

Timothy D Scheibe

List of Publications by Year in descending order

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Version: 2024-02-01

92
papers

3,565
citations

172457

29
h-index

144013

57
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108
all docs

108
docs citations

108
times ranked

3085
citing authors

#	ARTICLE	IF	CITATIONS
1	Contributions of biofilm-induced flow heterogeneities to solute retention and anomalous transport features in porous media. <i>Water Research</i> , 2022, 209, 117896.	11.3	5
2	Modeling framework for evaluating the impacts of hydrodynamic pressure on hydrologic exchange fluxes and residence time for a large-scale river section over a long-term period. <i>Environmental Modelling and Software</i> , 2022, 148, 105277.	4.5	2
3	From legacy contamination to watershed systems science: a review of scientific insights and technologies developed through DOE-supported research in water and energy security. <i>Environmental Research Letters</i> , 2022, 17, 043004.	5.2	12
4	Modeling of streamflow in a 30%km long reach spanning 5 years using OpenFOAM 5.x. <i>Geoscientific Model Development</i> , 2022, 15, 2917-2947.	3.6	4
5	Integrating field observations and process-based modeling to predict watershed water quality under environmental perturbations. <i>Journal of Hydrology</i> , 2021, 602, 125762.	5.4	22
6	Historical Contingency in Microbial Resilience to Hydrologic Perturbations. <i>Frontiers in Water</i> , 2021, 3, .	2.3	2
7	Machine Learning Analysis of Hydrologic Exchange Flows and Transit Time Distributions in a Large Regulated River. <i>Frontiers in Artificial Intelligence</i> , 2021, 4, 648071.	3.4	10
8	Editorial: Linking Hydrological and Biogeochemical Processes in Riparian Corridors. <i>Frontiers in Water</i> , 2021, 3, .	2.3	3
9	Scale-dependent spatial variabilities of hydrological exchange flows and transit time in a large regulated river. <i>Journal of Hydrology</i> , 2021, 598, 126283.	5.4	3
10	A novel construct for scaling groundwater-river interactions based on machine-guided hydromorphic classification. <i>Environmental Research Letters</i> , 2021, 16, 104016.	5.2	1
11	ANALYSIS OF NESTED HYPORHEIC FLOW PATHS USING ANALYTICAL SPECTRAL SOLUTIONS. , 2021, , .		0
12	Identification of Characteristic Spatial Scales to Improve the Performance of Analytical Spectral Solutions to the Groundwater Flow Equation. <i>Water Resources Research</i> , 2021, 57, .	4.2	0
13	Representing Organic Matter Thermodynamics in Biogeochemical Reactions via Substrate-Explicit Modeling. <i>Frontiers in Microbiology</i> , 2020, 11, 531756.	3.5	27
14	High-Performance Simulation of Dynamic Hydrologic Exchange and Implications for Surrogate Flow and Reactive Transport Modeling in a Large River Corridor. <i>Frontiers in Water</i> , 2020, 2, .	2.3	2
15	Spatial Mapping of Riverbed Grain-Size Distribution Using Machine Learning. <i>Frontiers in Water</i> , 2020, 2, .	2.3	5
16	An efficient three-dimensional rhizosphere modeling capability to study the effect of root system architecture on soil water and reactive transport. <i>Plant and Soil</i> , 2019, 441, 33-48.	3.7	13
17	On Modeling Ensemble Transport of Metal Reducing Motile Bacteria. <i>Scientific Reports</i> , 2019, 9, 14638.	3.3	2
18	Identification and mapping of riverbed sediment facies in the Columbia River through integration of field observations and numerical simulations. <i>Hydrological Processes</i> , 2019, 33, 1245-1259.	2.6	12

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19	Reactive Transport Modeling of Microbial Dynamics. <i>Elements</i> , 2019, 15, 111-116.	0.5	21
20	Subsurface biogeochemistry is a missing link between ecology and hydrology in dam-impacted river corridors. <i>Science of the Total Environment</i> , 2019, 657, 435-445.	8.0	19
21	UNDERSTANDING RIVER CORRIDOR CONNECTIVITY ACROSS THE CONTINENTAL UNITED STATES. , 2019, , .		0
22	Downscaling-Based Segmentation for Unresolved Images of Highly Heterogeneous Granular Porous Samples. <i>Water Resources Research</i> , 2018, 54, 2871-2890.	4.2	5
23	Groundwater Contamination, Subsurface Processes, and Remediation Methods: Overview of the Special Issue of <i>Water on Groundwater Contamination and Remediation</i> . <i>Water (Switzerland)</i> , 2018, 10, 1708.	2.7	7
24	Geochemical and Microbial Community Attributes in Relation to Hyporheic Zone Geological Facies. <i>Scientific Reports</i> , 2017, 7, 12006.	3.3	40
25	What can we learn from in-soil imaging of a live plant: X-ray Computed Tomography and 3D numerical simulation of root-soil system. <i>Rhizosphere</i> , 2017, 3, 259-262.	3.0	12
26	Regulation-Structured Dynamic Metabolic Model Provides a Potential Mechanism for Delayed Enzyme Response in Denitrification Process. <i>Frontiers in Microbiology</i> , 2017, 8, 1866.	3.5	40
27	Multiscale Modelling and Simulation, 13th International Workshop. <i>Procedia Computer Science</i> , 2016, 80, 1242-1243.	2.0	1
28	Intercomparison of 3D pore-scale flow and solute transport simulation methods. <i>Advances in Water Resources</i> , 2016, 95, 176-189.	3.8	105
29	Hybrid multiscale simulation of a mixing-controlled reaction. <i>Advances in Water Resources</i> , 2015, 83, 228-239.	3.8	23
30	Pore-scale and multiscale numerical simulation of flow and transport in a laboratory-scale column. <i>Water Resources Research</i> , 2015, 51, 1023-1035.	4.2	79
31	A Hybrid Multiscale Framework for Subsurface Flow and Transport Simulations. <i>Procedia Computer Science</i> , 2015, 51, 1098-1107.	2.0	8
32	An Analysis Platform for Multiscale Hydrogeologic Modeling with Emphasis on Hybrid Multiscale Methods. <i>Ground Water</i> , 2015, 53, 38-56.	1.3	62
33	Flow Partitioning in Fully Saturated Soil Aggregates. <i>Transport in Porous Media</i> , 2014, 103, 295-314.	2.6	11
34	Colloid transport in saturated porous media: Elimination of attachment efficiency in a new colloid transport model. <i>Water Resources Research</i> , 2013, 49, 2952-2965.	4.2	23
35	Multiphysics simulations. <i>International Journal of High Performance Computing Applications</i> , 2013, 27, 4-83.	3.7	244
36	Development of a coupled thermo-hydro-mechanical model in discontinuous media for carbon sequestration. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2013, 62, 138-147.	5.8	22

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37	Pore-scale simulation of microbial growth using a genome-scale metabolic model: Implications for Darcy-scale reactive transport. <i>Advances in Water Resources</i> , 2013, 59, 256-270.	3.8	26
38	Flow and axial dispersion in a sinusoidal-walled tube: Effects of inertial and unsteady flows. <i>Advances in Water Resources</i> , 2013, 62, 215-226.	3.8	18
39	Model-based analysis of mixed uranium(VI) reduction by biotic and abiotic pathways during in situ bioremediation. <i>Chemical Geology</i> , 2013, 357, 215-222.	3.3	5
40	Direct numerical simulation of pore-scale flow in a bead pack: Comparison with magnetic resonance imaging observations. <i>Advances in Water Resources</i> , 2013, 54, 228-241.	3.8	62
41	Advanced Simulation Capability for Environmental Management: Current Status and Future Applications. , 2013, , .		1
42	Pore-scale simulation of intragranular diffusion: Effects of incomplete mixing on macroscopic manifestations. <i>Water Resources Research</i> , 2013, 49, 4277-4294.	4.2	16
43	A fluid pressure and deformation analysis for geological sequestration of carbon dioxide. <i>Computers and Geosciences</i> , 2012, 46, 31-37.	4.2	19
44	Dissipative-particle-dynamics model of biofilm growth. <i>Physical Review E</i> , 2011, 83, 066702.	2.1	23
45	Hybrid models of reactive transport in porous and fractured media. <i>Advances in Water Resources</i> , 2011, 34, 1140-1150.	3.8	119
46	Dimension reduction numerical closure method for advection-diffusion-reaction systems. <i>Advances in Water Resources</i> , 2011, 34, 1616-1626.	3.8	9
47	Lessons Learned from Bacterial Transport Research at the South Oyster Site. <i>Ground Water</i> , 2011, 49, 745-763.	1.3	20
48	Direct coupling of a genome-scale microbial in silico model and a groundwater reactive transport model. <i>Journal of Contaminant Hydrology</i> , 2011, 122, 96-103.	3.3	44
49	Model-based analysis of the role of biological, hydrological and geochemical factors affecting uranium bioremediation. <i>Biotechnology and Bioengineering</i> , 2011, 108, 1537-1548.	3.3	19
50	Modeling and sensitivity analysis of electron capacitance for <i>Geobacter</i> in sedimentary environments. <i>Journal of Contaminant Hydrology</i> , 2010, 112, 30-44.	3.3	16
51	Simulating the heterogeneity in braided channel belt deposits: 1. A geometric-based methodology and code. <i>Water Resources Research</i> , 2010, 46, .	4.2	48
52	Simulating the heterogeneity in braided channel belt deposits: 2. Examples of results and comparison to natural deposits. <i>Water Resources Research</i> , 2010, 46, .	4.2	35
53	A Component-Based Framework for Smoothed Particle Hydrodynamics Simulations of Reactive Fluid Flow in Porous Media. <i>International Journal of High Performance Computing Applications</i> , 2010, 24, 228-239.	3.7	18
54	Coupling a genome-scale metabolic model with a reactive transport model to describe <i>in situ</i> uranium bioremediation. <i>Microbial Biotechnology</i> , 2009, 2, 274-286.	4.2	92

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55	On breakdown of macroscopic models of mixing-controlled heterogeneous reactions in porous media. <i>Advances in Water Resources</i> , 2009, 32, 1664-1673.	3.8	133
56	Effects of incomplete mixing on multicomponent reactive transport. <i>Advances in Water Resources</i> , 2009, 32, 1674-1679.	3.8	100
57	Application of the SALSSA framework to the validation of smoothed particle hydrodynamics simulations of low Reynolds number flows. <i>Journal of Physics: Conference Series</i> , 2009, 180, 012065.	0.4	1
58	Pore-Scale Model for Reactive Transport and Biomass Growth. <i>Journal of Porous Media</i> , 2009, 12, 417-434.	1.9	38
59	Mixing-induced precipitation: Experimental study and multiscale numerical analysis. <i>Water Resources Research</i> , 2008, 44, .	4.2	167
60	Hybrid Simulations of Reaction-Diffusion Systems in Porous Media. <i>SIAM Journal of Scientific Computing</i> , 2008, 30, 2799-2816.	2.8	74
61	Special Issue on Discussions on Metahydrogeology: Research Stocktaking or Identity Crisis? Essays on the Once and Future Merit of Research in Hydrogeology. <i>Journal of Hydrologic Engineering - ASCE</i> , 2008, 13, 1-1.	1.9	0
62	Iterative Workflows for Numerical Simulations in Subsurface Sciences. , 2008, , .		3
63	Hybrid numerical methods for multiscale simulations of subsurface biogeochemical processes. <i>Journal of Physics: Conference Series</i> , 2008, 125, 012054.	0.4	1
64	Hybrid numerical methods for multiscale simulations of subsurface biogeochemical processes. <i>Journal of Physics: Conference Series</i> , 2007, 78, 012063.	0.4	13
65	Particle methods for simulation of subsurface multiphase fluid flow and biogeochemical processes. <i>Journal of Physics: Conference Series</i> , 2007, 78, 012047.	0.4	4
66	A novel approach to estimate iron distribution within different pore domains of structured media. <i>Applied Geochemistry</i> , 2007, 22, 2630-2636.	3.0	0
67	Explaining "Noise" as Environmental Variations in Population Dynamics. <i>Computing in Science and Engineering</i> , 2007, 9, 40-49.	1.2	2
68	A smoothed particle hydrodynamics model for reactive transport and mineral precipitation in porous and fractured porous media. <i>Water Resources Research</i> , 2007, 43, .	4.2	128
69	Correlation between bacterial attachment rate coefficients and hydraulic conductivity and its effect on field-scale bacterial transport. <i>Advances in Water Resources</i> , 2007, 30, 1571-1582.	3.8	26
70	Simulations of reactive transport and precipitation with smoothed particle hydrodynamics. <i>Journal of Computational Physics</i> , 2007, 222, 654-672.	3.8	200
71	Transport and biogeochemical reaction of metals in a physically and chemically heterogeneous aquifer. , 2006, 2, 220.		61
72	Change of Collision Efficiency with Distance in Bacterial Transport Experiments. <i>Ground Water</i> , 2006, 44, 415-429.	1.3	12

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73	Physical versus chemical effects on bacterial and bromide transport as determined from on site sediment column pulse experiments. <i>Journal of Contaminant Hydrology</i> , 2005, 76, 295-314.	3.3	21
74	Conceptual and numerical model of uranium(VI) reductive immobilization in fractured subsurface sediments. <i>Chemosphere</i> , 2005, 59, 617-628.	8.2	36
75	Interactive Models for Ground Water Flow and Solute Transport. <i>Ground Water</i> , 2004, 42, 8-11.	1.3	3
76	Apparent Decreases in Colloid Deposition Rate Coefficients with Distance of Transport under Unfavorable Deposition Conditions: A General Phenomenon. <i>Environmental Science & Technology</i> , 2004, 38, 5616-5625.	10.0	206
77	Processes in Microbial Transport in the Natural Subsurface. <i>ChemInform</i> , 2003, 34, no.	0.0	2
78	An Evaluation of Conditioning Data for Solute Transport Prediction. <i>Ground Water</i> , 2003, 41, 128-141.	1.3	43
79	A particle-based model of size or anion exclusion with application to microbial transport in porous media. <i>Water Resources Research</i> , 2003, 39, .	4.2	45
80	Relative Dominance of Physical versus Chemical Effects on the Transport of Adhesion-Deficient Bacteria in Intact Cores from South Oyster, Virginia. <i>Environmental Science & Technology</i> , 2002, 36, 891-900.	10.0	68
81	Fish individual-based numerical simulator (FINS): a particle-based model of juvenile salmonid movement and dissolved gas exposure history in the Columbia River basin. <i>Ecological Modelling</i> , 2002, 147, 233-252.	2.5	25
82	Processes in microbial transport in the natural subsurface. <i>Advances in Water Resources</i> , 2002, 25, 1017-1042.	3.8	258
83	Breakthroughs in field-scale bacterial transport. <i>Eos</i> , 2001, 82, 417-417.	0.1	12
84	Extended tailing of bacteria following breakthrough at the Narrow Channel Focus Area, Oyster, Virginia. <i>Water Resources Research</i> , 2001, 37, 2687-2698.	4.2	79
85	Ferrogaphic Tracking of Bacterial Transport in the Field at the Narrow Channel Focus Area, Oyster, VA. <i>Environmental Science & Technology</i> , 2001, 35, 182-191.	10.0	56
86	Use of Quantitative Models to Design Microbial Transport Experiments in a Sandy Aquifer. <i>Ground Water</i> , 2001, 39, 210-222.	1.3	29
87	Scaling of flow and transport behavior in heterogeneous groundwater systems. <i>Advances in Water Resources</i> , 1998, 22, 223-238.	3.8	79
88	Preliminary observations on bacterial transport in a coastal plain aquifer. <i>FEMS Microbiology Reviews</i> , 1997, 20, 473-487.	8.6	74
89	Preliminary observations on bacterial transport in a coastal plain aquifer. <i>FEMS Microbiology Reviews</i> , 1997, 20, 473-487.	8.6	2
90	Use of sedimentological information for geometric simulation of natural porous media structure. <i>Water Resources Research</i> , 1995, 31, 3259-3270.	4.2	74

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91	Non-Gaussian Particle Tracking: Application to scaling of transport processes in heterogeneous porous media. <i>Water Resources Research</i> , 1994, 30, 2027-2039.	4.2	27
92	Risk-Based Selection of Monitoring Wells for Assessing Agricultural Chemical Contamination of Ground Water. <i>Ground Water Monitoring and Remediation</i> , 1989, 9, 98-108.	0.8	1