

Geir Næssvdal

List of Publications by Year in descending order

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Version: 2024-02-01

90
papers

2,766
citations

331670

21
h-index

206112

48
g-index

90
all docs

90
docs citations

90
times ranked

1073
citing authors

#	ARTICLE	IF	CITATIONS
1	The Ensemble Kalman Filter in Reservoir Engineering--a Review. SPE Journal, 2009, 14, 393-412.	3.1	620
2	Reservoir Monitoring and Continuous Model Updating Using Ensemble Kalman Filter. SPE Journal, 2005, 10, 66-74.	3.1	263
3	Bridging the ensemble Kalman filter and particle filters: the adaptive Gaussian mixture filter. Computational Geosciences, 2011, 15, 293-305.	2.4	134
4	Waterflooding using closed-loop control. Computational Geosciences, 2006, 10, 37-60.	2.4	105
5	Iterative Ensemble Smoother as an Approximate Solution to a Regularized Minimum-Average-Cost Problem: Theory and Applications. SPE Journal, 2015, 20, 962-982.	3.1	98
6	Adaptive Multiscale Permeability Estimation. Computational Geosciences, 2003, 7, 1-25.	2.4	86
7	History Matching Using the Ensemble Kalman Filter on a North Sea Field Case. SPE Journal, 2008, 13, 382-391.	3.1	82
8	An Iterative Ensemble Kalman Filter. IEEE Transactions on Automatic Control, 2011, 56, 1990-1995.	5.7	81
9	Nonlinear model predictive control scheme for stabilizing annulus pressure during oil well drilling. Journal of Process Control, 2006, 16, 719-732.	3.3	73
10	A New Approach for Dynamic Optimization of Waterflooding Problems. , 2006, , .		68
11	Tuning of parameters in a two-phase flow model using an ensemble Kalman filter. International Journal of Multiphase Flow, 2003, 29, 1283-1309.	3.4	65
12	History Matching and Production Forecast Uncertainty by Means of the Ensemble Kalman Filter: A Real Field Application. , 2007, , .		64
13	An Ensemble 4D-Seismic History-Matching Framework With Sparse Representation Based On Wavelet Multiresolution Analysis. SPE Journal, 2017, 22, 985-1010.	3.1	55
14	History Matching Channelized Reservoirs Using the Ensemble Kalman Filter. SPE Journal, 2012, 17, 137-151.	3.1	53
15	Analysis of the Ensemble Kalman Filter for Estimation of Permeability and Porosity in Reservoir Models. , 2005, , .		52
16	Correlation-Based Adaptive Localization With Applications to Ensemble-Based 4D-Seismic History Matching. SPE Journal, 2018, 23, 396-427.	3.1	52
17	Underbalanced and Low-head Drilling Operations: Real Time Interpretation of Measured Data and Operational Support. , 2001, , .		48
18	Efficient big data assimilation through sparse representation: A 3D benchmark case study in petroleum engineering. PLoS ONE, 2018, 13, e0198586.	2.5	37

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19	Production optimization using derivative free methods applied to Brugge field case. Journal of Petroleum Science and Engineering, 2014, 114, 22-37.	4.2	35
20	Reservoir Characterization During Underbalanced Drilling (UBD): Methodology and Active Tests. SPE Journal, 2006, 11, 181-192.	3.1	32
21	Closed Loop Reservoir Management Using the Ensemble Kalman Filter and Sequential Quadratic Programming. , 2009, , .		31
22	Estimating Facies Fields by Use of the Ensemble Kalman Filter and Distance Functions Applied to Shallow-Marine Environments. SPE Journal, 2013, 18, 146-158.	3.1	31
23	Simultaneous assimilation of production and seismic data: application to the Norne field. Computational Geosciences, 2020, 24, 907-920.	2.4	30
24	4D seismic history matching. Journal of Petroleum Science and Engineering, 2021, 207, 109119.	4.2	30
25	Underbalanced Drilling: Real Time Data Interpretation and Decision Support. , 2001, , .		27
26	Reservoir Characterization During Underbalanced Drilling: Methodology, Accuracy, and Necessary Data. , 2002, , .		25
27	Iterated extended Kalman filter method for time-lapse seismic full-waveform inversion. Geophysical Prospecting, 2019, 67, 379-394.	1.9	25
28	A new framework for assessing subject-specific whole brain circulation and perfusion using MRI-based measurements and a multi-scale continuous flow model. PLoS Computational Biology, 2019, 15, e1007073.	3.2	24
29	Bottomhole Pressure Control During Drilling Operations in Gas-Dominant Wells. SPE Journal, 2007, 12, 49-61.	3.1	21
30	Waterflooding Optimization Using Gradient Based Methods. , 2009, , .		21
31	Estimation of Production Rates With Transient Well-Flow Modeling and the Auxiliary Particle Filter. SPE Journal, 2014, 19, 172-180.	3.1	21
32	Quantifying Monte Carlo Uncertainty in the Ensemble Kalman Filter. SPE Journal, 2011, 16, 172-182.	3.1	19
33	Target-Oriented Inversion of Time-Lapse Seismic Waveform Data. Communications in Computational Physics, 2020, 28, 249-275.	1.7	19
34	Evaluating nonlinear Kalman filters for parameter estimation in reservoirs during petroleum well drilling. , 2006, , .		18
35	Natural and Conventional Tracers for Improving Reservoir Models Using the EnKF Approach. SPE Journal, 2010, 15, 1047-1061.	3.1	18
36	Robust production optimization with capacitance-resistance model as precursor. Computational Geosciences, 2017, 21, 1423-1442.	2.4	18

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37	The Effect of Including Tracer Data in the Ensemble-Kalman-Filter Approach. SPE Journal, 2010, 15, 454-470.	3.1	15
38	Updating Markov chain models using the ensemble Kalman filter. Computational Geosciences, 2011, 15, 325-344.	2.4	15
39	Bayesian full waveform inversion in anisotropic elastic media using the iterated extended Kalman filter. Geophysics, 0, , 1-69.	2.6	15
40	Comparing the adaptive Gaussian mixture filter with the ensemble Kalman filter on synthetic reservoir models. Computational Geosciences, 2012, 16, 467-482.	2.4	14
41	Improving hydropower inflow forecasts by assimilating snow data. Hydrology Research, 2020, 51, 226-237.	2.7	14
42	MODELING SPATIAL STRUCTURES THROUGH EQUILIBRIUM STATES FOR TRANSITION MATRICES*. Journal of Regional Science, 1996, 36, 171-196.	3.3	12
43	History Matching Channelized Reservoirs Using the Ensemble Kalman Filter. , 2009, , .		11
44	Selection of Decision Variables for Large-Scale Production Optimization Problems Applied to Brugge Field. , 2010, , .		11
45	Filtering with state space localized Kalman gain. Physica D: Nonlinear Phenomena, 2012, 241, 1123-1135.	2.8	10
46	Soft Multiphase Flow Metering for Accurate Production Allocation. , 2010, , .		9
47	Refined Adaptive Gaussian Mixture Filter - Application on a Real Field Case. , 2012, , .		9
48	Toward an enhanced Bayesian estimation framework for multiphase flow soft-sensing. Inverse Problems, 2014, 30, 114012.	2.0	9
49	Benchmark Study of Ensemble Kalman Filter Methodology: History Matching and Uncertainty Quantification for a Deep-Water Oil Reservoir. , 2009, , .		8
50	Efficient workflow for optimizing well controls. Journal of Petroleum Science and Engineering, 2012, 82-83, 66-74.	4.2	8
51	The Finite Subsets of Z^2 Having the Extension Property. Journal of the London Mathematical Society, 2000, 62, 904-916.	1.0	7
52	Bottomhole Pressure Control During Pipe Connection in Gas-Dominant Wells. , 2004, , .		7
53	Estimation of Production Rates by Use of Transient Well-Flow Modeling and the Auxiliary Particle Filter: Full-Scale Applications. SPE Production and Operations, 2016, 31, 163-175.	0.6	7
54	A New Methodology for the Optimization of the Placement of Downhole Production-Monitoring Sensors. SPE Journal, 2001, 6, 108-116.	3.1	6

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55	Evaluation of Drillstring and Casing Instrumentation Needed for Reservoir Characterization During Drilling Operations. , 2005, , .		6
56	Time-lapse CSEM reservoir monitoring of the Norne field with vertical dipoles. , 2016, , .		6
57	Positive bases with maximal cosine measure. Optimization Letters, 2019, 13, 1381-1388.	1.6	6
58	Iterative solution of the Lippmannâ€“Schwinger equation in strongly scattering acoustic media by randomized construction of preconditioners. Geophysical Journal International, 2021, 224, 2121-2130.	2.4	6
59	Evaluating Nonlinear Kalman Filters for Parameter Estimation in Reservoirs During Petroleum Well Drilling. , 2006, , .		6
60	Multiscale estimation with spline wavelets, with application to two-phase porous-media flow. Inverse Problems, 2000, 16, 315-332.	2.0	5
61	Evaluation of EnKF and Variants on the PUNQ-S3 Case. Oil and Gas Science and Technology, 2012, 67, 841-855.	1.4	5
62	Ensemble based 4D seismic history matching using a sparse representation of AVA data. , 2016, , .		5
63	A target-oriented scheme for efficient inversion of time-lapse seismic waveform data. , 2018, , .		5
64	DATA ASSIMILATION USING MRI DATA. , 2016, , .		5
65	On a generalization of the trigonometric moment problem. Linear Algebra and Its Applications, 1997, 258, 1-18.	0.9	4
66	Bayesian estimation of reservoir propertiesâ€“effects of uncertainty quantification of 4D seismic data. Computational Geosciences, 2016, 20, 1211-1229.	2.4	4
67	A modified randomized maximum likelihood for improved Bayesian history matching. Computational Geosciences, 2018, 22, 29-41.	2.4	4
68	OLYMPUS optimization under geological uncertainty. Computational Geosciences, 2020, 24, 2027-2042.	2.4	4
69	A Workflow for Efficient Initialization of Local-Search Iterative Methods for Waterflooding Optimization. , 2009, , .		3
70	Ensemble Kalman filter for model updating â€“ A special issue. Computational Geosciences, 2011, 15, 223-224.	2.4	3
71	Bayesian Inversion of Time-lapse Seismic Waveform Data Using an Integral Equation Method. , 2017, , .		3
72	On the Completion of Partially Given Triangular Toeplitz Matrices to Contractions. SIAM Journal on Matrix Analysis and Applications, 1993, 14, 545-552.	1.4	2

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73	Simultaneous determination of absolute and relative permeabilities. International Journal of Thermal Sciences, 2002, 41, 546-556.	4.9	2
74	The Effect of Including Tracer Data in the EnKF Approach. , 2008, , .		2
75	Error Estimate for the Ensemble Kalman Filter Analysis Step. SIAM Journal on Matrix Analysis and Applications, 2011, 32, 1275-1287.	1.4	2
76	Homotopy scattering series for seismic forward modelling with variable density and velocity. Geophysical Prospecting, 2022, 70, 3-18.	1.9	2
77	Estimation of Pressure-Saturation and Porosity Fields from Seismic AVA Data Using an Ensemble Based Method. , 2017, , .		2
78	Partial matrix contractions and intersections of matrix balls. Linear Algebra and Its Applications, 1992, 175, 225-238.	0.9	1
79	Cone Inclusion Numbers. SIAM Journal on Matrix Analysis and Applications, 1998, 19, 613-639.	1.4	1
80	Validation of History Matching Results Achieved by Multiscale Methods. , 2007, , .		1
81	Sampling error distribution for the ensemble Kalman filter update step. Computational Geosciences, 2012, 16, 455-466.	2.4	1
82	Estimation of pressure-saturation and porosity fields from seismic acoustic impedance data using an ensemble-based method. , 2017, , .		1
83	Ultrasound Imaging of the Brain using Full-Waveform Inversion. , 2020, , .		1
84	A Comment on Parrott's Theorem. SIAM Journal on Numerical Analysis, 1991, 28, 1517-1522.	2.3	0
85	STATE ESTIMATION OF A LARGE-SCALE SYSTEM IN THE PETROLEUM INDUSTRY: THE ENSEMBLE KALMAN FILTER FOR UPDATING RESERVOIR MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 147-152.	0.4	0
86	Production Optimization of Thin-Oil Rims: Evaluation of a Stochastic Steepest-Ascent Approach. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1079-1084.	0.4	0
87	Mathematics and Medicine: How Mathematics, Modelling and Simulations Can Lead to Better Diagnosis and Treatments. Lecture Notes in Computational Science and Engineering, 2019, , 65-80.	0.3	0
88	Integration of IOR Research Projects through Generic Case Studies. , 2017, , .		0
89	Decoupling of changes in pressure-saturation and porosity fields from time-lapse seismic data using an ensemble based method for a compacting chalk reservoir. , 2020, , .		0
90	Homotopy method for seismic modeling in strongly scattering acoustic media with density variation. , 2020, , .		0