.2	48
165	On the value of soil moisture measurements in vadose zone hydrology: A review. <i>Water Resources Research</i> , 2008, 44, .	4.2	530
166	Comment on "Field observations of soil moisture variability across scales" by James S. Famiglietti et al.. <i>Water Resources Research</i> , 2008, 44, .	4.2	9
167	Use of a Three-Dimensional Detailed Modeling Approach for Predicting Root Water Uptake. <i>Vadose Zone Journal</i> , 2008, 7, 1079-1088.	2.2	320
168	Changes in Soil Water Content Resulting from <i>Ricinus</i> Root Uptake Monitored by Magnetic Resonance Imaging. <i>Vadose Zone Journal</i> , 2008, 7, 1010-1017.	2.2	76
169	Design and Testing of a Drop Counter for Use in Vadose Zone Water Samplers. <i>Vadose Zone Journal</i> , 2008, 7, 434-438.	2.2	4
170	Review of Dispersivities for Transport Modeling in Soils. <i>Vadose Zone Journal</i> , 2007, 6, 29-52.	2.2	246
171	Dissolved Organic Carbon Fluxes under Bare Soil. <i>Journal of Environmental Quality</i> , 2007, 36, 597-606.	2.0	40
172	Two-dimensional characterization of hydraulic heterogeneity by multiple pumping tests. <i>Water Resources Research</i> , 2007, 43, .	4.2	71
173	Explaining soil moisture variability as a function of mean soil moisture: A stochastic unsaturated flow perspective. <i>Geophysical Research Letters</i> , 2007, 34, .	4.0	177
174	PARSWMS: A Parallelized Model for Simulating Three-Dimensional Water Flow and Solute Transport in Variably Saturated Soils. <i>Vadose Zone Journal</i> , 2007, 6, 255-259.	2.2	32
175	Upscaling Hydraulic Properties and Soil Water Flow Processes in Heterogeneous Soils: A Review. <i>Vadose Zone Journal</i> , 2007, 6, 1-28.	2.2	215
176	Comment on "Root Water Extraction and Limiting Soil Hydraulic Conditions Estimated by Numerical Simulation" <i>Vadose Zone Journal</i> , 2007, 6, 524-526.	2.2	6
177	Numerical Analysis of Passive Capillary Wick Samplers prior to Field Installation. <i>Soil Science Society of America Journal</i> , 2007, 71, 35-42.	2.2	26
178	One-Dimensional Modeling of Transport in Soils with Depth-Dependent Dispersion, Sorption and Decay. <i>Vadose Zone Journal</i> , 2007, 6, 140-148.	2.2	20
179	Fluorescence macrophotography as a tool to visualise and quantify spatial distribution of deposited colloid tracers in porous media. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2007, 306, 118-125.	4.7	6
180	Measured microwave radiative transfer properties of a deciduous forest canopy. <i>Remote Sensing of Environment</i> , 2007, 109, 523-532.	11.0	67

#	ARTICLE	IF	CITATIONS
181	Prediction of velocity statistics in three-dimensional multi-Gaussian hydraulic conductivity fields. <i>Water Resources Research</i> , 2006, 42, .	4.2	20
182	Numerical investigations on ergodicity of solute transport in heterogeneous aquifers. <i>Water Resources Research</i> , 2006, 42, .	4.2	30
183	Numerical experiments on the sensitivity of runoff generation to the spatial variation of soil hydraulic properties. <i>Journal of Hydrology</i> , 2006, 326, 43-58.	5.4	50
184	Three-Dimensional Modeling of the Scale- and Flow Rate-Dependency of Dispersion in a Heterogeneous Unsaturated Sandy Monolith. <i>Vadose Zone Journal</i> , 2006, 5, 515-528.	2.2	22
185	Stochastic Continuum Transport Equations for Field-Scale Solute Transport: Overview of Theoretical and Experimental Results. <i>Vadose Zone Journal</i> , 2006, 5, 184-203.	2.2	37
186	Interpretation of Dye Transport in a Macroscopically Heterogeneous, Unsaturated Subsoil with a One-Dimensional Model. <i>Vadose Zone Journal</i> , 2006, 5, 529-538.	2.2	18
187	SOLUTE TRANSPORT PROCESSES. , 2006, , 117-159.		11
188	Response to "Comments on "A Set of Analytical Benchmarks to Test Numerical Models of Flow and Transport in Soils". <i>Vadose Zone Journal</i> , 2006, 5, 128-128.	2.2	0
189	A Set of Analytical Benchmarks to Test Numerical Models of Flow and Transport in Soils. <i>Vadose Zone Journal</i> , 2005, 4, 206.	2.2	45
190	A Set of Analytical Benchmarks to Test Numerical Models of Flow and Transport in Soils. <i>Vadose Zone Journal</i> , 2005, 4, 206-221.	2.2	40
191	Soil Water Extraction with a Suction Cup: Results of Numerical Simulations. <i>Vadose Zone Journal</i> , 2005, 4, 899-907.	2.2	42
192	Pesticide fate at regional scale: Development of an integrated model approach and application. <i>Physics and Chemistry of the Earth</i> , 2005, 30, 542-549.	2.9	16
193	Potential of electrical resistivity tomography to infer aquifer transport characteristics from tracer studies: A synthetic case study. <i>Water Resources Research</i> , 2005, 41, .	4.2	89
194	Hydrogeophysical characterization of subsurface solute transport at the Krauthausen test site: experiments and numerical modelling. , 2005, , 221-237.		1
195	Numerical Modeling of Large Scale Transport of Contaminant Solutes Using the Global Random Walk Algorithm. <i>Monte Carlo Methods and Applications</i> , 2004, 10, 153-177.	0.8	7
196	Quantitative Imaging of 3D Solute Transport Using 2D Time-Lapse ERT: A Synthetic Feasibility Study. , 2004, , .		3
197	Miscible Displacement, Sorption and Desorption of Atrazine in a Brazilian Oxisol. <i>Vadose Zone Journal</i> , 2003, 2, 728-738.	2.2	23
198	Miscible Displacement, Sorption and Desorption of Atrazine in a Brazilian Oxisol. <i>Vadose Zone Journal</i> , 2003, 2, 728-738.	2.2	4

#	ARTICLE	IF	CITATIONS
199	Miscible Displacement, Sorption and Desorption of Atrazine in a Brazilian Oxisol. <i>Vadose Zone Journal</i> , 2003, 2, 728.	2.2	2
200	Characterisation of the field-saturated hydraulic conductivity on a hillslope: in situ single ring pressure infiltrometer measurements. <i>Journal of Hydrology</i> , 2002, 263, 217-229.	5.4	43
201	Imaging and characterisation of subsurface solute transport using electrical resistivity tomography (ERT) and equivalent transport models. <i>Journal of Hydrology</i> , 2002, 267, 125-146.	5.4	352
202	Imaging Fluorescent Dye Concentrations on Soil Surfaces. <i>Soil Science Society of America Journal</i> , 2002, 66, 760-773.	2.2	17
203	Identification of Transport Processes in Soil Cores Using Fluorescent Tracers. <i>Soil Science Society of America Journal</i> , 2002, 66, 774-787.	2.2	48
204	Estimation of local scale dispersion from local breakthrough curves during a tracer test in a heterogeneous aquifer: the Lagrangian approach. <i>Journal of Contaminant Hydrology</i> , 2002, 54, 141-171.	3.3	22
205	Imaging and characterisation of subsurface solute transport using electrical resistivity tomography (ERT) and equivalent transport models. <i>Journal of Hydrology</i> , 2002, 267, 125-146.	5.4	249
206	Imaging Fluorescent Dye Concentrations on Soil Surfaces. <i>Soil Science Society of America Journal</i> , 2002, 66, 760.	2.2	6
207	Identification of Transport Processes in Soil Cores Using Fluorescent Tracers. <i>Soil Science Society of America Journal</i> , 2002, 66, 774.	2.2	19
208	Concentration variance and spatial covariance in second-order stationary heterogeneous conductivity fields. <i>Water Resources Research</i> , 2001, 37, 1893-1912.	4.2	34
209	Overview of inert tracer experiments in key belgian soil types: Relation between transport and soil morphological and hydraulic properties. <i>Water Resources Research</i> , 2001, 37, 2873-2888.	4.2	65
210	Analyses of locally measured bromide breakthrough curves from a natural gradient tracer experiment at Krauthausen. <i>Journal of Contaminant Hydrology</i> , 2001, 48, 23-43.	3.3	33
211	Surfactant enhanced solubilization of residual trichloroethene: an experimental and numerical analysis. <i>Journal of Contaminant Hydrology</i> , 2000, 46, 1-16.	3.3	30
212	Solute Transport for Steady-State and Transient Flow in Soils with and without Macropores. <i>Soil Science Society of America Journal</i> , 2000, 64, 1305-1317.	2.2	65
213	Deriving Transport Parameters from Transient Flow Leaching Experiments by Approximate Steady-State Flow Convection-Dispersion Models. <i>Soil Science Society of America Journal</i> , 2000, 64, 1317-1327.	2.2	17
214	Modelling Water Flow and Solute Transport in Heterogeneous Soils: A Review of Recent Approaches. <i>Biosystems Engineering</i> , 1998, 70, 231-256.	0.4	93
215	Analysis of steady state chloride transport through two heterogeneous field soils. <i>Water Resources Research</i> , 1998, 34, 2539-2550.	4.2	40
216	Solute transport in a heterogeneous soil for boundary and initial conditions: Evaluation of first-order approximations. <i>Water Resources Research</i> , 1998, 34, 3255-3270.	4.2	24

#	ARTICLE	IF	CITATIONS
217	Reply to "Comment on "Comparison of Three Methods to Calibrate TDR for Monitoring Solute Movement in Undisturbed Soil" Soil Science Society of America Journal, 1998, 62, 490.	2.2	1
218	Effects of Soil Type and Water Flux on Solute Transport. Soil Science Society of America Journal, 1997, 61, 372.	2.2	55
219	Parameter uncertainty in the mobile-immobile solute transport model. Journal of Hydrology, 1997, 190, 75-101.	5.4	33
220	Comparison of three stream tube models predicting field-scale solute transport. Hydrology and Earth System Sciences, 1997, 1, 873-893.	4.9	9
221	Comparison between field measurements and numerical simulation of steady-state solute transport in a heterogeneous soil profile. Hydrology and Earth System Sciences, 1997, 1, 853-871.	4.9	8
222	Analysis of Solute Redistribution in Heterogeneous Soil. Quantitative Geology and Geostatistics, 1997, , 271-282.	0.1	3
223	Comparison of Three Methods to Calibrate TDR for Monitoring Solute Movement in Undisturbed Soil. Soil Science Society of America Journal, 1996, 60, 747-754.	2.2	93
224	Determining Convective Lognormal Solute Transport Parameters from Resident Concentration Data. Soil Science Society of America Journal, 1996, 60, 1306-1317.	2.2	45
225	Monitoring Solute Transport in a Multi-layered Sandy Lysimeter using Time Domain Reflectometry. Soil Science Society of America Journal, 1995, 59, 337-344.	2.2	71
226	Geophysical Methods for Field-Scale Imaging of Root Zone Properties and Processes. SSSA Special Publication Series, 0, , 247-282.	0.2	13