Behnam Jafarpour

List of Publications by Year
in descending order

65 papers	1,769 citations	331670 21 h-index	276875 41 g-index
65 all docs	65 docs citations	65 times ranked	798 citing authors

#	Article	IF	Citations
1	Reservoir Characterization With the Discrete Cosine Transform. SPE Journal, 2009, 14, 182-201.	3.1	127
2	History matching with an ensemble Kalman filter and discrete cosine parameterization. Computational Geosciences, 2008, 12, 227-244.	2.4	123
3	A simultaneous perturbation stochastic approximation algorithm for coupled well placement and control optimization under geologic uncertainty. Computational Geosciences, 2013, 17, 167-188.	2.4	111
4	A Probability Conditioning Method (PCM) forÂNonlinear Flow Data Integration into Multipoint Statistical Facies Simulation. Mathematical Geosciences, 2011, 43, 133-164.	2.4	97
5	Compressed History Matching: Exploiting Transform-Domain Sparsity for Regularization ofÂNonlinear Dynamic Data Integration Problems. Mathematical Geosciences, 2010, 42, 1-27.	2.4	83
6	A variable-control well placement optimization for improved reservoir development. Computational Geosciences, 2012, 16, 871-889.	2.4	82
7	Sparse geologic dictionaries for subsurface flow model calibration: Part I. Inversion formulation. Advances in Water Resources, 2012, 39, 106-121.	3.8	78
8	Estimating Channelized-Reservoir Permeabilities With the Ensemble Kalman Filter: The Importance of Ensemble Design. SPE Journal, 2009, 14, 374-388.	3.1	72
9	Optimization of hydraulic fracturing design under spatially variable shale fracability. Journal of Petroleum Science and Engineering, 2016, 138, 174-188.	4.2	72
10	Transform-domain sparsity regularization for inverse problems in geosciences. Geophysics, 2009, 74, R69-R83.	2.6	68
11	Wavelet Reconstruction of Geologic Facies From Nonlinear Dynamic Flow Measurements. IEEE Transactions on Geoscience and Remote Sensing, 2011, 49, 1520-1535.	6.3	68
12	A generalized grid connectivityâ€“based parameterization for subsurface flow model calibration. Water Resources Research, 2011, 47, .	4.2	64
13	Efficient Production Optimization With Flow-Network Models. SPE Journal, 2014, 19, 1083-1095.	3.1	51
14	Controlled CO₂ injection into heterogeneous geologic formations for improved solubility and residual trapping. Water Resources Research, 2012, 48, .	4.2	50
15	Sparse geologic dictionaries for subsurface flow model calibration: Part II. Robustness to uncertainty. Advances in Water Resources, 2012, 39, 122-136.	3.8	43
16	Effective solution of nonlinear subsurface flow inverse problems in sparse bases. Inverse Problems, 2010, 26, 105016.	2.0	39
17	Convolutional neural networks (CNN) for feature-based model calibration under uncertain geologic scenarios. Computational Geosciences, 2020, 24, 1625-1649.	2.4	39
18	A Bayesian mixtureâ€modeling approach for flowâ€conditioned multipleâ€point statistical facies simulation from uncertain training images. Water Resources Research, 2013, 49, 328-342.	4.2	37

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19	Integration of microseismic monitoring data into coupled flow and geomechanical models with ensemble Kalman filter. Water Resources Research, 2015, 51, 5177-5197.	4.2	32
20	A reduced random sampling strategy for fast robust well placement optimization. Journal of Petroleum Science and Engineering, 2020, 184, 106414.	4.2	29
21	Inference of permeability distribution from injectionâ€induced discrete microseismic events with kernel density estimation and ensemble Kalman filter. Water Resources Research, 2012, 48, .	4.2	24
22	A sparse Bayesian framework for conditioning uncertain geologic models to nonlinear flow measurements. Advances in Water Resources, 2010, 33, 1024-1042.	3.8	23
23	Inference of permeability heterogeneity from joint inversion of transient flow and temperature data. Water Resources Research, 2014, 50, 4710-4725.	4.2	19
24	Geologic CO2 Storage Optimization under Geomechanical Risk Using Coupled-Physics Models. International Journal of Greenhouse Gas Control, 2021, 110, 103385.	4.6	19
25	Dynamic characterization of geologic CO2 storage aquifers from monitoring data with ensemble Kalman filter. International Journal of Greenhouse Gas Control, 2019, 81, 199-215.	4.6	18
26	Groupâ€sparsity regularization for illâ€posed subsurface flow inverse problems. Water Resources Research, 2015, 51, 8607-8626.	4.2	17
27	Simultaneous geologic scenario identification and flow model calibration with group-sparsity formulations. Advances in Water Resources, 2016, 92, 208-227.	3.8	17
28	Transfer Learning with Recurrent Neural Networks for Long-Term Production Forecasting in Unconventional Reservoirs. SPE Journal, 2022, 27, 2425-2442.	3.1	17
29	Prior model identification during subsurface flow data integration with adaptive sparse representation techniques. Computational Geosciences, 2014, 18, 3-16.	2.4	16
30	Dynamic Fracture Characterization From Tracer-Test and Flow-Rate Data With Ensemble Kalman Filter. SPE Journal, 2018, 23, 449-466.	3.1	16
31	Deep Convolutional Autoencoders for Robust Flow Model Calibration Under Uncertainty in Geologic Continuity. Water Resources Research, 2021, 57, e2021WR029754.	4.2	15
32	Sparse Randomized Maximum Likelihood (SpRML) for subsurface flow model calibration and uncertainty quantification. Advances in Water Resources, 2014, 69, 23-37.	3.8	14
33	A distance transform for continuous parameterization of discrete geologic facies for subsurface flow model calibration. Water Resources Research, 2017, 53, 8226-8249.	4.2	14
34	Pilot points method for conditioning multiple-point statistical facies simulation on flow data. Advances in Water Resources, 2018, 115, 219-233.	3.8	14
35	Learning sparse geologic dictionaries from low-rank representations of facies connectivity for flow model calibration. Water Resources Research, 2013, 49, 7088-7101.	4.2	12
36	Optimization of Hydraulic Fracturing Design under Spatially Variable Shale Fracability. , 2014, , .		12

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37	Hybrid Parameterization for Robust History Matching. SPE Journal, 2014, 19, 487-499.	3.1	11
38	Recurrent neural networks for short-term and long-term prediction of geothermal reservoirs. Geothermics, 2022, 104, 102439.	3.4	11
39	Fast linearized forecasts for subsurface flow data assimilation with ensemble Kalman filter. Computational Geosciences, 2016, 20, 929-952.	2.4	9
40	Inference of Rock Flow and Mechanical Properties from Injection-Induced Microseismic Events During Geologic CO2 Storage. International Journal of Greenhouse Gas Control, 2021, 105, 103206.	4.6	9
41	Integration of soft data into multiple-point statistical simulation: re-assessing the probability conditioning method for facies model calibration. Computational Geosciences, 2019, 23, 683-703.	2.4	8
42	Inverting subsurface flow data for geologic scenarios selection with convolutional neural networks. Advances in Water Resources, 2021, 149, 103840.	3.8	8
43	Stochastic Oilfield Optimization Under Uncertain Future Development Plans. SPE Journal, 2019, 24, 1526-1551.	3.1	7
44	Conditioning generative adversarial networks on nonlinear data for subsurface flow model calibration and uncertainty quantification. Computational Geosciences, 2022, 26, 29-52.	2.4	7
45	A unified formulation for generalized oilfield development optimization. Computational Geosciences, 2017, 21, 47-74.	2.4	6
46	Discrete Regularization for Calibration of Geologic Facies Against Dynamic Flow Data. Water Resources Research, 2018, 54, 2523-2543.	4.2	6
47	Closed-loop stochastic oilfield optimization for hedging against geologic, development, and operation uncertainty. Computational Geosciences, 2020, 24, 129-148.	2.4	6
48	Field-scale history matching with sparse geologic dictionaries. Journal of Petroleum Science and Engineering, 2018, 170, 967-991.	4.2	5
49	Latent-space inversion (LSI): a deep learning framework for inverse mapping of subsurface flow data. Computational Geosciences, 2022, 26, 71-99.	2.4	5
50	A Generalized Formulation for Oilfield Development Optimization. IFAC-PapersOnLine, 2015, 48, 56-61.	0.9	4
51	Hedging against Uncertain Future Development Plans in Closed-loop Field Development Optimization. , 2018, , .		4
52	Deep Learning for Latent Space Data Assimilation in Subsurface Flow Systems. SPE Journal, 2022, 27, 2820-2840.	3.1	4
53	Residual Learning to Integrate Neural Network and Physics-Based Models for Improved Production Prediction in Unconventional Reservoirs. SPE Journal, 2022, 27, 3328-3350.	3.1	4
54	Subsurface Flow Model Calibration with a Spectral-Domain Parameterization Adaptive to Grid Connectivity and Prior Model Information. Mathematical Geosciences, 2012, 44, 673-710.	2.4	3

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55	Adaptive Conditioning of Multiple-Point Statistical Facies Simulation to Flow Data with Probability Maps. Mathematical Geosciences, 2014, 46, 573-595.	2.4	3
56	Inference of Global Reservoir Connectivity from Static Pressure Data with Fast Coarse-Scale Simulation Models. Mathematical Geosciences, 2019, 51, 625-648.	2.4	3
57	Reducing uncertainty in conceptual prior models of complex geologic systems via integration of flow response data. Computational Geosciences, 2020, 24, 161-180.	2.4	3
58	Efficient Robust Production Optimization with Reduced Sampling. SPE Journal, 2022, 27, 1973-1988.	3.1	3
59	Pattern-based calibration of complex subsurface flow models against dynamic response data. Advances in Water Resources, 2018, 121, 388-405.	3.8	2
60	A Distance Transform Method for History Matching of Discrete Geologic Facies Models. , 2017, , .		1
61	A pattern-matching method for flow model calibration under training image constraint. Computational Geosciences, 2019, 23, 813-828.	2.4	1
62	Assessing Multiple-Point Statistical Facies Simulation Behavior for Effective Conditioning on Probabilistic Data. Mathematical Geosciences, 2019, 51, 975-998.	2.4	1
63	Combining Regularized Convolutional Neural Networks with Production Data Integration for Geologic Scenario Selection. , 2019, , .		1
64	Discrete Regularization for Calibration of Geologic Facies Against Dynamic Flow Data. , 2018, 54, 2523.		1
65	Exploiting Sparsity in Solving PDE-Constrained Inverse Problems: Application to Subsurface Flow Model Calibration. The IMA Volumes in Mathematics and Its Applications, 2018, , 399-434.	0.5	1