

Marwan fahs

List of Publications by Year in descending order

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69
papers

1,112
citations

393982

19
h-index

476904

29
g-index

75
all docs

75
docs citations

75
times ranked

677
citing authors

#	ARTICLE	IF	CITATIONS
1	Bayesian sparse polynomial chaos expansion for global sensitivity analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2017, 318, 474-496.	3.4	89
2	Assessment of CO2 Injectivity During Sequestration in Depleted Gas Reservoirs. <i>Geosciences (Switzerland)</i> , 2019, 9, 199.	1.0	60
3	Solving density driven flow problems with efficient spatial discretizations and higher-order time integration methods. <i>Advances in Water Resources</i> , 2009, 32, 340-352.	1.7	49
4	An easy and efficient combination of the Mixed Finite Element Method and the Method of Lines for the resolution of Richards's Equation. <i>Environmental Modelling and Software</i> , 2009, 24, 1122-1126.	1.9	49
5	Uncertainty analysis for seawater intrusion in fractured coastal aquifers: Effects of fracture location, aperture, density and hydrodynamic parameters. <i>Journal of Hydrology</i> , 2019, 571, 159-177.	2.3	48
6	The Henry problem: New semianalytical solution for velocity-dependent dispersion. <i>Water Resources Research</i> , 2016, 52, 7382-7407.	1.7	36
7	An advanced discrete fracture model for variably saturated flow in fractured porous media. <i>Advances in Water Resources</i> , 2020, 140, 103602.	1.7	36
8	A high-accurate solution for Darcy-Brinkman double-diffusive convection in saturated porous media. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2016, 69, 26-47.	0.6	35
9	A Reference Benchmark Solution for Free Convection in A Square Cavity Filled with A Heterogeneous Porous Medium. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2015, 67, 437-462.	0.6	33
10	Variable-density flow in heterogeneous porous media – Laboratory experiments and numerical simulations. <i>Journal of Contaminant Hydrology</i> , 2009, 108, 168-175.	1.6	31
11	Analyzing natural convection in porous enclosure with polynomial chaos expansions: Effect of thermal dispersion, anisotropic permeability and heterogeneity. <i>International Journal of Heat and Mass Transfer</i> , 2017, 115, 205-224.	2.5	30
12	An efficient numerical model for hydrodynamic parameterization in 2D fractured dual-porosity media. <i>Advances in Water Resources</i> , 2014, 63, 179-193.	1.7	29
13	Monotonicity of the cell-centred triangular MPFA method for saturated and unsaturated flow in heterogeneous porous media. <i>Journal of Hydrology</i> , 2013, 504, 132-141.	2.3	27
14	On equivalent hydraulic conductivity for oscillation-free solutions of Richard's equation. <i>Journal of Hydrology</i> , 2013, 505, 202-217.	2.3	25
15	A 3D Semianalytical Solution for Density-Driven Flow in Porous Media. <i>Water Resources Research</i> , 2018, 54, 10,094.	1.7	24
16	A new benchmark semi-analytical solution for density-driven flow in porous media. <i>Advances in Water Resources</i> , 2014, 70, 24-35.	1.7	21
17	On the Efficiency of the Direct Substitution Approach for Reactive Transport Problems in Porous Media. <i>Water, Air, and Soil Pollution</i> , 2008, 193, 299-308.	1.1	20
18	A new benchmark reference solution for double-diffusive convection in a heterogeneous porous medium. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2016, 70, 373-392.	0.6	20

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19	Uncertainty quantification and global sensitivity analysis of double-diffusive natural convection in a porous enclosure. <i>International Journal of Heat and Mass Transfer</i> , 2020, 162, 120291.	2.5	19
20	Global sensitivity analysis and Bayesian parameter inference for solute transport in porous media colonized by biofilms. <i>Journal of Contaminant Hydrology</i> , 2016, 191, 1-18.	1.6	17
21	A Generalized Semi-Analytical Solution for the Dispersive Henry Problem: Effect of Stratification and Anisotropy on Seawater Intrusion. <i>Water (Switzerland)</i> , 2018, 10, 230.	1.2	17
22	Semi-Analytical Solution to Assess CO ₂ Leakage in the Subsurface through Abandoned Wells. <i>Energies</i> , 2021, 14, 2452.	1.6	17
23	Modelling variable density flow problems in heterogeneous porous media using the method of lines and advanced spatial discretization methods. <i>Mathematics and Computers in Simulation</i> , 2011, 81, 2346-2355.	2.4	16
24	A semi-analytical solution for saltwater intrusion with a very narrow transition zone. <i>Hydrogeology Journal</i> , 2014, 22, 501-506.	0.9	16
25	Influence of fluid flow and heat transfer on crack propagation in SOFC multi-layered like material with anisotropic porous layers. <i>International Journal of Solids and Structures</i> , 2016, 78-79, 189-198.	1.3	16
26	Convective-reactive transport of dissolved CO ₂ in fractured-geological formations. <i>International Journal of Greenhouse Gas Control</i> , 2021, 109, 103365.	2.3	16
27	Analyzing the efficiency and robustness of deep convolutional neural networks for modeling natural convection in heterogeneous porous media. <i>International Journal of Heat and Mass Transfer</i> , 2022, 183, 122131.	2.5	16
28	A High-Accurate Fourier-Galerkin Solution for Buoyancy-Driven Flow in a Square Cavity. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2014, 65, 495-517.	0.6	15
29	A new approach to avoid excessive numerical diffusion in Eulerian-Lagrangian methods. <i>Communications in Numerical Methods in Engineering</i> , 2007, 24, 897-910.	1.3	13
30	Effect of Pilot-Points Location on Model Calibration: Application to the Northern Karst Aquifer of Qatar. <i>Water (Switzerland)</i> , 2019, 11, 679.	1.2	13
31	Three-dimensional natural convection, entropy generation and mixing in heterogeneous porous medium. <i>Advances in Water Resources</i> , 2021, 155, 103992.	1.7	13
32	Modeling variable-density flow in saturated-unsaturated porous media: An advanced numerical model. <i>Advances in Water Resources</i> , 2022, 159, 104077.	1.7	13
33	A comparison of discrete versus continuous adjoint states to invert groundwater flow in heterogeneous dual porosity systems. <i>Advances in Water Resources</i> , 2017, 110, 1-18.	1.7	12
34	A new efficient Bayesian parameter inference strategy: Application to flow and pesticide transport through unsaturated porous media. <i>Journal of Hydrology</i> , 2018, 563, 887-899.	2.3	12
35	An efficient geometric approach to solve the slope limiting problem with the Discontinuous Galerkin method on unstructured triangles. <i>International Journal for Numerical Methods in Biomedical Engineering</i> , 2010, 26, 1824-1835.	1.0	11
36	Study of the Effect of Thermal Dispersion on Internal Natural Convection in Porous Media Using Fourier Series. <i>Transport in Porous Media</i> , 2020, 131, 537-568.	1.2	11

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37	Extension of the Henry semi-analytical solution for saltwater intrusion in stratified domains. Computational Geosciences, 2015, 19, 1207-1217.	1.2	10
38	Hydraulic and transport parameter assessment using column infiltration experiments. Hydrology and Earth System Sciences, 2017, 21, 2263-2275.	1.9	9
39	Sensitivity and identifiability of hydraulic and geophysical parameters from streaming potential signals in unsaturated porous media. Hydrology and Earth System Sciences, 2018, 22, 3561-3574.	1.9	9
40	Pollutant Dissipation at the Sediment-Water Interface: A Robust Discrete Continuum Numerical Model and Recirculating Laboratory Experiments. Water Resources Research, 2021, 57, e2020WR028932.	1.7	9
41	A new benchmark with high accurate solution for hot-cold fluids mixing. Heat and Mass Transfer, 2015, 51, 1321-1336.	1.2	8
42	Unstable Density-Driven Flow in Fractured Porous Media: The Fractured Elder Problem. Fluids, 2019, 4, 168.	0.8	8
43	Effect of distance-dependent dispersivity on density-driven flow in porous media. Journal of Hydrology, 2020, 589, 125204.	2.3	8
44	Modeling of Flow and Transport in Saturated and Unsaturated Porous Media. Water (Switzerland), 2021, 13, 1088.	1.2	8
45	On the use of large time steps with ELLAM for transport with kinetic reactions over heterogeneous domains. AIChE Journal, 2009, 55, 1121-1126.	1.8	7
46	An Efficient Implementation of the Method of Lines for Multicomponent Reactive Transport Equations. Water, Air, and Soil Pollution, 2011, 215, 273-283.	1.1	7
47	Modeling 2D Multispecies Reactive Transport in Saturated/Unsaturated Porous Media with the Eulerian-Lagrangian Localized Adjoint Method. Water, Air, and Soil Pollution, 2012, 223, 1801-1813.	1.1	7
48	Analytical solution and Bayesian inference for interference pumping tests in fractal dual-porosity media. Computational Geosciences, 2018, 22, 413-421.	1.2	7
49	An improved Kalman filtering approach for the estimation of unsaturated flow parameters by assimilating photographic imaging data. Journal of Hydrology, 2020, 590, 125373.	2.3	7
50	Uncertainty Analysis of Seepage-Induced Consolidation in a Fractured Porous Medium. CMES - Computer Modeling in Engineering and Sciences, 2021, 129, 279-297.	0.8	7
51	Joint identification of contaminant source characteristics and hydraulic conductivity in a tide-influenced coastal aquifer. Journal of Contaminant Hydrology, 2022, 247, 103980.	1.6	7
52	A robust fully mixed finite element model for flow and transport in unsaturated fractured porous media. Advances in Water Resources, 2022, 166, 104259.	1.7	7
53	Direct and split operator approaches with ELLAM for reactive transport equations. AIChE Journal, 2007, 53, 2161-2169.	1.8	6
54	Reactive transport parameter estimation: Genetic algorithm vs. Monte carlo approach. AIChE Journal, 2009, 55, 1959-1968.	1.8	6

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55	A Semi-Analytical Solution for the Reactive Henry Saltwater Intrusion Problem. <i>Water, Air, and Soil Pollution</i> , 2013, 224, 1.	1.1	6
56	An Efficient ELLAM Implementation for Modeling Solute Transport in Fractured Porous Media. <i>Water, Air, and Soil Pollution</i> , 2018, 229, 1.	1.1	6
57	Semianalytical solutions for contaminant transport under variable velocity field in a coastal aquifer. <i>Journal of Hydrology</i> , 2018, 560, 434-450.	2.3	6
58	Bayesian soil parameter estimation: Results of percolation-drainage vs infiltration laboratory experiments. <i>Journal of Hydrology</i> , 2018, 565, 770-778.	2.3	6
59	Laboratory Experiments of Drainage, Imbibition and Infiltration under Artificial Rainfall Characterized by Image Analysis Method and Numerical Simulations. <i>Water (Switzerland)</i> , 2019, 11, 2232.	1.2	5
60	Bayesian Simultaneous Estimation of Unsaturated Flow and Solute Transport Parameters from a Laboratory Infiltration Experiment. <i>Water (Switzerland)</i> , 2019, 11, 1660.	1.2	4
61	A Fourier Series Solution for Transient Three-Dimensional Thermohaline Convection in Porous Enclosures. <i>Water Resources Research</i> , 2020, 56, e2020WR028111.	1.7	4
62	A fully interior penalty discontinuous Galerkin method for variable density groundwater flow problems. <i>Computers and Fluids</i> , 2020, 213, 104744.	1.3	3
63	On the Validity of the Null Current Assumption for Modeling Sorptive Reactive Transport and Electro-Diffusion in Porous Media. <i>Water (Switzerland)</i> , 2021, 13, 2221.	1.2	3
64	Algorithms for activity correction models for geochemical speciation and reactive transport modeling. <i>AICHE Journal</i> , 2022, 68, e17391.	1.8	2
65	Bayesian inversion of laboratory experiments of transport through limestone fractures. <i>Journal of Contaminant Hydrology</i> , 2022, 249, 104045.	1.6	2
66	Random Sampling from Joint Probability Distributions Defined in a Bayesian Framework. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A316-A338.	1.3	1
67	Use of Global Sensitivity and Data-Worth Analysis for an Efficient Estimation of Soil Hydraulic Properties. <i>Water (Switzerland)</i> , 2020, 12, 736.	1.2	1
68	A New Normalized Groundwater Age-Based Index for Quantitative Evaluation of the Vulnerability to Seawater Intrusion in Coastal Aquifers: Implications for Management and Risk Assessments. <i>Water (Switzerland)</i> , 2021, 13, 2496.	1.2	1
69	A new ELLAM implementation for modeling solute transport in fractured porous media. , 2018, , .		0