Dongxiao Zhang

List of Publications by Citations

270 papers	8,856 citations	49 h-index	82 g-index
300 ext. papers	10,221 ext. citations	4.7 avg, IF	6.84 L-index

#	Paper	IF	Citations
270	Slowdown of the meridional overturning circulation in the upper Pacific Ocean. *Nature*, **2002**, 415, 603-8	50.4	407
269	Data assimilation for transient flow in geologic formations via ensemble Kalman filter. *Advances in Water Resources*, **2006**, 29, 1107-1122	4.7	260
268	An efficient, high-order perturbation approach for flow in random porous media via Karhunen□ Loeve and polynomial expansions. *Journal of Computational Physics*, **2004**, 194, 773-794	4.1	245
267	Atlantic Meridional Overturning Circulation (AMOC) in CMIP5 Models: RCP and Historical Simulations. *Journal of Climate*, **2013**, 26, 7187-7197	4.4	241
266	Efficient Ensemble-Based Closed-Loop Production Optimization. *SPE Journal*, **2009**, 14, 634-645	3.1	205
265	Displacement of a two-dimensional immiscible droplet in a channel. *Physics of Fluids*, **2002**, 14, 3203-3214	4.4	204
264	Convective stability analysis of the long-term storage of carbon dioxide in deep saline aquifers. *Advances in Water Resources*, **2006**, 29, 397-407	4.7	200
263	Pore scale study of flow in porous media: Scale dependency, REV, and statistical REV. *Geophysical Research Letters*, **2000**, 27, 1195-1198	4.9	194
262	Lattice Boltzmann simulation of chemical dissolution in porous media. *Physical Review E*, **2002**, 65, 036318	2.4	183
261	Observed freshening and warming of the western Pacific Warm Pool. *Climate Dynamics*, **2009**, 33, 565-589	4.2	177
260	Lattice Boltzmann pore-scale model for multicomponent reactive transport in porous media. *Journal of Geophysical Research*, **2006**, 111, n/a-n/a		170
259	Probabilistic collocation method for flow in porous media: Comparisons with other stochastic methods. *Water Resources Research*, **2007**, 43,	5.4	159
258	Comprehensive review of caprock-sealing mechanisms for geologic carbon sequestration. *Environmental Science & Technology*, **2013**, 47, 9-22	10.3	154
257	Pacific Ocean circulation rebounds. *Geophysical Research Letters*, **2004**, 31,	4.9	141
256	An improved lattice Boltzmann model for multicomponent reactive transport in porous media at the pore scale. *Water Resources Research*, **2007**, 43,	5.4	136
255	Data assimilation for distributed hydrological catchment modeling via ensemble Kalman filter. *Advances in Water Resources*, **2010**, 33, 678-690	4.7	132
254	Simulation of dissolution and precipitation in porous media. *Journal of Geophysical Research*, **2003**, 108,		119

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253	Unified lattice Boltzmann method for flow in multiscale porous media. *Physical Review E*, **2002**, 66, 056307	2.4	105
252	Displacement of a three-dimensional immiscible droplet in a duct. *Journal of Fluid Mechanics*, **2005**, 545, 41	3.7	97
251	Coupled fluid-flow and geomechanics for triple-porosity/dual-permeability modeling of coalbed methane recovery. *International Journal of Rock Mechanics and Minings Sciences*, **2010**, 47, 1242-1253	6	95
250	Non-modal growth of perturbations in density-driven convection in porous media. *Journal of Fluid Mechanics*, **2008**, 609, 285-303	3.7	95
249	Observational Evidence for Flow between the Subtropical and Tropical Atlantic: The Atlantic Subtropical Cells*. *Journal of Physical Oceanography*, **2003**, 33, 1783-1797	2.4	94
248	Immiscible displacement in a channel: simulations of fingering in two dimensions. *Advances in Water Resources*, **2004**, 27, 13-22	4.7	93
247	Influence of African dust on ocean–atmosphere variability in the tropical Atlantic. *Nature Geoscience*, **2011**, 4, 762-765	18.3	83
246	Investigation of flow and transport processes at the MADE site using ensemble Kalman filter. *Advances in Water Resources*, **2008**, 31, 975-986	4.7	83
245	Decadal variability of the shallow Pacific meridional overturning circulation: Relation to tropical sea surface temperatures in observations and climate change models. *Ocean Modelling*, **2006**, 15, 250-273	3	81
244	Multi-crack interaction in limestone subject to stress and flow of chemical solutions. *International Journal of Rock Mechanics and Minings Sciences*, **2009**, 46, 159-171	6	78
243	Numerical simulation of proppant transport in hydraulic fracture with the upscaling CFD-DEM method. *Journal of Natural Gas Science and Engineering*, **2016**, 33, 264-277	4.6	76
242	The NCEP GODAS Ocean Analysis of the Tropical Pacific Mixed Layer Heat Budget on Seasonal to Interannual Time Scales. *Journal of Climate*, **2010**, 23, 4901-4925	4.4	74
241	History matching of facies distribution with the EnKF and level set parameterization. *Journal of Computational Physics*, **2010**, 229, 8011-8030	4.1	74
240	Lattice Boltzmann model for crystal growth from supersaturated solution. *Geophysical Research Letters*, **2004**, 31, n/a-n/a	4.9	72
239	Mean transport and seasonal cycle of the Kuroshio east of Taiwan with comparison to the Florida Current. *Journal of Geophysical Research*, **2001**, 106, 22143-22158		72
238	Synthetic well logs generation via Recurrent Neural Networks. *Petroleum Exploration and Development*, **2018**, 45, 629-639	4.5	71
237	A sparse grid based Bayesian method for contaminant source identification. *Advances in Water Resources*, **2012**, 37, 1-9	4.7	68
236	Laboratory characterisation of fracture compressibility for coal and shale gas reservoir rocks: A review. *International Journal of Coal Geology*, **2019**, 204, 1-17	5.5	64

235	Environmental impacts of hydraulic fracturing in shale gas development in the United States. *Petroleum Exploration and Development*, **2015**, 42, 876-883	4.5	63
234	Deep learning of subsurface flow via theory-guided neural network. *Journal of Hydrology*, **2020**, 584, 124700	6	62
233	Assessing leakage detectability at geologic CO2 sequestration sites using the probabilistic collocation method. *Advances in Water Resources*, **2013**, 56, 49-60	4.7	62
232	Onset of convection over a transient base-state in anisotropic and layered porous media. *Journal of Fluid Mechanics*, **2009**, 641, 227-244	3.7	61
231	Mechanisms for Geological Carbon Sequestration. *Procedia IUTAM*, **2014**, 10, 319-327		60
230	Higher-Order Effects on Flow and Transport in Randomly Heterogeneous Porous Media. *Water Resources Research*, **1996**, 32, 571-582	5.4	59
229	Multiscale pore structure and its effect on gas transport in organic-rich shale. *Water Resources Research*, **2017**, 53, 5438-5450	5.4	58
228	On stochastic modeling of flow in multimodal heterogeneous formations. *Water Resources Research*, **2002**, 38, 8-1-8-15	5.4	58
227	Numerical solutions to statistical moment equations of groundwater flow in nonstationary, bounded, heterogeneous media. *Water Resources Research*, **1998**, 34, 529-538	5.4	56
226	Eulerian-Lagrangian Analysis of Transport Conditioned on Hydraulic Data: 1. Analytical-Numerical Approach. *Water Resources Research*, **1995**, 31, 39-51	5.4	55
225	Data assimilation for nonlinear problems by ensemble Kalman filter with reparameterization. *Journal of Petroleum Science and Engineering*, **2009**, 66, 1-14	4.4	54
224	Nonstationary stochastic analysis of transient unsaturated flow in randomly heterogeneous media. *Water Resources Research*, **1999**, 35, 1127-1141	5.4	54
223	Stochastic analysis of unsaturated flow with probabilistic collocation method. *Water Resources Research*, **2009**, 45,	5.4	53
222	Numerical modeling of pore-scale phenomena during CO2 sequestration in oceanic sediments. *Fuel Processing Technology*, **2005**, 86, 1647-1665	7.2	50
221	A review of phase behavior simulation of hydrocarbons in confined space: Implications for shale oil and shale gas. *Journal of Natural Gas Science and Engineering*, **2019**, 68, 102901	4.6	49
220	Coupled thermo-hydro-mechanical analysis of stimulation and production for fractured geothermal reservoirs. *Applied Energy*, **2019**, 247, 40-59	10.7	47
219	A fully coupled thermo-hydro-mechanical, three-dimensional model for hydraulic stimulation treatments. *Journal of Natural Gas Science and Engineering*, **2016**, 34, 64-84	4.6	45
218	Stochastic analysis of steady-state unsaturated flow in heterogeneous media: Comparison of the Brooks-Corey and Gardner-Russo Models. *Water Resources Research*, **1998**, 34, 1437-1449	5.4	45

217	Efficient Ensemble-Based Closed-Loop Production Optimization **2008**,		44
216	Effect of Local Dispersion on Solute Transport in Randomly Heterogeneous Media. *Water Resources Research*, **1996**, 32, 2715-2723	5.4	44
215	A Comparative Study of the Probabilistic-Collocation and Experimental-Design Methods for Petroleum-Reservoir Uncertainty Quantification. *SPE Journal*, **2011**, 16, 429-439	3.1	43
214	Probabilistic collocation method for unconfined flow in heterogeneous media. *Journal of Hydrology* , **2009**, 365, 4-10	6	43
213	Impact of Adsorption on Gas Transport in Nanopores. *Scientific Reports*, **2016**, 6, 23629	4.9	43
212	A multimodel data assimilation framework via the ensemble Kalman filter. *Water Resources Research*, **2014**, 50, 4197-4219	5.4	41
211	An adsorbed gas estimation model for shale gas reservoirs via statistical learning. *Applied Energy*, **2017**, 197, 327-341	10.7	40
210	Efficient and Accurate Quantification of Uncertainty for Multiphase Flow With the Probabilistic Collocation Method. *SPE Journal*, **2009**, 14, 665-679	3.1	40
209	Stochastic collocation and mixed finite elements for flow in porous media. *Computer Methods in Applied Mechanics and Engineering*, **2008**, 197, 3547-3559	5.7	39
208	Water flow and solute spreading in heterogeneous soils with spatially variable water content. *Water Resources Research*, **1999**, 35, 415-426	5.4	39
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205	Dynamic Reservoir Data Assimilation With an Efficient, Dimension-Reduced Kalman Filter. *SPE Journal*, **2007**, 12, 108-117	3.1	36
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199	Probabilistic collocation method for strongly nonlinear problems: 1. Transform by location. *Water Resources Research*, **2013**, 49, 7911-7928	5.4	34
198	A stochastic collocation based Kalman filter for data assimilation. *Computational Geosciences*, **2010**, 14, 721-744	2.7	34
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196	Stochastic Analysis of Immiscible Two-Phase Flow in Heterogeneous Media. *SPE Journal*, **1999**, 4, 380-388	3.1	33
195	Nonergodic Solute Transport in Three-Dimensional Heterogeneous Isotropic Aquifers. *Water Resources Research*, **1996**, 32, 2955-2963	5.4	33
194	A New Approach to the Modeling of Hydraulic-Fracturing Treatments in Naturally Fractured Reservoirs. *SPE Journal*, **2017**, 22, 1064-1081	3.1	32
193	Multimodel Bayesian analysis of groundwater data worth. *Water Resources Research*, **2014**, 50, 8481-8496	5.4	32
192	Long-term viability of carbon sequestration in deep-sea sediments. *Science Advances*, **2018**, 4, eaao6588	14.3	31
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189	Quantitative dynamic analysis of gas desorption contribution to production in shale gas reservoirs. *Journal of Unconventional Oil and Gas Resources*, **2015**, 9, 18-30		30
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170	Deep learning based forecasting of photovoltaic power generation by incorporating domain knowledge. *Energy*, **2021**, 225, 120240	7.9	25
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158	Stochastic Analysis of Transient Flow in Heterogeneous, Variably Saturated Porous Media: The van Genuchten~~M~~ualem Constitutive Model. *Vadose Zone Journal*, **2002**, 1, 137-149	2.7	20
157	Ensemble Neural Networks (ENN): A gradient-free stochastic method. *Neural Networks*, **2019**, 110, 170-185	9.5	20
156	History Matching of Channelized Reservoirs With Vector-Based Level-Set Parameterization. *SPE Journal*, **2014**, 19, 514-529	3.1	19
155	Lattice Boltzmann Simulation of Particle Motion in Binary Immiscible Fluids. *Communications in Computational Physics*, **2015**, 18, 757-786	2.4	19
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150	Data Assimilation of Coupled Fluid Flow and Geomechanics Using the Ensemble Kalman Filter. *SPE Journal*, **2010**, 15, 382-394	3.1	18
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142	A Fully Coupled Multiphase Multicomponent Flow and Geomechanics Model for Enhanced Coalbed-Methane Recovery and CO2 Storage. *SPE Journal*, **2013**, 18, 448-467	3.1	17
141	A stochastic analysis of steady state two-phase flow in heterogeneous media. *Water Resources Research*, **2005**, 41,	5.4	17
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139	A two-stage adaptive stochastic collocation method on nested sparse grids for multiphase flow in randomly heterogeneous porous media. *Journal of Computational Physics*, **2017**, 330, 828-845	4.1	16
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137	Stochastic representation and dimension reduction for non-Gaussian random fields: review and reflection. *Stochastic Environmental Research and Risk Assessment*, **2013**, 27, 1621-1635	3.5	16
136	Moment-Equation Approach to Single Phase Fluid Flow in Heterogeneous Reservoirs. *SPE Journal*, **1999**, 4, 118-127	3.1	16
135	Probabilistic collocation method for strongly nonlinear problems: 3. Transform by time. *Water Resources Research*, **2016**, 52, 2366-2375	5.4	15
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