

Armen Allahverdyan

List of Publications by Year in descending order

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82
papers

2,007
citations

361413
20
h-index

254184
43
g-index

82
all docs

82
docs citations

82
times ranked

1131
citing authors

#	ARTICLE	IF	CITATIONS
1	Maximal work extraction from finite quantum systems. Europhysics Letters, 2004, 67, 565-571.	2.0	301
2	Understanding quantum measurement from the solution of dynamical models. Physics Reports, 2013, 525, 1-166.	25.6	160
3	Extraction of Work from a Single Thermal Bath in the Quantum Regime. Physical Review Letters, 2000, 85, 1799-1802.	7.8	151
4	Work extremum principle: Structure and function of quantum heat engines. Physical Review E, 2008, 77, 041118.	2.1	122
5	Carnot Cycle at Finite Power: Attainability of Maximal Efficiency. Physical Review Letters, 2013, 111, 050601.	7.8	112
6	Nonequilibrium quantum fluctuations of work. Physical Review E, 2014, 90, 032137.	2.1	101
7	Optimal refrigerator. Physical Review E, 2010, 81, 051129.	2.1	94
8	Determining a Quantum State by Means of a Single Apparatus. Physical Review Letters, 2004, 92, 120402.	7.8	81
9	Thermodynamic efficiency of information and heat flow. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P09011.	2.3	74
10	A sub-ensemble theory of ideal quantum measurement processes. Annals of Physics, 2017, 376, 324-352.	2.8	67
11	Opinion Dynamics with Confirmation Bias. PLoS ONE, 2014, 9, e99557.	2.5	54
12	Testing the violation of the Clausius inequality in nanoscale electric circuits. Physical Review B, 2002, 66, .	3.2	52
13	Curie-Weiss model of the quantum measurement process. Europhysics Letters, 2003, 61, 452-458.	2.0	49
14	Energy and entropy: Path from game theory to statistical mechanics. Physical Review Research, 2020, 2, .	3.6	46
15	Thermodynamic limits of dynamic cooling. Physical Review E, 2011, 84, 041109.	2.1	43
16	Steady adiabatic state: Its thermodynamics, entropy production, energy dissipation, and violation of Onsager relations. Physical Review E, 2000, 62, 845-850.	2.1	42
17	Quantum thermodynamics: Thermodynamics at the nanoscale. Journal of Modern Optics, 2004, 51, 2703-2711.	1.3	35
18	Community detection with and without prior information. Europhysics Letters, 2010, 90, 18002.	2.0	28

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19	Stabilization and Anomalous Hydration of Collagen Fibril under Heating. PLoS ONE, 2013, 8, e78526.	2.5	25
20	Explanation of the Gibbs paradox within the framework of quantum thermodynamics. Physical Review E, 2006, 73, 066119.	2.1	21
21	Minimal-work principle and its limits for classical systems. Physical Review E, 2007, 75, 051124.	2.1	20
22	Bath-Assisted Cooling of Spins. Physical Review Letters, 2004, 93, 260404.	7.8	19
23	Adaptive decision making via entropy minimization. International Journal of Approximate Reasoning, 2018, 103, 270-287.	3.3	18
24	Explaining Zipf's law via a mental lexicon. Physical Review E, 2013, 88, 062804.	2.1	17
25	Work extraction from microcanonical bath. Europhysics Letters, 2011, 95, 60004.	2.0	16
26	Anomalous Latent Heat in Nonequilibrium Phase Transitions. Physical Review Letters, 2006, 96, 065701.	7.8	15
27	Rank-frequency relation for Chinese characters. European Physical Journal B, 2014, 87, 1.	1.5	15
28	Optimizing the Classical Heat Engine. Physical Review Letters, 2000, 85, 232-235.	7.8	12
29	How adsorption influences DNA denaturation. Physical Review E, 2009, 79, 031903.	2.1	12
30	Statistical networks emerging from link-node interactions. Europhysics Letters, 2006, 75, 908-914.	2.0	11
31	Adhesion-Induced DNA Naturation. Physical Review Letters, 2006, 96, 098302.	7.8	11
32	Replicators in a Fine-Grained Environment: Adaptation and Polymorphism. Physical Review Letters, 2009, 102, 058102.	7.8	10
33	Simultaneous measurement of non-commuting observables. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 339-342.	2.7	10
34	Emergence of Leadership in Communication. PLoS ONE, 2016, 11, e0159301.	2.5	10
35	Adaptive Heat Engine. Physical Review Letters, 2016, 117, 030601.	7.8	9
36	Adaptive machine and its thermodynamic costs. Physical Review E, 2013, 87, .	2.1	8

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37	Phase transitions in community detection: A solvable toy model. Europhysics Letters, 2014, 106, 48004.	2.0	8
38	Dynamics of a quantum measurement. Physica E: Low-Dimensional Systems and Nanostructures, 2005, 29, 261-271.	2.7	7
39	Glassy state of native collagen fibril?. Europhysics Letters, 2011, 95, 23001.	2.0	7
40	Time arrow is influenced by the dark energy. Physical Review E, 2016, 93, 052125.	2.1	7
41	Polymorphism in rapidly changing cyclic environment. Physical Review E, 2019, 100, 032401.	2.1	7
42	Entropy of Hidden Markov Processes via Cycle Expansion. Journal of Statistical Physics, 2008, 133, 535-564.	1.2	6
43	Quantum-state tomography using a single apparatus. Physical Review A, 2008, 77, .	2.5	6
44	Le Chatelier's principle in replicator dynamics. Physical Review E, 2011, 84, 041117.	2.1	6
45	Validity limits of the maximum entropy method. Chinese Journal of Physics, 2021, 71, 95-111.	3.9	6
46	Employing feedback in adiabatic quantum dynamics. Europhysics Letters, 2008, 84, 40007.	2.0	5
47	Statistical mechanics of semi-supervised clustering in sparse graphs. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P08009.	2.3	5
48	Kinetics of the helix-coil transition. Europhysics Letters, 2009, 86, 53002.	2.0	4
49	Active Inference for Binary Symmetric Hidden Markov Models. Journal of Statistical Physics, 2015, 161, 452-466.	1.2	4
50	Stochastic Model for Phonemes Uncovers an Author-Dependency of Their Usage. PLoS ONE, 2016, 11, e0152561.	2.5	4
51	Leadership scenarios in prisoner's dilemma game. Physica A: Statistical Mechanics and Its Applications, 2020, 545, 123020.	2.6	4
52	Thomson's formulation of the second law for macroscopic and finite work sources. Entropy, 2004, 6, 30-37.	2.2	4
53	Strengthened Lindblad inequality: Applications in nonequilibrium thermodynamics and quantum information theory. Physical Review E, 1998, 58, 1148-1151.	2.1	3
54	Phase Transitions and Quantum Measurements. AIP Conference Proceedings, 2006, , .	0.4	3

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55	Transferring elements of a density matrix. <i>Physical Review A</i> , 2010, 81, .	2.5	3
56	Electromagnetic gauge-freedom and work. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2016, 49, 285001.	2.1	3
57	Free energy for non-equilibrium quasi-stationary states. <i>Europhysics Letters</i> , 2017, 117, 50004.	2.0	3
58	Thomson's formulation of the second law: an exact theorem and limits of its validity. <i>AIP Conference Proceedings</i> , 2002, , .	0.4	2
59	Adiabatic processes need not correspond to optimal work. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2005, 29, 74-81.	2.7	2
60	Relating the thermodynamic arrow of time to the causal arrow. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2008, 2008, P04001.	2.3	2
61	The thermodynamics of enhanced heat transfer: a model study. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2010, 2010, P06010.	2.3	2
62	Non-random structures in universal compression and the Fermi paradox. <i>European Physical Journal Plus</i> , 2016, 131, 1.	2.6	2
63	Work Extraction from Fluid Flow: The Analog of Carnot's Efficiency. <i>Physical Review Letters</i> , 2020, 125, 064503.	7.8	2
64	Dynamical symmetrization of the state of identical particles. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2021, 477, 20200911.	2.1	2
65	Energy dissipation and storage in adaptation and homeostasis. <i>Physics of Life Reviews</i> , 2021, 38, 137-139.	2.8	2
66	THE QUANTUM MEASUREMENT PROCESS: LESSONS FROM AN EXACTLY SOLVABLE MODEL. , 2007, , .		2
67	Nonequilibrium, weak-field-induced cyclotron motion: A mechanism for magnetobiology. <i>Physical Review E</i> , 2021, 104, 064407.	2.1	2
68	Thermodynamic selection: mechanisms and scenarios. <i>New Journal of Physics</i> , 2022, 24, 053006.	2.9	2
69	Spin-glass model with partially annealed asymmetric bonds. <i>Physical Review E</i> , 1998, 58, R5201-R5204.	2.1	1
70	Quantum Brownian motion and its conflict with the second law. <i>AIP Conference Proceedings</i> , 2002, , .	0.4	1
71	Memory-induced mechanism for self-sustaining activity in networks. <i>Physical Review E</i> , 2015, 92, 062824.	2.1	1
72	Active image restoration. <i>Physical Review E</i> , 2018, 98, .	2.1	1

#	ARTICLE	IF	CITATIONS
73	Defining the Work Done on an Electromagnetic Field. Physical Review Letters, 2018, 121, 240602.	7.8	1
74	Quantum non-locality co-exists with locality. Europhysics Letters, 2018, 122, 40005.	2.0	1
75	Reexamination of Betz's Limit for Wind Engines. Journal of Contemporary Physics, 2021, 56, 38-46.	0.6	1
76	Two halves of a meaningful text are statistically different. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 033413.	2.3	1
77	Modeling gasodynamic vortex cooling. Physical Review Fluids, 2017, 2, .	2.5	1
78	Broadcast of classical information through a quantum channel. Europhysics Letters, 2000, 50, 718-723.	2.0	0
79	Unmasking Maxwell's Demon. AIP Conference Proceedings, 2002, , .	0.4	0
80	Bath generated work extraction in two-level systems. AIP Conference Proceedings, 2002, , .	0.4	0
81	FEEDBACK-DRIVEN ADIABATIC QUANTUM DYNAMICS. , 2010, , .		0
82	Dissipative search of an unstructured database. Physical Review A, 2022, 105, .	2.5	0