Simon A Mathias

List of Publications by Year
in descending order

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		218381	243296
74	2,144	26	44
papers	citations	h-index	g-index

75	75	75	1976
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hydraulic fractures: How far can they go?. Marine and Petroleum Geology, 2012, 37, 1-6.	1.5	208
2	Approximate Solutions for Pressure Buildup During CO2 Injection in Brine Aquifers. Transport in Porous Media, 2009, 79, 265-284.	1.2	129
3	Screening and selection of sites for CO2 sequestration based on pressure buildup. International Journal of Greenhouse Gas Control, 2009, 3, 577-585.	2.3	95
4	Pressure Buildup During CO2 Injection into a Closed Brine Aquifer. Transport in Porous Media, 2011, 89, 383-397.	1.2	86
5	Approximate Solutions for Forchheimer Flow to a Well. Journal of Hydraulic Engineering, 2008, 134, 1318-1325.	0.7	85
6	Nitrate pollution in intensively farmed regions: What are the prospects for sustaining highâ€quality groundwater?. Water Resources Research, 2011, 47, .	1.7	84
7	On relative permeability data uncertainty and CO2 injectivity estimation for brine aquifers. International Journal of Greenhouse Gas Control, 2013, 12, 200-212.	2.3	76
8	Analytical solution for Jouleâ€“Thomson cooling during CO2 geo-sequestration in depleted oil and gas reservoirs. International Journal of Greenhouse Gas Control, 2010, 4, 806-810.	2.3	68
9	A model for flow in the chalk unsaturated zone incorporating progressive weathering. Journal of Hydrology, 2009, 365, 244-260.	2.3	62
10	Role of partial miscibility on pressure buildup due to constant rate injection of CO₂ into closed and open brine aquifers. Water Resources Research, 2011, 47, .	1.7	62
11	Linearized Richards' equation approach to pumping test analysis in compressible aquifers. Water Resources Research, 2006, 42, .	1.7	60
12	Transient simulations of flow and transport in the Chalk unsaturated zone. Journal of Hydrology, 2006, 330, 10-28.	2.3	58
13	Hydrological processes in the Chalk unsaturated zone â€“ Insights from an intensive field monitoring programme. Journal of Hydrology, 2006, 330, 29-43.	2.3	58
14	Modelling long-term diffuse nitrate pollution at the catchment-scale: Data, parameter and epistemic uncertainty. Journal of Hydrology, 2011, 403, 337-351.	2.3	52
15	The significance of flow in the matrix of the Chalk unsaturated zone. Journal of Hydrology, 2005, 310, 62-77.	2.3	49
16	Probabilistic longevity estimate for the LUSI mud volcano, East Java. Journal of the Geological Society, 2011, 168, 517-523.	0.9	46
17	Masudaâ€™s sandstone core hydrate dissociation experiment revisited. Chemical Engineering Science, 2018, 175, 98-109.	1.9	45
18	Stepâ€drawdown tests and the Forchheimer equation. Water Resources Research, 2010, 46, .	1.7	42

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19	Analytical Model for CO2 Injection into Brine Aquifers-Containing Residual CH4. Transport in Porous Media, 2012, 94, 795-815.	1.2	36
20	Insights from a pseudospectral approach to the Elder problem. Water Resources Research, 2009, 45, .	1.7	33
21	Farming for Water Quality: Balancing Food Security and Nitrate Pollution in UK River Basins. Annals of the American Association of Geographers, 2013, 103, 397-407.	3.0	33
22	Catchment-scale modelling of flow and nutrient transport in the Chalk unsaturated zone. Ecological Modelling, 2007, 209, 41-52.	1.2	32
23	Hydraulic Fracture Propagation with 3-D Leak-off. Transport in Porous Media, 2009, 80, 499-518.	1.2	32
24	æŠ½æº´å'Œè‡ªç„¶æ¦ä»¶ä¸‹æº´æµåœ¨è‹±å›½è£‚éš™ç™½å ©ä¸æµåŠ¨è¿‡ç¨‹å†æž• Hydrogeology Journal, 2009, 17, 1849-1858.		
25	A simple model of variable residence time flow and nutrient transport in the chalk. Journal of Hydrology, 2006, 330, 221-234.	2.3	30
26	Deepwater canyons: An escape route for methane sealed by methane hydrate. Earth and Planetary Science Letters, 2012, 323-324, 72-78.	1.8	30
27	The significance of colloids in the transport of pesticides through Chalk. Science of the Total Environment, 2007, 385, 262-271.	3.9	24
28	A pseudospectral approach to the McWhorter and Sunada equation for two-phase flow in porous media with capillary pressure. Computational Geosciences, 2013, 17, 889-897.	1.2	24
29	Soil moisture data as a constraint for groundwater recharge estimation. Journal of Hydrology, 2017, 552, 258-266.	2.3	24
30	Numerical simulation of Forchheimer flow to a partially penetrating well with a mixed-type boundary condition. Journal of Hydrology, 2015, 524, 53-61.	2.3	23
31	Recovering tracer test input functions from fluid electrical conductivity logging in fractured porous rocks. Water Resources Research, 2007, 43, .	1.7	20
32	Heat transport and pressure buildup during carbon dioxide injection into depleted gas reservoirs. Journal of Fluid Mechanics, 2014, 756, 89-109.	1.4	19
33	Analysis of Momentum Transfer in a Lid-Driven Cavity Containing a Brinkmanâ€“Forchheimer Medium. Transport in Porous Media, 2012, 92, 101-118.	1.2	18
34	Flow to a finite diameter well in a horizontally anisotropic aquifer with wellbore storage. Water Resources Research, 2007, 43, .	1.7	16
35	An irregular feather-edge and potential outcrop of marine gas hydrate along the Mauritanian margin. Earth and Planetary Science Letters, 2015, 423, 202-209.	1.8	16
36	A study of non-linearity in rainfall-runoff response using 120 UK catchments. Journal of Hydrology, 2016, 540, 423-436.	2.3	16

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37	Impact of Maximum Allowable Cost on CO₂ Storage Capacity in Saline Formations. Environmental Science & Technology, 2015, 49, 13510-13518.	4.6	15
38	Shape factors for constant-head double-packer permeameters. Water Resources Research, 2007, 43, .	1.7	14
39	Reply: Davies etÂal. (2012), Hydraulic fractures: How far can they go?. Marine and Petroleum Geology, 2013, 43, 519-521.	1.5	14
40	A soil moisture accounting-procedure with a Richards' equation-based soil texture-dependent parameterization. Water Resources Research, 2015, 51, 506-523.	1.7	14
41	Gas Diffusion in Coal Powders is a Multi-rate Process. Transport in Porous Media, 2020, 131, 1037-1051.	1.2	14
42	An improvement on Hvorslev's shape factors. Geotechnique, 2006, 56, 705-706.	2.2	12
43	Recent advances in modelling nitrate transport in the Chalk unsaturated zone. Quarterly Journal of Engineering Geology and Hydrogeology, 2007, 40, 353-359.	0.8	12
44	Closed-form equation for subsidence due to fluid production from a cylindrical confined aquifer. Journal of Hydrology, 2019, 573, 964-969.	2.3	12
45	A Model for the Soil Freezing Characteristic Curve That Represents the Dominant Role of Salt Exclusion. Water Resources Research, 2021, 57, e2021WR030070.	1.7	12
46	Laplace transform inversion for late-time behavior of groundwater flow problems. Water Resources Research, 2003, 39, .	1.7	11
47	The realities of storing carbon dioxide - A response to CO2 storage capacity issues raised by Ehlig-Economides & Economides. Nature Precedings, 0, , .	0.1	11
48	Multiple Well Systems with Nonâ€Darcy Flow. Ground Water, 2013, 51, 588-596.	0.7	11
49	The late field life of the East Midlands Petroleum Province; a new geothermal prospect?. Quarterly Journal of Engineering Geology and Hydrogeology, 2015, 48, 104-114.	0.8	11
50	Approximate solutions for Forchheimer flow during water injection and water production in an unconfined aquifer. Journal of Hydrology, 2016, 538, 13-21.	2.3	11
51	A trigonometric interpolation approach to mixedâ€type boundary problems associated with permeameter shape factors. Water Resources Research, 2011, 47, .	1.7	10
52	A statistical analysis of well production rates from UK oil and gas fields â€“ Implications for carbon capture and storage. International Journal of Greenhouse Gas Control, 2013, 19, 510-518.	2.3	10
53	Methane hydrate recycling offshore of Mauritania probably after the last glacial maximum. Marine and Petroleum Geology, 2017, 84, 323-331.	1.5	10
54	A parameter sensitivity analysis of two Chalk tracer tests. Quarterly Journal of Engineering Geology and Hydrogeology, 2009, 42, 237-244.	0.8	9

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55	Investigation of hydromechanical processes during cyclic extraction recovery testing of a deformable rock fracture. International Journal of Rock Mechanics and Minings Sciences, 2010, 47, 517-522.	2.6	9
56	Storage Coefficients and Permeability Functions for Coal-Bed Methane Production Under Uniaxial Strain Conditions. Transport in Porous Media, 2019, 130, 627-636.	1.2	9
57	Simulation of Three-Component Two-Phase Flow in Porous Media Using Method of Lines. Transport in Porous Media, 2016, 112, 1-19.	1.2	8
58	Dissolution of CO2 From Leaking Fractures in Saline Formations. Transport in Porous Media, 2012, 94, 729-745.	1.2	7
59	A Lambert W function solution for estimating sustainable injection rates for storage of CO2 in brine aquifers. International Journal of Greenhouse Gas Control, 2013, 17, 546-548.	2.3	7
60	Gas venting that bypasses the feather edge of marine hydrate, offshore Mauritania. Marine and Petroleum Geology, 2017, 88, 402-409.	1.5	7
61	Analytical solution for clay plug swelling experiments. Applied Clay Science, 2017, 149, 75-78.	2.6	7
62	Dynamic modelling of a UK North Sea saline formation for CO ₂ sequestration. Petroleum Geoscience, 2014, 20, 169-185.	0.9	6
63	North Sea â€“ next life: extending the commercial life of producing North Sea fields. Petroleum Geology Conference Proceedings, 2018, 8, 561-570.	0.7	5
64	Modelling radioiodine transport across a capillary fringe. Journal of Environmental Radioactivity, 2008, 99, 716-729.	0.9	4
65	Transient Divergent Flow and Transport in an Infinite Anisotropic Porous Formation. Ground Water, 2010, 48, 438-441.	0.7	4
66	An approximate solution for toughness-dominated near-surface hydraulic fractures. International Journal of Fracture, 2011, 168, 93-100.	1.1	4
67	Uncertainty in static CO₂ storage capacity estimates: Case study from the North Sea, UK. , 2013, 3, 212-230.		4
68	Capillary processes increase salt precipitation during CO₂ injection in saline formations. Journal of Fluid Mechanics, 2018, 852, 398-421.	1.4	4
69	Pseudospectral methods provide fast and accurate solutions for the horizontal infiltration equation. Journal of Hydrology, 2021, 598, 126407.	2.3	4
70	Transmission loss estimation for ephemeral sand rivers in Southern Africa. Journal of Hydrology, 2021, 600, 126487.	2.3	4
71	Strain characteristics and permeability evolution of faults under stress disturbance monitoring by fibre bragg grating sensing and pressure pulses. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2021, 7, 1.	1.3	4
72	Capturing the coupled hydro-mechanical processes occurring during CO2 injection â€“ example from In Salah. Energy Procedia, 2014, 63, 3416-3424.	1.8	3

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73	Impact of sub seismic heterogeneity on CO2 injectivity. Energy Procedia, 2014, 63, 3078-3088.	1.8	1
74	Reply to comment by Robert P. Chapuis and Djaouida Chenaf on â€œShape factors for constantâ€head doubleâ€packer permeametersâ€. Water Resources Research, 2008, 44, .	1.7	0