Geir NÃ¦vdal

List of Publications by Year
in descending order

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	Homotopy scattering series for seismic forward modelling with variable density and velocity. Geophysical Prospecting, 2022, 70, 3-18.	1.9	2
2	Iterative solution of the Lippmann–Schwinger equation in strongly scattering acoustic media by randomized construction of preconditioners. Geophysical Journal International, 2021, 224, 2121-2130.	2.4	6
3	4D seismic history matching. Journal of Petroleum Science and Engineering, 2021, 207, 109119.	4.2	30
4	OLYMPUS optimization under geological uncertainty. Computational Geosciences, 2020, 24, 2027-2042.	2.4	4
5	Simultaneous assimilation of production and seismic data: application to the Norne field. Computational Geosciences, 2020, 24, 907-920.	2.4	30
6	Improving hydropower inflow forecasts by assimilating snow data. Hydrology Research, 2020, 51, 226-237.	2.7	14
7	Target-Oriented Inversion of Time-Lapse Seismic Waveform Data. Communications in Computational Physics, 2020, 28, 249-275.	1.7	19
8	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
9	Homotopy method for seismic modeling in strongly scattering acoustic media with density variation. , 2020, , .		0
10	Ultrasound Imaging of the Brain using Full-Waveform Inversion. , 2020, , .		1
11	Iterated extended Kalman filter method for time–lapse seismic full–waveform inversion. Geophysical Prospecting, 2019, 67, 379-394.	1.9	25
12	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
13	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
14	Positive bases with maximal cosine measure. Optimization Letters, 2019, 13, 1381-1388.	1.6	6
15	Correlation-Based Adaptive Localization With Applications to Ensemble-Based 4D-Seismic History Matching. SPE Journal, 2018, 23, 396-427.	3.1	52
16	A modified randomized maximum likelihood for improved Bayesian history matching. Computational Geosciences, 2018, 22, 29-41.	2.4	4
17	A target-oriented scheme for efficient inversion of time-lapse seismic waveform data. , 2018, , .		5
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	An Ensemble 4D-Seismic History-Matching Framework With Sparse Representation Based On Wavelet Multiresolution Analysis. SPE Journal, 2017, 22, 985-1010.	3.1	55
20	Estimation of pressure-saturation and porosity fields from seismic acoustic impedance data using an ensemble-based method. , 2017, , .		1
21	Robust production optimization with capacitance-resistance model as precursor. Computational Geosciences, 2017, 21, 1423-1442.	2.4	18
22	Estimation of Pressure-Saturation and Porosity Fields from Seismic AVA Data Using an Ensemble Based Method. , 2017, , .		2
23	Integration of IOR Research Projects through Generic Case Studies. , 2017, , .		0
24	Bayesian Inversion of Time-lapse Seismic Waveform Data Using an Integral Equation Method. , 2017, , .		3
25	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
26	Bayesian estimation of reservoir properties—effects of uncertainty quantification of 4D seismic data. Computational Geosciences, 2016, 20, 1211-1229.	2.4	4
27	Ensemble based 4D seismic history matching using a sparse representation of AVA data. , 2016, , .		5
28	Time-lapse CSEM reservoir monitoring of the Norne field with vertical dipoles. , 2016, , .		6
29	DATA ASSIMILATION USING MRI DATA. , 2016, , .		5
30	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
31	Toward an enhanced Bayesian estimation framework for multiphase flow soft-sensing. Inverse Problems, 2014, 30, 114012.	2.0	9
32	Production optimization using derivative free methods applied to Brugge field case. Journal of Petroleum Science and Engineering, 2014, 114, 22-37.	4.2	35
33	Estimation of Production Rates With Transient Well-Flow Modeling and the Auxiliary Particle Filter. SPE Journal, 2014, 19, 172-180.	3.1	21
34	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
35	History Matching Channelized Reservoirs Using the Ensemble Kalman Filter. SPE Journal, 2012, 17, 137-151.	3.1	53
36	Refined Adaptive Gaussian Mixture Filter - Application on a Real Field Case. , 2012, , .		9

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37	Evaluation of EnKF and Variants on the PUNQ-S3 Case. Oil and Gas Science and Technology, 2012, 67, 841-855.	1.4	5
38	Comparing the adaptive Gaussian mixture filter with the ensemble Kalman filter on synthetic reservoir models. Computational Geosciences, 2012, 16, 467-482.	2.4	14
39	Efficient workflow for optimizing well controls. Journal of Petroleum Science and Engineering, 2012, 82-83, 66-74.	4.2	8
40	Filtering with state space localized Kalman gain. Physica D: Nonlinear Phenomena, 2012, 241, 1123-1135.	2.8	10
41	Sampling error distribution for the ensemble Kalman filter update step. Computational Geosciences, 2012, 16, 455-466.	2.4	1
42	Quantifying Monte Carlo Uncertainty in the Ensemble Kalman Filter. SPE Journal, 2011, 16, 172-182.	3.1	19
43	Error Estimate for the Ensemble Kalman Filter Analysis Step. SIAM Journal on Matrix Analysis and Applications, 2011, 32, 1275-1287.	1.4	2
44	An Iterative Ensemble Kalman Filter. IEEE Transactions on Automatic Control, 2011, 56, 1990-1995.	5.7	81
45	Bridging the ensemble Kalman filter and particle filters: the adaptive Gaussian mixture filter. Computational Geosciences, 2011, 15, 293-305.	2.4	134
46	Updating Markov chain models using the ensemble Kalman filter. Computational Geosciences, 2011, 15, 325-344.	2.4	15
47	Ensemble Kalman filter for model updating â€" A special issue. Computational Geosciences, 2011, 15, 223-224.	2.4	3
48	The Effect of Including Tracer Data in the Ensemble-Kalman-Filter Approach. SPE Journal, 2010, 15, 454-470.	3.1	15
49	Natural and Conventional Tracers for Improving Reservoir Models Using the EnKF Approach. SPE Journal, 2010, 15, 1047-1061.	3.1	18
50	Selection of Decision Variables for Large-Scale Production Optimization Problems Applied to Brugge Field. , 2010, , .		11
51	Soft Multiphase Flow Metering for Accurate Production Allocation. , 2010, , .		9
52	The Ensemble Kalman Filter in Reservoir Engineering--a Review. SPE Journal, 2009, 14, 393-412.	3.1	620
53	Closed Loop Reservoir Management Using the Ensemble Kalman Filter and Sequential Quadratic Programming. , 2009, , .		31
54	Waterflooding Optimization Using Gradient Based Methods. , 2009, , .		21

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55	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
56	History Matching Channelized Reservoirs Using the Ensemble Kalman Filter. , 2009, , .		11
57	A Workflow for Efficient Initialization of Local-Search Iterative Methods for Waterflooding Optimization. , 2009, , .		3
58	Benchmark Study of Ensemble Kalman Filter Methodology: History Matching and Uncertainty Quantification for a Deep-Water Oil Reservoir. , 2009, , .		8
59	History Matching Using the Ensemble Kalman Filter on a North Sea Field Case. SPE Journal, 2008, 13, 382-391.	3.1	82
60	The Effect of Including Tracer Data in the EnKF Approach. , 2008, , .		2
61	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
62	Bottomhole Pressure Control During Drilling Operations in Gas-Dominant Wells. SPE Journal, 2007, 12, 49-61.	3.1	21
63	History Matching and Production Forecast Uncertainty by Means of the Ensemble Kalman Filter: A Real Field Application. , 2007, , .		64
64	Validation of History Matching Results Achieved by Multiscale Methods. , 2007, , .		1
65	Reservoir Characterization During Underbalanced Drilling (UBD): Methodology and Active Tests. SPE Journal, 2006, 11, 181-192.	3.1	32
66	A New Approach for Dynamic Optimization of Waterflooding Problems. , 2006, , .		68
67	Nonlinear model predictive control scheme for stabilizing annulus pressure during oil well drilling. Journal of Process Control, 2006, 16, 719-732.	3.3	73
68	Waterflooding using closed-loop control. Computational Geosciences, 2006, 10, 37-60.	2.4	105
69	Evaluating nonlinear Kalman filters for parameter estimation in reservoirs during petroleum well drilling. , 2006, , .		18
70	Evaluating Nonlinear Kalman Filters for Parameter Estimation in Reservoirs During Petroleum Well Drilling. , 2006, , .		6
71	Analysis of the Ensemble Kalman Filter for Estimation of Permeability and Porosity in Reservoir Models. , 2005, , .		52
72	Evaluation of Drillstring and Casing Instrumentation Needed for Reservoir Characterization During Drilling Operations. , 2005, , .		6

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73	Reservoir Monitoring and Continuous Model Updating Using Ensemble Kalman Filter. SPE Journal, 2005, 10, 66-74.	3.1	263
74	Bottomhole Pressure Control During Pipe Connection in Gas-Dominant Wells. , 2004, , .		7
75	Adaptive Multiscale Permeability Estimation. Computational Geosciences, 2003, 7, 1-25.	2.4	86
76	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
77	Reservoir Characterization During Underbalanced Drilling: Methodology, Accuracy, and Necessary Data. , 2002, , .		25
78	Simultaneous determination of absolute and relative permeabilities. International Journal of Thermal Sciences, 2002, 41, 546-556.	4.9	2
79	Underbalanced and Low-head Drilling Operations: Real Time Interpretation of Measured Data and Operational Support. , 2001, , .		48
80	Underbalanced Drilling: Real Time Data Interpretation and Decision Support. , 2001, , .		27
81	A New Methodology for the Optimization of the Placement of Downhole Production-Monitoring Sensors. SPE Journal, 2001, 6, 108-116.	3.1	6
82	The Finite Subsets of Z 2 Having the Extension Property. Journal of the London Mathematical Society, 2000, 62, 904-916.	1.0	7
83	Multiscale estimation with spline wavelets, with application to two-phase porous-media flow. Inverse Problems, 2000, 16, 315-332.	2.0	5
84	Cone Inclusion Numbers. SIAM Journal on Matrix Analysis and Applications, 1998, 19, 613-639.	1.4	1
85	On a generalization of the trigonometric moment problem. Linear Algebra and Its Applications, 1997, 258, 1-18.	0.9	4
86	MODELING SPATIAL STRUCTURES THROUGH EQUILIBRIUM STATES FOR TRANSITION MATRICES*. Journal of Regional Science, 1996, 36, 171-196.	3.3	12
87	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
88	Partial matrix contractions and intersections of matrix balls. Linear Algebra and Its Applications, 1992, 175, 225-238.	0.9	1
89	A Comment on Parrottâ€™s Theorem. SIAM Journal on Numerical Analysis, 1991, 28, 1517-1522.	2.3	0
90	Bayesian full waveform inversion in anisotropic elastic media using the iterated extended Kalman filter. Geophysics, 0, , 1-69.	2.6	15