Robert K Niven

List of Publications by Year
in descending order

70 papers	1,506 citations	430754 18 h-index	315616 38 g-index
70 all docs	70 docs citations	70 times ranked	1454 citing authors

#	Article	IF	Citations
1	Groundwater vulnerability assessment: A review including new statistical and hybrid methods. Science of the Total Environment, 2022, 822, 153486.	3.9	42
2	Unification of surface tension isotherms of PFOA or GenX salts in electrolyte solutions by mean ionic activity. Chemosphere, 2021, 280, 130715.	4.2	8
3	Invariance Properties of the Entropy Production, and the Entropic Pairing of Inertial Frames of Reference by Shear-Flow Systems. Entropy, 2021, 23, 1515.	1.1	4
4	Bayesian Identification of Dynamical Systems. Proceedings (mdpi), 2020, 33, .	0.2	6
5	New Conservation Laws Based on Generalised Reynolds Transport Theorems. , 2020, , .		4
6	Dynamical System Identification by Bayesian Inference. , 2020, , .		1
7	Maximum Entropy Analysis of Flow Networks: Theoretical Foundation and Applications. Entropy, 2019, 21, 776.	1.1	7
8	Effect of water and solid activities at high pressure on supercritical CO2 sequestration in saline aquifers. Chemical Geology, 2018, 476, 11-23.	1.4	2
9	Synchronization control of oscillator networks using symbolic regression. Nonlinear Dynamics, 2018, 91, 1001-1021.	2.7	11
10	Reduced-Parameter Method for Maximum Entropy Analysis of Hydraulic Pipe Flow Networks. Journal of Hydraulic Engineering, 2018, 144, 04017060.	0.7	3
11	Detection of unstable periodic orbits in mineralising geological systems. Chaos, 2018, 28, 085711.	1.0	16
12	Bayesian and Maximum Entropy Analyses of Flow Networks with Non-Gaussian Priors and Soft Constraints. Springer Proceedings in Mathematics and Statistics, 2018, , 285-294.	0.1	0
13	Maximum Entropy Analysis of Flow Networks with Structural Uncertainty (Graph Ensembles). Springer Proceedings in Mathematics and Statistics, 2018, , 261-274.	0.1	0
14	Maximum entropy analysis of transport networks. AIP Conference Proceedings, 2017, , .	0.3	3
15	Consistent maximum entropy representations of pipe flow networks. AIP Conference Proceedings, 2017, , .	0.3	0
16	Comparison Between Bayesian and Maximum Entropy Analyses of Flow Networksâ€. Entropy, 2017, 19, 58.	1.1	7
17	Maximum entropy derivation of quasi-Newton methods. AIP Conference Proceedings, 2016, , .	0.3	1
18	Maximum Entropy Analysis of Hydraulic Pipe Flow Networks. Journal of Hydraulic Engineering, 2016, 142, .	0.7	19

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19	Prediction of dynamical systems by symbolic regression. Physical Review E, 2016, 94, 012214.	0.8	70
20	Maximum Entropy Derivation of Quasi-Newton Methods. SIAM Journal on Optimization, 2016, 26, 2495-2511.	1.2	4
21	Bayesian cyclic networks, mutual information and reduced-order Bayesian inference. AIP Conference Proceedings, 2016, , .	0.3	1
22	Maximum entropy analysis of flow and reaction networks. , 2015, , .		2
23	MaxEnt analysis of a water distribution network in Canberra, ACT, Australia. , 2015, , .		4
24	Cluster-based reduced-order modelling of shear flows. AIP Conference Proceedings, 2014, , .	0.3	5
25	Maximum entropy analysis of flow networks. , 2014, , .		3
26	Maximum entropy analysis of hydraulic pipe networks. , 2014, , .		4
27	Cluster-based reduced-order modelling of a mixing layer. Journal of Fluid Mechanics, 2014, 754, 365-414.	1.4	204
28	Beyond the Second Law: An Overview. Understanding Complex Systems, 2014, , 3-27.	0.3	4
29	Control Volume Analysis, Entropy Balance and the Entropy Production in Flow Systems. Understanding Complex Systems, 2014, , 129-162.	0.3	3
30	Identification strategies for model-based control. Experiments in Fluids, 2013, 54, 1.	1.1	74
31	Non-aqueous Phase Liquid Spills in Freezing and Thawing Soils: Critical Analysis of Pore-Scale Processes. Critical Reviews in Environmental Science and Technology, 2013, 43, 551-597.	6.6	11
32	A hierarchy of maximum entropy closures for Galerkin systems of incompressible flows. Computers and Mathematics With Applications, 2013, 65, 1558-1574.	1.4	13
33	Maximum entropy analysis of steady-state flow systems (and extremum entropy production principles). , 2012, , .		4
34	Maximum-entropy closure for a Galerkin model of an incompressible periodic wake. Journal of Fluid Mechanics, 2012, 700, 187-213.	1.4	21
35	Maximum-entropy weighting of multiple earth climate models. Climate Dynamics, 2012, 39, 755-765.	1.7	4
36	Remobilization of Residual Non-Aqueous Phase Liquid in Porous Media by Freezeâ^'Thaw Cycles. Environmental Science & Technology, 2011, 45, 3473-3478.	4.6	33

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37	The PÃ³lya information divergence. Information Sciences, 2010, 180, 4189-4194.	4.0	9
38	Minimization of a free-energy-like potential for non-equilibrium flow systems at steady state. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 1323-1331.	1.8	40
39	Simultaneous extrema in the entropy production for steady-state fluid flow in parallel pipes. Journal of Non-Equilibrium Thermodynamics, 2010, 35, .	2.4	28
40	Jaynes' Maximum Entropy Principle, Riemannian Metrics and Generalised Least Action Bound. , 2010, , .		3
41	Non-asymptotic thermodynamic ensembles. Europhysics Letters, 2009, 86, 20010.	0.7	12
42	The q-gamma and (q,q)-polygamma functions of Tsallis statistics. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 4045-4060.	1.2	6
43	Generalized classical, quantum and intermediate statistics and the PÃ³lya urn model. Physics Letters, Section A: General, Atomic and Solid State Physics, 2009, 373, 621-626.	0.9	22
44	Combinatorial entropies and statistics. European Physical Journal B, 2009, 70, 49-63.	0.6	30
45	Steady state of a dissipative flow-controlled system and the maximum entropy production principle. Physical Review E, 2009, 80, 021113.	0.8	94
46	Jaynesâ€™ MaxEnt, Steady State Flow Systems and the Maximum Entropy Production Principle. , 2009, , .		2
47	Comment on â€œA fiber optic Raman sensor for hydrocarbon detectionâ€•by Khijwania et al. [Sens. Actuators B 125 (2007) 563â€“568]. Sensors and Actuators B: Chemical, 2008, 130, 575-575.	4.0	0
48	Combinatorial basis and non-asymptotic form of the Tsallis entropy function. European Physical Journal B, 2008, 61, 75-82.	0.6	6
49	Mobilization and Rupture of LNAPL Ganglia during Freeze-Thaw: Two-Dimensional Cell Experiments. Environmental Science & Technology, 2008, 42, 5467-5472.	4.6	14
50	Origins of the Combinatorial Basis of Entropy. AIP Conference Proceedings, 2007, , .	0.3	8
51	Combinatorial entropy for distinguishable entities in indistinguishable states. AIP Conference Proceedings, 2007, , .	0.3	3
52	q-Exponential structure of arbitrary-order reaction kinetics. Chemical Engineering Science, 2006, 61, 3785-3790.	1.9	28
53	Cost of s-fold decisions in exact Maxwellâ€“Boltzmann, Boseâ€“Einstein and Fermiâ€“Dirac statistics. Physica A: Statistical Mechanics and Its Applications, 2006, 365, 142-149.	1.2	13
54	Force stability of pore-scale fluid bridges and ganglia in axisymmetric and non-axisymmetric configurations. Journal of Petroleum Science and Engineering, 2006, 52, 1-18.	2.1	18

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55	Ethanol in gasoline: environmental impacts and sustainability review article. Renewable and Sustainable Energy Reviews, 2005, 9, 535-555.	8.2	304
56	Exact Maxwellâ€“Boltzmann, Boseâ€“Einstein and Fermiâ€“Dirac statistics. Physics Letters, Section A: General, Atomic and Solid State Physics, 2005, 342, 286-293.	0.9	29
57	Reply to the comments by D. Stevenson on â€œPhysical insight into the Ergun and Wen and Yu equations for fluid flow in packed and fluidised bedsâ€•by R.K. Niven [Chemical Engineering Science, 57 (2002), 527â€“534]. Chemical Engineering Science, 2005, 60, 299-300.	1.9	3
58	The constrained entropy and cross-entropy functions. Physica A: Statistical Mechanics and Its Applications, 2004, 334, 444-458.	1.2	10
59	"Turbulent Flow Through Porous Media" by D.W. Barr, September-October 2001 issue, v. 39, no. 5: 646-650.. Ground Water, 2003, 41, 544-545.	0.7	2
60	In Situ Fluidization for Permeable Reactive Barrier Installation and Maintenance. ACS Symposium Series, 2002, , 217-235.	0.5	1
61	In situ fluidization for peat bed rupture, and preliminary economic analysis. Journal of Contaminant Hydrology, 2002, 59, 67-85.	1.6	2
62	"Coefficient of Permeability Determined by Measurable Parameters," by D,W, Barr, May-June 2001 issue, v. 39, no. 3: 356-361.. Ground Water, 2002, 40, 670-671.	0.7	6
63	Discussion/DNAPL Remediation: Which â€˜New Paradigmâ€™ Will Prevail?. Ground Water Monitoring and Remediation, 2002, 22, 169-169.	0.6	0
64	Physical insight into the Ergun and Wen & Yu equations for fluid flow in packed and fluidised beds. Chemical Engineering Science, 2002, 57, 527-534.	1.9	151
65	Incipient Sediment Motion With Upward Seepage. Journal of Hydraulic Research/De Recherches Hydrauliques, 2000, 38, 475-479.	0.7	5
66	Mixed solid/dispersed phase particles in multiphase fluidised beds. II: Stability at laminar to turbulent flow scales. Chemical Engineering Science, 2000, 55, 3033-3051.	1.9	10
67	Mixed solid/dispersed phase particles in multiphase fluidised beds, Part I: Free energy of stability due to interfacial tension. Chemical Engineering Science, 2000, 55, 3013-3032.	1.9	19
68	In situ multiphase fluidization ("upflow washing") for the remediation of hydrocarbon contaminated sands. Canadian Geotechnical Journal, 1998, 35, 938-960.	1.4	12
69	In situ fluidisation by a single internal vertical jet. Journal of Hydraulic Research/De Recherches Hydrauliques, 1998, 36, 199-228.	0.7	18
70	Discussion: Washing of Zinc(II) from Contaminated Soil Column. Journal of Environmental Engineering, ASCE, 1996, 122, 881-883.	0.7	0