

Robert K Niven

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/373710/publications.pdf>

Version: 2024-02-01

70
papers

1,506
citations

430442

18
h-index

315357

38
g-index

70
all docs

70
docs citations

70
times ranked

1454
citing authors

#	ARTICLE	IF	CITATIONS
1	Ethanol in gasoline: environmental impacts and sustainability review article. <i>Renewable and Sustainable Energy Reviews</i> , 2005, 9, 535-555.	8.2	304
2	Cluster-based reduced-order modelling of a mixing layer. <i>Journal of Fluid Mechanics</i> , 2014, 754, 365-414.	1.4	204
3	Physical insight into the Ergun and Wen & Yu equations for fluid flow in packed and fluidised beds. <i>Chemical Engineering Science</i> , 2002, 57, 527-534.	1.9	151
4	Steady state of a dissipative flow-controlled system and the maximum entropy production principle. <i>Physical Review E</i> , 2009, 80, 021113.	0.8	94
5	Identification strategies for model-based control. <i>Experiments in Fluids</i> , 2013, 54, 1.	1.1	74
6	Prediction of dynamical systems by symbolic regression. <i>Physical Review E</i> , 2016, 94, 012214.	0.8	70
7	Groundwater vulnerability assessment: A review including new statistical and hybrid methods. <i>Science of the Total Environment</i> , 2022, 822, 153486.	3.9	42
8	Minimization of a free-energy-like potential for non-equilibrium flow systems at steady state. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 2010, 365, 1323-1331.	1.8	40
9	Remobilization of Residual Non-Aqueous Phase Liquid in Porous Media by Freeze-Thaw Cycles. <i>Environmental Science & Technology</i> , 2011, 45, 3473-3478.	4.6	33
10	Combinatorial entropies and statistics. <i>European Physical Journal B</i> , 2009, 70, 49-63.	0.6	30
11	Exact Maxwell-Boltzmann, Bose-Einstein and Fermi-Dirac statistics. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2005, 342, 286-293.	0.9	29
12	q-Exponential structure of arbitrary-order reaction kinetics. <i>Chemical Engineering Science</i> , 2006, 61, 3785-3790.	1.9	28
13	Simultaneous extrema in the entropy production for steady-state fluid flow in parallel pipes. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2010, 35, .	2.4	28
14	Generalized classical, quantum and intermediate statistics and the Pólya urn model. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 373, 621-626.	0.9	22
15	Maximum-entropy closure for a Galerkin model of an incompressible periodic wake. <i>Journal of Fluid Mechanics</i> , 2012, 700, 187-213.	1.4	21
16	Mixed solid/dispersed phase particles in multiphase fluidised beds, Part I: Free energy of stability due to interfacial tension. <i>Chemical Engineering Science</i> , 2000, 55, 3013-3032.	1.9	19
17	Maximum Entropy Analysis of Hydraulic Pipe Flow Networks. <i>Journal of Hydraulic Engineering</i> , 2016, 142, .	0.7	19
18	In situ fluidisation by a single internal vertical jet. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1998, 36, 199-228.	0.7	18

#	ARTICLE	IF	CITATIONS
19	Force stability of pore-scale fluid bridges and ganglia in axisymmetric and non-axisymmetric configurations. <i>Journal of Petroleum Science and Engineering</i> , 2006, 52, 1-18.	2.1	18
20	Detection of unstable periodic orbits in mineralising geological systems. <i>Chaos</i> , 2018, 28, 085711.	1.0	16
21	Mobilization and Rupture of LNAPL Ganglia during Freeze-Thaw: Two-Dimensional Cell Experiments. <i>Environmental Science & Technology</i> , 2008, 42, 5467-5472.	4.6	14
22	Cost of s-fold decisions in exact Maxwellâ€“Boltzmann, Boseâ€“Einstein and Fermiâ€“Dirac statistics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2006, 365, 142-149.	1.2	13
23	A hierarchy of maximum entropy closures for Galerkin systems of incompressible flows. <i>Computers and Mathematics With Applications</i> , 2013, 65, 1558-1574.	1.4	13
24	In situ multiphase fluidization ("upflow washing") for the remediation of hydrocarbon contaminated sands. <i>Canadian Geotechnical Journal</i> , 1998, 35, 938-960.	1.4	12
25	Non-asymptotic thermodynamic ensembles. <i>Europhysics Letters</i> , 2009, 86, 20010.	0.7	12
26	Non-aqueous Phase Liquid Spills in Freezing and Thawing Soils: Critical Analysis of Pore-Scale Processes. <i>Critical Reviews in Environmental Science and Technology</i> , 2013, 43, 551-597.	6.6	11
27	Synchronization control of oscillator networks using symbolic regression. <i>Nonlinear Dynamics</i> , 2018, 91, 1001-1021.	2.7	11
28	Mixed solid/dispersed phase particles in multiphase fluidised beds. II: Stability at laminar to turbulent flow scales. <i>Chemical Engineering Science</i> , 2000, 55, 3033-3051.	1.9	10
29	The constrained entropy and cross-entropy functions. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2004, 334, 444-458.	1.2	10
30	The PÃ³lya information divergence. <i>Information Sciences</i> , 2010, 180, 4189-4194.	4.0	9
31	Origins of the Combinatorial Basis of Entropy. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	8
32	Unification of surface tension isotherms of PFOA or GenX salts in electrolyte solutions by mean ionic activity. <i>Chemosphere</i> , 2021, 280, 130715.	4.2	8
33	Comparison Between Bayesian and Maximum Entropy Analyses of Flow Networksâ€. <i>Entropy</i> , 2017, 19, 58.	1.1	7
34	Maximum Entropy Analysis of Flow Networks: Theoretical Foundation and Applications. <i>Entropy</i> , 2019, 21, 776.	1.1	7
35	"Coefficient of Permeability Determined by Measurable Parameters," by D,W, Barr, May-June 2001 issue, v. 39, no. 3: 356-361.. <i>Ground Water</i> , 2002, 40, 670-671.	0.7	6
36	Combinatorial basis and non-asymptotic form of the Tsallis entropy function. <i>European Physical Journal B</i> , 2008, 61, 75-82.	0.6	6

#	ARTICLE	IF	CITATIONS
37	The q-gamma and (q,q)-polygamma functions of Tsallis statistics. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009, 388, 4045-4060.	1.2	6
38	Bayesian Identification of Dynamical Systems. <i>Proceedings (mdpi)</i> , 2020, 33, .	0.2	6
39	Incipient Sediment Motion With Upward Seepage. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 2000, 38, 475-479.	0.7	5
40	Cluster-based reduced-order modelling of shear flows. <i>AIP Conference Proceedings</i> , 2014, , .	0.3	5
41	Maximum entropy analysis of steady-state flow systems (and extremum entropy production principles). , 2012, , .		4
42	Maximum-entropy weighting of multiple earth climate models. <i>Climate Dynamics</i> , 2012, 39, 755-765.	1.7	4
43	Maximum entropy analysis of hydraulic pipe networks. , 2014, , .		4
44	MaxEnt analysis of a water distribution network in Canberra, ACT, Australia. , 2015, , .		4
45	Maximum Entropy Derivation of Quasi-Newton Methods. <i>SIAM Journal on Optimization</i> , 2016, 26, 2495-2511.	1.2	4
46	Beyond the Second Law: An Overview. <i>Understanding Complex Systems</i> , 2014, , 3-27.	0.3	4
47	New Conservation Laws Based on Generalised Reynolds Transport Theorems. , 2020, , .		4
48	Invariance Properties of the Entropy Production, and the Entropic Pairing of Inertial Frames of Reference by Shear-Flow Systems. <i>Entropy</i> , 2021, 23, 1515.	1.1	4
49	Reply to the comments by D. Stevenson on "Physical insight into the Ergun and Wen and Yu equations for fluid flow in packed and fluidised beds" by R.K. Niven [<i>Chemical Engineering Science</i> , 57 (2002), 527-534]. <i>Chemical Engineering Science</i> , 2005, 60, 299-300.	1.9	3
50	Combinatorial entropy for distinguishable entities in indistinguishable states. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	3
51	Maximum entropy analysis of flow networks. , 2014, , .		3
52	Maximum entropy analysis of transport networks. <i>AIP Conference Proceedings</i> , 2017, , .	0.3	3
53	Reduced-Parameter Method for Maximum Entropy Analysis of Hydraulic Pipe Flow Networks. <i>Journal of Hydraulic Engineering</i> , 2018, 144, 04017060.	0.7	3
54	Jaynes' Maximum Entropy Principle, Riemannian Metrics and Generalised Least Action Bound. , 2010, , .		3

#	ARTICLE	IF	CITATIONS
55	Control Volume Analysis, Entropy Balance and the Entropy Production in Flow Systems. Understanding Complex Systems, 2014, , 129-162.	0.3	3
56	In situ fluidization for peat bed rupture, and preliminary economic analysis. Journal of Contaminant Hydrology, 2002, 59, 67-85.	1.6	2
57	"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
58	Jaynesâ€™ MaxEnt, Steady State Flow Systems and the Maximum Entropy Production Principle. , 2009, , .		2
59	Maximum entropy analysis of flow and reaction networks. , 2015, , .		2
60	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
61	In Situ Fluidization for Permeable Reactive Barrier Installation and Maintenance. ACS Symposium Series, 2002, , 217-235.	0.5	1
62	Maximum entropy derivation of quasi-Newton methods. AIP Conference Proceedings, 2016, , .	0.3	1
63	Bayesian cyclic networks, mutual information and reduced-order Bayesian inference. AIP Conference Proceedings, 2016, , .	0.3	1
64	Dynamical System Identification by Bayesian Inference. , 2020, , .		1
65	Discussion: Washing of Zinc(II) from Contaminated Soil Column. Journal of Environmental Engineering, ASCE, 1996, 122, 881-883.	0.7	0
66	Discussion/DNAPL Remediation: Which â€œNew Paradigmâ€™ Will Prevail?. Ground Water Monitoring and Remediation, 2002, 22, 169-169.	0.6	0
67	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
68	Consistent maximum entropy representations of pipe flow networks. AIP Conference Proceedings, 2017, , .	0.3	0
69	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
70	Maximum Entropy Analysis of Flow Networks with Structural Uncertainty (Graph Ensembles). Springer Proceedings in Mathematics and Statistics, 2018, , 261-274.	0.1	0