

Simon A Mathias

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

74
papers

1,735
citations

24
h-index

39
g-index

75
ext. papers

1,915
ext. citations

4.4
avg, IF

4.84
L-index

#	Paper	IF	Citations
74	Pseudospectral methods provide fast and accurate solutions for the horizontal infiltration equation. <i>Journal of Hydrology</i> , 2021 , 598, 126407	6	0
73	A Model for the Soil Freezing Characteristic Curve That Represents the Dominant Role of Salt Exclusion. <i>Water Resources Research</i> , 2021 , 57, e2021WR030070	5.4	2
72	Transmission loss estimation for ephemeral sand rivers in Southern Africa. <i>Journal of Hydrology</i> , 2021 , 600, 126487	6	1
71	Strain characteristics and permeability evolution of faults under stress disturbance monitoring by fibre bragg grating sensing and pressure pulses. <i>Geomechanics and Geophysics for Geo-Energy and Geo-Resources</i> , 2021 , 7, 1	3.8	0
70	Gas Diffusion in Coal Powders is a Multi-rate Process. <i>Transport in Porous Media</i> , 2020 , 131, 1037-1051	3.1	8
69	Storage Coefficients and Permeability Functions for Coal-Bed Methane Production Under Uniaxial Strain Conditions. <i>Transport in Porous Media</i> , 2019 , 130, 627-636	3.1	7
68	Closed-form equation for subsidence due to fluid production from a cylindrical confined aquifer. <i>Journal of Hydrology</i> , 2019 , 573, 964-969	6	7
67	North Sea Next life: extending the commercial life of producing North Sea fields. <i>Petroleum Geology Conference Proceedings</i> , 2018 , 8, 561-570		3
66	Masuda sandstone core hydrate dissociation experiment revisited. <i>Chemical Engineering Science</i> , 2018 , 175, 98-109	4.4	28
65	Capillary processes increase salt precipitation during CO2 injection in saline formations. <i>Journal of Fluid Mechanics</i> , 2018 , 852, 398-421	3.7	0
64	Methane hydrate recycling offshore of Mauritania probably after the last glacial maximum. <i>Marine and Petroleum Geology</i> , 2017 , 84, 323-331	4.7	6
63	Gas venting that bypasses the feather edge of marine hydrate, offshore Mauritania. <i>Marine and Petroleum Geology</i> , 2017 , 88, 402-409	4.7	5
62	Analytical solution for clay plug swelling experiments. <i>Applied Clay Science</i> , 2017 , 149, 75-78	5.2	2
61	Soil moisture data as a constraint for groundwater recharge estimation. <i>Journal of Hydrology</i> , 2017 , 552, 258-266	6	15
60	A study of non-linearity in rainfall-runoff response using 120 UK catchments. <i>Journal of Hydrology</i> , 2016 , 540, 423-436	6	11
59	Simulation of Three-Component Two-Phase Flow in Porous Media Using Method of Lines. <i>Transport in Porous Media</i> , 2016 , 112, 1-19	3.1	5
58	Approximate solutions for Forchheimer flow during water injection and water production in an unconfined aquifer. <i>Journal of Hydrology</i> , 2016 , 538, 13-21	6	6

57	An irregular feather-edge and potential outcrop of marine gas hydrate along the Mauritanian margin. <i>Earth and Planetary Science Letters</i> , 2015 , 423, 202-209	5.3	11
56	Numerical simulation of Forchheimer flow to a partially penetrating well with a mixed-type boundary condition. <i>Journal of Hydrology</i> , 2015 , 524, 53-61	6	16
55	The late field life of the East Midlands Petroleum Province; a new geothermal prospect?. <i>Quarterly Journal of Engineering Geology and Hydrogeology</i> , 2015 , 48, 104-114	1.4	9
54	Impact of Maximum Allowable Cost on CO2 Storage Capacity in Saline Formations. <i>Environmental Science & Technology</i> , 2015 , 49, 13510-8	10.3	9
53	A soil moisture accounting-procedure with a Richards' equation-based soil texture-dependent parameterization. <i>Water Resources Research</i> , 2015 , 51, 506-523	5.4	9
52	Impact of sub seismic heterogeneity on CO2 injectivity. <i>Energy Procedia</i> , 2014 , 63, 3078-3088	2.3	1
51	Heat transport and pressure buildup during carbon dioxide injection into depleted gas reservoirs. <i>Journal of Fluid Mechanics</i> , 2014 , 756, 89-109	3.7	15
50	Capturing the coupled hydro-mechanical processes occurring during CO2 injection [example from In Salah. <i>Energy Procedia</i> , 2014 , 63, 3416-3424	2.3	3
49	Dynamic modelling of a UK North Sea saline formation for CO2 sequestration. <i>Petroleum Geoscience</i> , 2014 , 20, 169-185	1.9	5
48	A pseudospectral approach to the McWhorter and Sunada equation for two-phase flow in porous media with capillary pressure. <i>Computational Geosciences</i> , 2013 , 17, 889-897	2.7	20
47	Uncertainty in static CO2 storage capacity estimates: Case study from the North Sea, UK 2013 , 3, 212-230		3
46	A Lambert W function solution for estimating sustainable injection rates for storage of CO2 in brine aquifers. <i>International Journal of Greenhouse Gas Control</i> , 2013 , 17, 546-548	4.2	5
45	A statistical analysis of well production rates from UK oil and gas fields [Implications for carbon capture and storage. <i>International Journal of Greenhouse Gas Control</i> , 2013 , 19, 510-518	4.2	8
44	On relative permeability data uncertainty and CO2 injectivity estimation for brine aquifers. <i>International Journal of Greenhouse Gas Control</i> , 2013 , 12, 200-212	4.2	65
43	Multiple well systems with non-Darcy flow. <i>Ground Water</i> , 2013 , 51, 588-96	2.4	10
42	Reply: Davies et al. (2012), Hydraulic fractures: How far can they go?. <i>Marine and Petroleum Geology</i> , 2013 , 43, 519-521	4.7	13
41	Farming for Water Quality: Balancing Food Security and Nitrate Pollution in UK River Basins. <i>Annals of the American Association of Geographers</i> , 2013 , 103, 397-407		28
40	Analysis of Momentum Transfer in a Lid-Driven Cavity Containing a Brinkman-Forchheimer Medium. <i>Transport in Porous Media</i> , 2012 , 92, 101-118	3.1	16

39	Dissolution of CO ₂ From Leaking Fractures in Saline Formations. <i>Transport in Porous Media</i> , 2012 , 94, 729-745	3.1	7
38	Analytical Model for CO ₂ Injection into Brine Aquifers-Containing Residual CH ₄ . <i>Transport in Porous Media</i> , 2012 , 94, 795-815	3.1	30
37	Deepwater canyons: An escape route for methane sealed by methane hydrate. <i>Earth and Planetary Science Letters</i> , 2012 , 323-324, 72-78	5.3	15
36	Hydraulic fractures: How far can they go?. <i>Marine and Petroleum Geology</i> , 2012 , 37, 1-6	4.7	172
35	A trigonometric interpolation approach to mixed-type boundary problems associated with permeameter shape factors. <i>Water Resources Research</i> , 2011 , 47,	5.4	9
34	Nitrate pollution in intensively farmed regions: What are the prospects for sustaining high-quality groundwater?. <i>Water Resources Research</i> , 2011 , 47,	5.4	71
33	Role of partial miscibility on pressure buildup due to constant rate injection of CO ₂ into closed and open brine aquifers. <i>Water Resources Research</i> , 2011 , 47,	5.4	57
32	Modelling long-term diffuse nitrate pollution at the catchment-scale: Data, parameter and epistemic uncertainty. <i>Journal of Hydrology</i> , 2011 , 403, 337-351	6	47
31	An approximate solution for toughness-dominated near-surface hydraulic fractures. <i>International Journal of Fracture</i> , 2011 , 168, 93-100	2.3	2
30	Pressure Buildup During CO ₂ Injection into a Closed Brine Aquifer. <i>Transport in Porous Media</i> , 2011 , 89, 383-397	3.1	69
29	Probabilistic longevity estimate for the LUSI mud volcano, East Java. <i>Journal of the Geological Society</i> , 2011 , 168, 517-523	2.7	39
28	The realities of storing carbon dioxide - A response to CO ₂ storage capacity issues raised by Ehlig-Economides & Economides. <i>Nature Precedings</i> , 2010 ,		9
27	Step-drawdown tests and the Forchheimer equation. <i>Water Resources Research</i> , 2010 , 46,	5.4	31
26	Transient divergent flow and transport in an infinite anisotropic porous formation. <i>Ground Water</i> , 2010 , 48, 438-41	2.4	3
25	Analytical solution for Joule-Thomson cooling during CO ₂ geo-sequestration in depleted oil and gas reservoirs. <i>International Journal of Greenhouse Gas Control</i> , 2010 , 4, 806-810	4.2	56
24	Investigation of hydromechanical processes during cyclic extraction recovery testing of a deformable rock fracture. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2010 , 47, 517-522	6	7
23	A model for flow in the chalk unsaturated zone incorporating progressive weathering. <i>Journal of Hydrology</i> , 2009 , 365, 244-260	6	51
22	Analysis of flow processes in fractured chalk under pumped and ambient conditions (UK). <i>Hydrogeology Journal</i> , 2009 , 17, 1849-1858	3.1	27

21	Approximate Solutions for Pressure Buildup During CO ₂ Injection in Brine Aquifers. <i>Transport in Porous Media</i> , 2009 , 79, 265-284	3.1	110
20	Hydraulic Fracture Propagation with 3-D Leak-off. <i>Transport in Porous Media</i> , 2009 , 80, 499-518	3.1	22
19	Screening and selection of sites for CO ₂ sequestration based on pressure buildup. <i>International Journal of Greenhouse Gas Control</i> , 2009 , 3, 577-585	4.2	81
18	A parameter sensitivity analysis of two Chalk tracer tests. <i>Quarterly Journal of Engineering Geology and Hydrogeology</i> , 2009 , 42, 237-244	1.4	7
17	Insights from a pseudospectral approach to the Elder problem. <i>Water Resources Research</i> , 2009 , 45,	5.4	27
16	Approximate Solutions for Forchheimer Flow to a Well. <i>Journal of Hydraulic Engineering</i> , 2008 , 134, 1318-1325	6.8	68
15	Reply to comment by Robert P. Chapuis and Djaouida Chenaf on Shape factors for constant-head double-packer permeameters. <i>Water Resources Research</i> , 2008 , 44,	5.4	
14	Modelling radioiodine transport across a capillary fringe. <i>Journal of Environmental Radioactivity</i> , 2008 , 99, 716-29	2.4	4
13	Shape factors for constant-head double-packer permeameters. <i>Water Resources Research</i> , 2007 , 43,	5.4	13
12	Recovering tracer test input functions from fluid electrical conductivity logging in fractured porous rocks. <i>Water Resources Research</i> , 2007 , 43,	5.4	18
11	Flow to a finite diameter well in a horizontally anisotropic aquifer with wellbore storage. <i>Water Resources Research</i> , 2007 , 43,	5.4	15
10	Catchment-scale modelling of flow and nutrient transport in the Chalk unsaturated zone. <i>Ecological Modelling</i> , 2007 , 209, 41-52	3	32
9	The significance of colloids in the transport of pesticides through Chalk. <i>Science of the Total Environment</i> , 2007 , 385, 262-71	10.2	23
8	Recent advances in modelling nitrate transport in the Chalk unsaturated zone. <i>Quarterly Journal of Engineering Geology and Hydrogeology</i> , 2007 , 40, 353-359	1.4	11
7	Linearized Richards' equation approach to pumping test analysis in compressible aquifers. <i>Water Resources Research</i> , 2006 , 42,	5.4	53
6	Transient simulations of flow and transport in the Chalk unsaturated zone. <i>Journal of Hydrology</i> , 2006 , 330, 10-28	6	50
5	Hydrological processes in the Chalk unsaturated zone - Insights from an intensive field monitoring programme. <i>Journal of Hydrology</i> , 2006 , 330, 29-43	6	48
4	A simple model of variable residence time flow and nutrient transport in the chalk. <i>Journal of Hydrology</i> , 2006 , 330, 221-234	6	28

3	An improvement on Hvorslev's shape factors. <i>Geotechnique</i> , 2006 , 56, 705-706	3-4	11
2	The significance of flow in the matrix of the Chalk unsaturated zone. <i>Journal of Hydrology</i> , 2005 , 310, 62-77	6	45
1	Laplace transform inversion for late-time behavior of groundwater flow problems. <i>Water Resources Research</i> , 2003 , 39,	5-4	7