

# Ahmed H Elsheikh

## List of Publications by Year in descending order

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44  
papers

881  
citations

430874

18  
h-index

477307

29  
g-index

44  
all docs

44  
docs citations

44  
times ranked

817  
citing authors

#	ARTICLE	IF	CITATIONS
1	Efficient Bayesian inference of subsurface flow models using nested sampling and sparse polynomial chaos surrogates. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 269, 515-537.	6.6	86
2	Parametric generation of conditional geological realizations using generative neural networks. <i>Computational Geosciences</i> , 2019, 23, 925-952.	2.4	65
3	Reservoir Modeling for Flow Simulation by Use of Surfaces, Adaptive Unstructured Meshes, and an Overlapping-Control-Volume Finite-Element Method. <i>SPE Reservoir Evaluation and Engineering</i> , 2015, 18, 115-132.	1.8	64
4	A machine learning approach for efficient uncertainty quantification using multiscale methods. <i>Journal of Computational Physics</i> , 2018, 354, 493-511.	3.8	64
5	Iterative ensemble smoothers in the annealed importance sampling framework. <i>Advances in Water Resources</i> , 2015, 86, 231-239.	3.8	41
6	Reduced-Order Modeling of Subsurface Multi-phase Flow Models Using Deep Residual Recurrent Neural Networks. <i>Transport in Porous Media</i> , 2019, 126, 713-741.	2.6	41
7	Surrogate accelerated sampling of reservoir models with complex structures using sparse polynomial chaos expansion. <i>Advances in Water Resources</i> , 2015, 86, 385-399.	3.8	40
8	Clustered iterative stochastic ensemble method for multi-modal calibration of subsurface flow models. <i>Journal of Hydrology</i> , 2013, 491, 40-55.	5.4	29
9	Data-driven surrogates for rapid simulation and optimization of WAG injection in fractured carbonate reservoirs. <i>Petroleum Geoscience</i> , 2017, 23, 270-283.	1.5	29
10	Nested sampling algorithm for subsurface flow model selection, uncertainty quantification, and nonlinear calibration. <i>Water Resources Research</i> , 2013, 49, 8383-8399.	4.2	28
11	Robust optimisation of CO <sub>2</sub> sequestration strategies under geological uncertainty using adaptive sparse grid surrogates. <i>Computational Geosciences</i> , 2014, 18, 763-778.	2.4	27
12	Accounting for model error in Bayesian solutions to hydrogeophysical inverse problems using a local basis approach. <i>Advances in Water Resources</i> , 2018, 116, 195-207.	3.8	27
13	Comparison of ensemble filtering algorithms and null-space Monte Carlo for parameter estimation and uncertainty quantification using CO <sub>2</sub> sequestration data. <i>Water Resources Research</i> , 2013, 49, 8108-8127.	4.2	26
14	Reservoir uncertainty tolerant, proactive control of intelligent wells. <i>Computational Geosciences</i> , 2016, 20, 655-676.	2.4	26
15	Sparse calibration of subsurface flow models using nonlinear orthogonal matching pursuit and an iterative stochastic ensemble method. <i>Advances in Water Resources</i> , 2013, 56, 14-26.	3.8	25
16	Parametrization of Stochastic Inputs Using Generative Adversarial Networks With Application in Geology. <i>Frontiers in Water</i> , 2020, 2, .	2.3	24
17	An iterative stochastic ensemble method for parameter estimation of subsurface flow models. <i>Journal of Computational Physics</i> , 2013, 242, 696-714.	3.8	23
18	Hybrid nested sampling algorithm for Bayesian model selection applied to inverse subsurface flow problems. <i>Journal of Computational Physics</i> , 2014, 258, 319-337.	3.8	23

#	ARTICLE	IF	CITATIONS
19	Accelerating Monte Carlo Markov chains with proxy and error models. Computers and Geosciences, 2015, 85, 38-48.	4.2	18
20	Proactive Optimization of Intelligent-Well Production Using Stochastic Gradient-Based Algorithms. SPE Reservoir Evaluation and Engineering, 2016, 19, 239-252.	1.8	18
21	A reliable triangular mesh intersection algorithm and its application in geological modelling. Engineering With Computers, 2014, 30, 143-157.	6.1	16
22	Regression-based sparse polynomial chaos for uncertainty quantification of subsurface flow models. Journal of Computational Physics, 2019, 399, 108909.	3.8	16
23	Quantification of prediction uncertainty using imperfect subsurface models with model error estimation. Journal of Hydrology, 2019, 576, 764-783.	5.4	15
24	Calibration of channelized subsurface flow models using nested sampling and soft probabilities. Advances in Water Resources, 2015, 75, 14-30.	3.8	13
25	A posteriori error estimation based on numerical realization of the variational multiscale method. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 3637-3656.	6.6	9
26	A Comparison Study Between an Adaptive Quadtree Grid and Uniform Grid Upscaling for Reservoir Simulation. Transport in Porous Media, 2013, 98, 377-400.	2.6	9
27	Optimal Bayesian experimental design for subsurface flow problems. Computer Methods in Applied Mechanics and Engineering, 2020, 370, 113208.	6.6	9
28	Boosting iterative stochastic ensemble method for nonlinear calibration of subsurface flow models. Computer Methods in Applied Mechanics and Engineering, 2013, 259, 10-23.	6.6	8
29	Probabilistic model-error assessment of deep learning proxies: an application to real-time inversion of borehole electromagnetic measurements. Geophysical Journal International, 2022, 230, 1800-1817.	2.4	7
30	Stochastic optimal well control in subsurface reservoirs using reinforcement learning. Engineering Applications of Artificial Intelligence, 2022, 114, 105106.	8.1	7
31	A consistent octree hanging node elimination algorithm for hexahedral mesh generation. Advances in Engineering Software, 2014, 75, 86-100.	3.8	6
32	Hydrogeophysical Parameter Estimation Using Iterative Ensemble Smoothing and Approximate Forward Solvers. Frontiers in Environmental Science, 2019, 7, .	3.3	6
33	A nested sampling particle filter for nonlinear data assimilation. Quarterly Journal of the Royal Meteorological Society, 2014, 140, 1640-1653.	2.7	5
34	Flexible iterative ensemble smoother for calibration of perfect and imperfect models. Computational Geosciences, 2021, 25, 373-394.	2.4	5
35	Generating unrepresented proportions of geological facies using Generative Adversarial Networks. Computers and Geosciences, 2022, 162, 105085.	4.2	5
36	Efficient Integration of Production and Seismic Data into Reservoir Models Exhibiting Complex Connectivity Using an Iterative Ensemble Smoother. , 2015, , .		4

#	ARTICLE	IF	CITATIONS
37	Robust Algorithms for History Matching of Imperfect Subsurface Models. SPE Journal, 2020, 25, 3300-3316.	3.1	4
38	Probabilistic forecasting for geosteering in fluvial successions using a generative adversarial network. First Break, 2021, 39, 45-50.	0.4	4
39	A Machine Learning Based Hybrid Multi-Fidelity Multi-Level Monte Carlo Method for Uncertainty Quantification. Frontiers in Environmental Science, 2019, 7, .	3.3	3
40	Machine learning-based multiscale constitutive modelling: Development and application to dual-porosity mass transfer. Advances in Water Resources, 2022, 163, 104166.	3.8	3
41	Data-driven acceleration of multiscale methods for uncertainty quantification: application in transient multiphase flow in porous media. GEM - International Journal on Geomathematics, 2020, 11, 1.	1.6	2
42	Development of a Probabilistic Framework for Risk-Based Well Decommissioning Design. SPE Journal, 2021, 26, 1946-1963.	3.1	1
43	Assessment of two a posteriori error estimators for elasticity problems. Canadian Journal of Civil Engineering, 2008, 35, 1239-1250.	1.3	0
44	Identifiability of Model Discrepancy Parameters in History Matching. , 2019, , .		0