Dennis B Mclaughlin

List of Publications by Year
in descending order

64	4,736	126907	114465
papers	citations	33 h-index	63 g-index

66	66	66	3518
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Hydrologic Data Assimilation with the Ensemble Kalman Filter. Monthly Weather Review, 2002, 130, 103-114.	1.4	785
2	A Reassessment of the Groundwater Inverse Problem. Water Resources Research, 1996, 32, 1131-1161.	4.2	464
3	Land data assimilation and estimation of soil moisture using measurements from the Southern Great Plains 1997 Field Experiment. Water Resources Research, 2002, 38, 35-1-35-18.	4.2	237
4	An integrated approach to hydrologic data assimilation: interpolation, smoothing, and filtering. Advances in Water Resources, 2002, 25, 1275-1286.	3.8	204
5	An Agenda for Land Surface Hydrology Research and a Call for the Second International Hydrological Decade. Bulletin of the American Meteorological Society, 1999, 80, 2043-2058.	3.3	188
6	Downscaling of radio brightness measurements for soil moisture estimation: A four-dimensional variational data assimilation approach. Water Resources Research, 2001, 37, 2353-2364.	4.2	180
7	Numerical simulation of three-dimensional saturated flow in randomly heterogeneous porous media. Transport in Porous Media, 1989, 4, 549.	2.6	177
8	Modeling nitrate leaching with a biogeochemical model modified based on observations in a row-crop field in Iowa. Ecological Modelling, 2006, 196, 116-130.	2.5	166
9	Stochastic analysis of nonstationary subsurface solute transport: 2. Conditional moments. Water Resources Research, 1989, 25, 2331-2355.	4.2	154
10	Reservoir Characterization With the Discrete Cosine Transform. SPE Journal, 2009, 14, 182-201.	3.1	127
11	History matching with an ensemble Kalman filter and discrete cosine parameterization. Computational Geosciences, 2008, 12, 227-244.	2.4	123
12	A Multiscale Ensemble Filtering System for Hydrologic Data Assimilation. Part I: Implementation and Synthetic Experiment. Journal of Hydrometeorology, 2009, 10, 794-806.	1.9	112
13	Assessing the Performance of the Ensemble Kalman Filter for Land Surface Data Assimilation. Monthly Weather Review, 2006, 134, 2128-2142.	1.4	106
14	Food security and sustainable resource management. Water Resources Research, 2015, 51, 4966-4985.	4.2	97
15	Stochastic modeling of large-scale flow in heterogeneous unsaturated soils. Water Resources Research, 1991, 27, 1447-1458.	4.2	89
16	A nonstationary spectral method for solving stochastic groundwater problems: Unconditional analysis. Water Resources Research, 1991, 27, 1589-1605.	4.2	87
17	Compressed History Matching: Exploiting Transform-Domain Sparsity for Regularization ofÂNonlinear Dynamic Data Integration Problems. Mathematical Geosciences, 2010, 42, 1-27.	2.4	83
18	Recent developments in hydrologic data assimilation. Reviews of Geophysics, 1995, 33, 977-984.	23.0	81

#	Article	IF	Citations
19	Probabilistic analysis of the effects of climate change on groundwater recharge. Water Resources Research, 2010, 46, .	4.2	73
20	Estimating Channelized-Reservoir Permeabilities With the Ensemble Kalman Filter: The Importance of Ensemble Design. SPE Journal, 2009, 14, 374-388.	3.1	72
21	Transform-domain sparsity regularization for inverse problems in geosciences. Geophysics, 2009, 74, R69-R83.	2.6	68
22	A distributed parameter approach for evaluating the accuracy of groundwater model predictions: 1. Theory. Water Resources Research, 1988, 24, 1037-1047.	4.2	61
23	Using the Nonstationary Spectral Method to Analyze Flow Through Heterogeneous Trending Media. Water Resources Research, 1995, 31, 541-551.	4.2	57
24	Data assimilation by field alignment. Physica D: Nonlinear Phenomena, 2007, 230, 127-145.	2.8	57
25	A stochastic model of solute transport in groundwater: Application to the Borden, Ontario, Tracer Test. Water Resources Research, 1991, 27, 1345-1359.	4.2	56
26	Conservation of Mass and Preservation of Positivity with Ensemble-Type Kalman Filter Algorithms. Monthly Weather Review, 2014, 142, 755-773.	1.4	55
27	A stochastic approach to model validation. Advances in Water Resources, 1992, 15, 15-32.	3.8	53
28	An efficient multivariate random field generator using the fast Fourier transform. Advances in Water Resources, 1998, 21, 385-399.	3.8	47
29	A space-time accurate method for solving solute transport problems. Water Resources Research, 1992, 28, 2297-2306.	4.2	41
30	Scale-recursive assimilation of precipitation data. Advances in Water Resources, 2001, 24, 941-953.	3.8	40
31	An Ensemble Multiscale Filter for Large Nonlinear Data Assimilation Problems. Monthly Weather Review, 2008, 136, 678-698.	1.4	39
32	Estimation of flood frequency: An evaluation of two derived distribution procedures. Water Resources Research, 1987, 23, 1309-1319.	4.2	35
33	Realâ€time control of a system of large hydropower reservoirs. Water Resources Research, 1990, 26, 623-635.	4.2	35
34	The role of model dynamics in ensemble Kalman filter performance for chaotic systems. Tellus, Series A: Dynamic Meteorology and Oceanography, 2022, 63, 958.	1.7	33
35	Estimation of evaporation over the upper <scp>B</scp>lue <scp>N</scp>ile basin by combining observations from satellites and river flow gauges. Water Resources Research, 2016, 52, 644-659.	4.2	30
36	Using data assimilation to identify diffuse recharge mechanisms from chemical and physical data in the unsaturated zone. Water Resources Research, 2009, 45, .	4.2	29

#	Article	IF	Citations
37	Sequential approach to joint flowâ€seismic inversion for improved characterization of fractured media. Water Resources Research, 2016, 52, 903-919.	4.2	29
38	Fast ensemble smoothing. Ocean Dynamics, 2007, 57, 123-134.	2.2	25
39	A computationally practical method for stochastic groundwater modeling. Advances in Water Resources, 2003, 26, 1137-1148.	3.8	24
40	Conditioning Stochastic Rainfall Replicates on Remote Sensing Data. IEEE Transactions on Geoscience and Remote Sensing, 2009, 47, 2436-2449.	6.3	24
41	Opportunities for enhanced collaboration within the data assimilation community. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 3683-3693.	2.7	23
42	Evolutionary Cooperation in Transboundary River Basins. Water Resources Research, 2019, 55, 9977-9994.	4.2	23
43	Macrodispersivity and Large-scale Hydrogeologic Variability. Transport in Porous Media, 2001, 42, 133-154.	2.6	22
44	An investigation of Eulerian-Lagrangian Methods for solving heterogeneous advection-dominated transport problems. Water Resources Research, 1999, 35, 2359-2373.	4.2	20
45	Quantifying Precipitation Uncertainty for Land Data Assimilation Applications. Monthly Weather Review, 2015, 143, 3276-3299.	1.4	19
46	Computational Issues for Large-Scale Land Surface Data Assimilation Problems. Journal of Hydrometeorology, 2006, 7, 494-510.	1.9	18
47	Spatiotemporal Disaggregation of Remotely Sensed Precipitation for Ensemble Hydrologic Modeling and Data Assimilation. Journal of Hydrometeorology, 2006, 7, 511-533.	1.9	16
48	Level-set techniques for facies identification in reservoir modeling. Inverse Problems, 2011, 27, 035008.	2.0	14
49	A multiscale approach for estimating solute travel time distributions. Advances in Water Resources, 2000, 23, 653-665.	3.8	12
50	Using an ensemble smoother to evaluate parameter uncertainty of an integrated hydrological model of Yanqi basin. Journal of Hydrology, 2015, 529, 146-158.	5.4	12
51	The accuracy of stochastic perturbation solutions to subsurface transport problems. Advances in Water Resources, 2004, 27, 47-56.	3.8	11
52	An Ensemble Optimization Framework for Coupled Design of Hydropower Contracts and Realâ€Time Reservoir Operating Rules. Water Resources Research, 2018, 54, 8401-8419.	4.2	10
53	Reply [to â€œComment on â€˜A reassessment of the groundwater inverse problemâ€™ by D. McLaughlin and L. R. Townleyâ€]. Water Resources Research, 1997, 33, 2203-2204.	4.2	9
54	Evaluation of Long-Term SSM/I-Based Precipitation Records over Land. Journal of Hydrometeorology, 2014, 15, 2012-2029.	1.9	8

#	Article	IF	Citations
55	Efficient Characterization of Uncertain Model Parameters with a Reduced-Order Ensemble Kalman Filter. SIAM Journal of Scientific Computing, 2014, 36, B198-B224.	2.8	8
56	Multiscale ensemble filtering for reservoir engineering applications. Computational Geosciences, 2009, 13, 245-254.	2.4	4
57	Reply [to â€œComment on â€˜A space-time accurate method for solving solute transport problemsâ€™ by S. G. Li, F. Ruan, and D. McLaughlinâ€]. Water Resources Research, 1994, 30, 3237-3237.	4.2	3
58	Comparison of NOWRAD, AMSU, AMSR-E, TMI, and SSM/I surface precipitation rate Retrievals over the united states great plains. , 2007, , .		3
59	Ensemble-based characterization of uncertain environmental features. Advances in Water Resources, 2014, 70, 36-50.	3.8	3
60	A general technique for assessing the numerical accuracy of solute transport models. Water Resources Research, 1999, 35, 3961-3966.	4.2	2
61	A probabilistic perspective on nonlinear model inversion and data assimilation. Geophysical Monograph Series, 2007, , 243-253.	0.1	2
62	Real-Time Ensemble Control with Reduced-Order Modeling. SIAM Journal of Scientific Computing, 2014, 36, B749-B775.	2.8	2
63	The Multiâ€Scale Dynamics of Groundwater Depletion. Water Resources Research, 2021, 57, e2020WR029402.	4.2	2
64	Data Assimilation. Encyclopedia of Earth Sciences Series, 2014, , 131-134.	0.1	0