

Eric Laloy

List of Publications by Year in descending order

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32
papers

1,585
citations

567281

15
h-index

414414

32
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33
all docs

33
docs citations

33
times ranked

1720
citing authors

#	ARTICLE	IF	CITATIONS
1	A hybrid method for characterizing tillage-induced soil physical quality at the profile scale with fine spatial details. <i>Soil and Tillage Research</i> , 2022, 216, 105236.	5.6	4
2	Speeding Up Reactive Transport Simulations in Cement Systems by Surrogate Geochemical Modeling: Deep Neural Networks and k-Nearest Neighbors. <i>Transport in Porous Media</i> , 2022, 143, 433-462.	2.6	6
3	Hydrogeological multiple-point statistics inversion by adaptive sequential Monte Carlo. <i>Advances in Water Resources</i> , 2022, 166, 104252.	3.8	3
4	Editorial: Broadening the Use of Machine Learning in Hydrology. <i>Frontiers in Water</i> , 2021, 3, .	2.3	44
5	Approaching geoscientific inverse problems with vector-to-image domain transfer networks. <i>Advances in Water Resources</i> , 2021, 152, 103917.	3.8	8
6	Bayesian inference of root architectural model parameters from synthetic field data. <i>Plant and Soil</i> , 2021, 467, 67-89.	3.7	5
7	Deep generative models in inversion: The impact of the generator's nonlinearity and development of a new approach based on a variational autoencoder. <i>Computers and Geosciences</i> , 2021, 152, 104762.	4.2	40
8	Bayesian inference of 1D activity profiles from segmented gamma scanning of a heterogeneous radioactive waste drum. <i>Applied Radiation and Isotopes</i> , 2021, 175, 109803.	1.5	7
9	Using deep generative neural networks to account for model errors in Markov chain Monte Carlo inversion. <i>Geophysical Journal International</i> , 2021, 228, 1098-1118.	2.4	6
10	A new framework for experimental design using Bayesian Evidential Learning: The case of wellhead protection area. <i>Journal of Hydrology</i> , 2021, 603, 126903.	5.4	14
11	Towards a scientific-based assessment of long-term durability and performance of cementitious materials for radioactive waste conditioning and disposal. <i>Journal of Nuclear Materials</i> , 2021, 557, 153201.	2.7	8
12	Pixel-wise conditioned generative adversarial networks for image synthesis and completion. <i>Neurocomputing</i> , 2020, 416, 218-230.	5.9	4
13	Electron spin resonance (ESR), optically stimulated luminescence (OSL) and terrestrial cosmogenic radionuclide (TCN) dating of quartz from a Plio-Pleistocene sandy formation in the Campine area, NE Belgium. <i>Quaternary International</i> , 2020, 556, 144-158.	1.5	10
14	Scale-dependent parameterization of groundwater-surface water interactions in a regional hydrogeological model. <i>Journal of Hydrology</i> , 2019, 576, 494-507.	5.4	6
15	Emulation of CPU-demanding reactive transport models: a comparison of Gaussian processes, polynomial chaos expansion, and deep neural networks. <i>Computational Geosciences</i> , 2019, 23, 1193-1215.	2.4	24
16	Gradient-based deterministic inversion of geophysical data with generative adversarial networks: Is it feasible?. <i>Computers and Geosciences</i> , 2019, 133, 104333.	4.2	41
17	A mesoscale framework for analysis of corrosion induced damage of concrete. <i>Construction and Building Materials</i> , 2019, 216, 347-361.	7.2	11
18	Bayesian full-waveform tomography with application to crosshole ground penetrating radar data. <i>Geophysical Journal International</i> , 2019, 218, 913-931.	2.4	17

#	ARTICLE	IF	CITATIONS
19	Nested multiresolution hierarchical simulated annealing algorithm for porous media reconstruction. <i>Physical Review E</i> , 2019, 100, 053316.	2.1	25
20	Training an Image Based Geostatistical Inversion Using a Spatial Generative Adversarial Neural Network. <i>Water Resources Research</i> , 2018, 54, 381-406.	4.2	232
21	HESS Opinions: Incubating deep-learning-powered hydrologic science advances as a community. <i>Hydrology and Earth System Sciences</i> , 2018, 22, 5639-5656.	4.9	169
22	Inference of multi-Gaussian relative permittivity fields by probabilistic inversion of crosshole ground-penetrating radar data. <i>Geophysics</i> , 2017, 82, H25-H40.	2.6	11
23	Inversion using a new low-dimensional representation of complex binary geological media based on a deep neural network. <i>Advances in Water Resources</i> , 2017, 110, 387-405.	3.8	155
24	Bayesian inversion of a CRN depth profile to infer Quaternary erosion of the northwestern Campine Plateau (NE Belgium). <i>Earth Surface Dynamics</i> , 2017, 5, 331-345.	2.4	12
25	Merging parallel tempering with sequential geostatistical resampling for improved posterior exploration of high-dimensional subsurface categorical fields. <i>Advances in Water Resources</i> , 2016, 90, 57-69.	3.8	28
26	Probabilistic inference of multi-Gaussian fields from indirect hydrological data using circulant embedding and dimensionality reduction. <i>Water Resources Research</i> , 2015, 51, 4224-4243.	4.2	39
27	Reply to comment by Chu et al. on "High-dimensional posterior exploration of hydrologic models using multiple DREAM (ZS) and high-performance computing". <i>Water Resources Research</i> , 2014, 50, 2781-2786.	4.2	5
28	High-resolution moisture profiles from full-waveform probabilistic inversion of TDR signals. <i>Journal of Hydrology</i> , 2014, 519, 2121-2135.	5.4	8
29	Efficient posterior exploration of a high-dimensional groundwater model from two-stage Markov chain Monte Carlo simulation and polynomial chaos expansion. <i>Water Resources Research</i> , 2013, 49, 2664-2682.	4.2	201
30	High-dimensional posterior exploration of hydrologic models using multiple DREAM (ZS) and high-performance computing. <i>Water Resources Research</i> , 2012, 48, .	4.2	353
31	Mass conservative three-dimensional water tracer distribution from Markov chain Monte Carlo inversion of time-lapse ground-penetrating radar data. <i>Water Resources Research</i> , 2012, 48, .	4.2	45
32	Effect of Intercropping Period Management on Runoff and Erosion in a Maize Cropping System. <i>Journal of Environmental Quality</i> , 2010, 39, 1001-1008.	2.0	43