Scott L Painter

List of Publications by Year
in descending order

101	3,634	101384	149479
papers	citations	36	56
		h-index	g-index

107	107	107	2574
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	dfnWorks: A discrete fracture network framework for modeling subsurface flow and transport. Computers and Geosciences, 2015, 84, 10-19.	2.0	264
2	Evidence for Non-Gaussian Scaling Behavior in Heterogeneous Sedimentary Formations. Water Resources Research, 1996, 32, 1183-1195.	1.7	124
3	Conforming Delaunay Triangulation of Stochastically Generated Three Dimensional Discrete Fracture Networks: A Feature Rejection Algorithm for Meshing Strategy. SIAM Journal of Scientific Computing, 2014, 36, A1871-A1894.	1.3	123
4	Stochastic simulation of radionuclide migration in discretely fractured rock near the Ã„spÃ¶ Hard Rock Laboratory. Water Resources Research, 2004, 40, .	1.7	114
5	Three-phase numerical model of water migration in partially frozen geological media: model formulation, validation, and applications. Computational Geosciences, 2011, 15, 69-85.	1.2	106
6	Upscaling discrete fracture network simulations: An alternative to continuum transport models. Water Resources Research, 2005, 41, .	1.7	104
7	Integrated surface/subsurface permafrost thermal hydrology: Model formulation and proofâ€ofâ€concept simulations. Water Resources Research, 2016, 52, 6062-6077.	1.7	102
8	Modeling the role of preferential snow accumulation in through talik development and hillslope groundwater flow in a transitional permafrost landscape. Environmental Research Letters, 2018, 13, 105006.	2.2	90
9	Time domain particle tracking methods for simulating transport with retention and firstâ€order transformation. Water Resources Research, 2008, 44, .	1.7	88
10	Effect of advective flow in fractures and matrix diffusion on natural gas production. Water Resources Research, 2015, 51, 8646-8657.	1.7	85
11	Non-isothermal, three-phase simulations of near-surface flows in a model permafrost system under seasonal variability and climate change. Journal of Hydrology, 2011, 403, 352-359.	2.3	83
12	Machine learning assisted hybrid models can improve streamflow simulation in diverse catchments across the conterminous US. Environmental Research Letters, 2020, 15, 104022.	2.2	81
13	Fractional LÃ©vy motion as a model for spatial variability in sedimentary rock. Geophysical Research Letters, 1994, 21, 2857-2860.	1.5	80
14	Constitutive Model for Unfrozen Water Content in Subfreezing Unsaturated Soils. Vadose Zone Journal, 2014, 13, 1-8.	1.3	79
15	Thermal effects of groundwater flow through subarctic fens: A case study based on field observations and numerical modeling. Water Resources Research, 2016, 52, 1591-1606.	1.7	79
16	A constrained robust least squares approach for contaminant release history identification. Water Resources Research, 2006, 42, .	1.7	78
17	Particle tracking approach for transport in three-dimensional discrete fracture networks. Computational Geosciences, 2015, 19, 1123-1137.	1.2	75
18	Evaluating the effect of internal aperture variability on transport in kilometer scale discrete fracture networks. Advances in Water Resources, 2016, 94, 486-497.	1.7	75

#	Article	IF	Citations
19	Permafrost degradation and subsurface-flow changes caused by surface warming trends. Hydrogeology Journal, 2013, 21, 271-280.	0.9	70
20	A robust approach for iterative contaminant source location and release history recovery. Journal of Contaminant Hydrology, 2006, 88, 181-196.	1.6	68
21	Influence of injection mode on transport properties in kilometer-scale three-dimensional discrete fracture networks. Water Resources Research, 2015, 51, 7289-7308.	1.7	68
22	Three-phase numerical model for subsurface hydrology in permafrost-affected regions (PFLOTRAN-ICE) Tj ETQq0 0 0 rgBT /Overlock 10 T	1.5	63
23	Stochastic Interpolation of Aquifer Properties Using Fractional LÃ©vy Motion. Water Resources Research, 1996, 32, 1323-1332.	1.7	60
24	Pathline tracing on fully unstructured control-volume grids. Computational Geosciences, 2012, 16, 1125-1134.	1.2	58
25	Power-law velocity distributions in fracture networks: Numerical evidence and implications for tracer transport. Geophysical Research Letters, 2002, 29, 20-1-20-4.	1.5	56
26	Using field observations to inform thermal hydrology models of permafrost dynamics with ATS (v0.83). Geoscientific Model Development, 2015, 8, 2701-2722.	1.3	56
27	Managing complexity in simulations of land surface and near-surface processes. Environmental Modelling and Software, 2016, 78, 134-149.	1.9	52
28	Modeling challenges for predicting hydrologic response to degrading permafrost. Hydrogeology Journal, 2013, 21, 221-224.	0.9	51
29	Flexible scaling model for use in random field simulation of hydraulic conductivity. Water Resources Research, 2001, 37, 1155-1163.	1.7	50
30	Influences and interactions of inundation, peat, and snow on active layer thickness. Geophysical Research Letters, 2016, 43, 5116-5123.	1.5	49
31	Groundwater Contamination in Karst Terranes. Water, Air and Soil Pollution, 2006, 6, 157-170.	0.8	48
32	Modeling conservative tracer transport in fracture networks with a hybrid approach based on the Boltzmann transport equation. Water Resources Research, 2003, 39, .	1.7	43
33	On the secular evolution of groundwater on Mars. Geophysical Research Letters, 2009, 36, .	1.5	43
34	On the distribution of seismic reflection coefficients and seismic amplitudes. Geophysics, 1995, 60, 1187-1194.	1.4	42
35	Random fractal models of heterogeneity: The LÃ©vy-stable approach. Mathematical Geosciences, 1995, 27, 813-830.	0.9	40
36	Patterns of fluid flow in naturally heterogeneous rocks. Physica A: Statistical Mechanics and Its Applications, 1996, 233, 619-628.	1.2	37

#	ARTICLE	IF	CITATIONS
37	Effect of soil property uncertainties on permafrost thaw projections: a calibration-constrained analysis. Cryosphere, 2016, 10, 341-358.	1.5	33
38	Permafrost Promotes Shallow Groundwater Flow and Warmer Headwater Streams. Water Resources Research, 2021, 57, e2020WR027463.	1.7	31
39	Permafrost thermal conditions are sensitive to shifts in snow timing. Environmental Research Letters, 2020, 15, 084026.	2.2	30
40	Numerical Method for Conditional Simulation of Levy Random Fields. Mathematical Geosciences, 1998, 30, 163-179.	0.9	28
41	Biogeochemical modeling of CO<sub>2</sub> and CH<sub>4</sub> production in anoxic Arctic soil microcosms. Biogeosciences, 2016, 13, 5021-5041.	1.3	27
42	Evaluating integrated surface/subsurface permafrost thermal hydrology models in ATS (v0.88) against observations from a polygonal tundra site. Geoscientific Model Development, 2020, 13, 2259-2276.	1.3	26
43	Alpha-Particle Losses in Compact Torsatron Reactors. Fusion Science and Technology, 1989, 16, 157-171.	0.6	24
44	Transport and retention in fractured rock: Consequences of a power-law distribution for fracture lengths. Physical Review E, 1998, 57, 6917-6922.	0.8	24
45	Effect of transport-pathway simplifications on projected releases of radionuclides from a nuclear waste repository (Sweden). Hydrogeology Journal, 2012, 20, 1467-1481.	0.9	24
46	Sequential Imputation of Missing Spatio-Temporal Precipitation Data Using Random Forests. Frontiers in Water, 2020, 2, .	1.0	24
47	An intermediate-scale model for thermal hydrology in low-relief permafrost-affected landscapes. Computational Geosciences, 2018, 22, 163-177.	1.2	23
48	A Subgrid Approach for Modeling Microtopography Effects on Overland Flow. Water Resources Research, 2018, 54, 6153-6167.	1.7	22
49	Transmissivity estimation for highly heterogeneous aquifers: comparison of three methods applied to the Edwards Aquifer, Texas, USA. Hydrogeology Journal, 2007, 15, 315-331.	0.9	21
50	Modelling radionuclide transport in fractured media with a dynamic update of Kd values. Computers and Geosciences, 2016, 86, 55-63.	2.0	21
51	Modeling anaerobic soil organic carbon decomposition in Arctic polygon tundra: insights into soil geochemical influences on carbon mineralization. Biogeosciences, 2019, 16, 663-680.	1.3	21
52	Fast wave heating experiments in the ion cyclotron range of frequencies on ATF. Nuclear Fusion, 1992, 32, 1225-1240.	1.6	20
53	Significance of Kinetics for Sorption on Inorganic Colloids:Â Modeling and Experiment Interpretation Issues. Environmental Science & Technology, 2002, 36, 5369-5375.	4.6	20
54	Robust Representation of Dry Cells in Singleâ€Layer MODFLOW Models. Ground Water, 2008, 46, 873-881.	0.7	20

#	ARTICLE	IF	CITATIONS
55	Kinetics of Methylmercury Production Revisited. Environmental Science & Technology, 2018, 52, 2063-2070.	4.6	20
56	Coupling surface flow and subsurface flow in complex soil structures using mimetic finite differences. Advances in Water Resources, 2020, 144, 103701.	1.7	19
57	Simulating Residual Saturation and Relative Permeability in Heterogeneous Formations. SPE Journal, 1998, 3, 211-218.	1.7	16
58	Quantifying root water extraction after drought recovery using sub-mm in situ empirical data. Plant and Soil, 2018, 424, 73-89.	1.8	16
59	Equilibrium, Stability, and Deeply Trapped Energetic Particle Confinement Calculations for l = 2 Torsatron/Heliotron Configurations. Fusion Science and Technology, 1991, 19, 217-233.	0.6	14
60	Prediction uncertainty for tracer migration in random heterogeneities with multifractal character. Advances in Water Resources, 1999, 23, 49-57.	1.7	14
61	Stochastic analysis of early tracer arrival in a segmented fracture pathway. Water Resources Research, 2001, 37, 1669-1680.	1.7	14
62	Addressing numerical challenges in introducing a reactive transport code into a land surface model: a biogeochemical modeling proof-of-concept with CLMâ€"PFLOTRAN 1.0. Geoscientific Model Development, 2016, 9, 927-946.	1.3	14
63	Geomechanical and Thermal Effects on Moisture Flow at the Proposed Yucca Mountain Nuclear Waste Repository. Nuclear Technology, 2001, 134, 241-262.	0.7	13
64	Multiscale Framework for Modeling Multicomponent Reactive Transport in Stream Corridors. Water Resources Research, 2018, 54, 7216-7230.	1.7	13
65	Transport analysis of stellarator reactors. Nuclear Fusion, 1991, 31, 2271-2290.	1.6	12
66	Full-Bayesian Inversion of the Edwards Aquifer. Ground Water, 2004, 42, 724-733.	0.7	12
67	A Particleâ€'Based Conditional Sampling Scheme for the Simulation of Transport in Fractured Rock With Diffusion Into Stagnant Water and Rock Matrix. Water Resources Research, 2020, 56, e2019WR026958.	1.7	12
68	From legacy contamination to watershed systems science: a review of scientific insights and technologies developed through DOE-supported research in water and energy security. Environmental Research Letters, 2022, 17, 043004.	2.2	12
69	Application of LeÂ´vy Random Fractal Simulation Techniques in Modeling Reservoir Mechanisms in the Kuparuk River Field, North Slope, Alaska. SPE Reservoir Evaluation and Engineering, 2000, 3, 263-271.	1.1	10
70	Comparative Measures of Radionuclide Containment in the Crystalline Geophere. Nuclear Science and Engineering, 2002, 142, 292-304.	0.5	10
71	Estimating Watershed Subsurface Permeability From Stream Discharge Data Using Deep Neural Networks. Frontiers in Earth Science, 2021, 9, .	0.8	10
72	Toward more mechanistic representations of biogeochemical processes in river networks: Implementation and demonstration of a multiscale model. Environmental Modelling and Software, 2021, 145, 105166.	1.9	10

#	Article	IF	Citations
73	Using Temperature to Test Models of Flow Near Yucca Mountain, Nevada. Ground Water, 2003, 41, 657-666.	0.7	9
74	Conceptualization and Simulation of the Edwards Aquifer, San Antonio Region, Texas. , 2005, , 122.		9
75	Time-Domain Random-Walk Algorithms for Simulating Radionuclide Transport in Fractured Porous Rock. Nuclear Technology, 2008, 163, 129-136.	0.7	9
76	Radionuclide transport during glacial cycles: Comparison of two approaches for representing flow transients. Physics and Chemistry of the Earth, 2013, 64, 32-45.	1.2	9
77	Orbit confinement and neoclassical transport in the H-1 heliac. Nuclear Fusion, 1993, 33, 1107-1118.	1.6	8
78	Advanced Toroidal Facility II Studies. Fusion Science and Technology, 1990, 17, 188-205.	0.6	7
79	Reply [to â€œComment on â€˜Evidence for non-Gaussian scaling behavior in heterogeneous sedimentary formationsâ€™ by Scott Painterâ€]. Water Resources Research, 1997, 33, 909-910.	1.7	7
80	Particle orbits and drift surfaces in a heliac. Nuclear Fusion, 1998, 38, 1001-1012.	1.6	7
81	Statistical Characterization of Spatial Variability in Sedimentary Rock. , 2003, , 187-206.		7
82	Improved Technique for Stochastic Interpolation of Reservoir Properties. SPE Journal, 1997, 2, 48-57.	1.7	6
83	Mesh Infrastructure for Coupled Multiprocess Geophysical Simulations. Procedia Engineering, 2014, 82, 34-45.	1.2	6
84	On the Reliability of Parameter Inferences in a Multiscale Model for Transport in Stream Corridors. Water Resources Research, 2021, 57, e2020WR028908.	1.7	6
85	Twoâ€dimensional Thomson scattering system for ATF. Review of Scientific Instruments, 1986, 57, 1816-1818.	0.6	4
86	On the Representation of Hyporheic Exchange in Models for Reactive Transport in Stream and River Corridors. Frontiers in Water, 2021, 2, .	1.0	4
87	Monte Carlo Transport Simulation Techniques for Stellarator Fusion Experiments. Australian Journal of Physics, 1999, 52, 715.	0.6	4
88	The AQUAâ€MER databases and aqueous speciation server: A web resource for multiscale modeling of mercury speciation. Journal of Computational Chemistry, 2020, 41, 147-155.	1.5	3
89	Joint estimation of biogeochemical model parameters from multiple experiments: A bayesian approach applied to mercury methylation. Environmental Modelling and Software, 2022, 155, 105453.	1.9	3
90	Insitudye laser calibration for Thomson scattering diagnostics. Review of Scientific Instruments, 1988, 59, 1464-1466.	0.6	2

#	ARTICLE	IF	CITATIONS
91	Design-Oriented Methods for One-Dimensional Analysis of Fusion Reactor Plasma Performance. Fusion Science and Technology, 1992, 21, 1617-1623.	0.6	2
92	Data-parallel algorithms for Monte Carlo simulation of neoclassical transport in magnetically confined plasmas. Computer Physics Communications, 1993, 77, 342-356.	3.0	2
93	Calculation of resident groundwater concentration by post-processing particle-tracking results. Computational Geosciences, 2013, 17, 189-196.	1.2	2
94	Numerical Simulation of Thermal-Hydrological Processes Observed at the Drift-Scale Heater Test at Yucca Mountain, Nevada. Elsevier Geo-Engineering Book Series, 2004, 2, 175-180.	0.0	1
95	Detached Eddy Simulations and Transient RANS Simulations of Turbulent Flow in the Lower Plenum of a Gas-Cooled Reactor. , 2008, , .		1
96	Assessment of DES Multiscale Turbulence Models for Prediction of Flow and Heat Transfer in an Axial-Channel Rod Configuration. , 2008, , .		1
97	Transport studies of compact torsatron reactors. , 0, , .		0
98	Comparative Assessment of Turbulence Models for Unsteady Turbulent Flow Predictions in Single Rod Channel Configuration. , 2007, , 211.		0
99	Transient Modeling of Permafrost Dynamics in Changing Climate Scenarios. , 2011, , .		0
100	Spatial Variability and Parametric Uncertainty in Performance Assessment Models. , 2010, , .		0
101	Levy Stochastic Model for the Variations in the Properties of Sedimentary Rock. , 1994, , .		0