Jerzy Åuczka

List of Publications by Year
in descending order

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156	2,987	147566	214527
papers	citations	31	47
		h-index	g-index

156	156	156	1134
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Velocity Multistability vs. Ergodicity Breaking in a Biased Periodic Potential. Entropy, 2022, 24, 98.	1.1	2
2	Energy of a free Brownian particle coupled to thermal vacuum. Scientific Reports, 2021, 11, 4088.	1.6	8
3	Comment on â€œDeformed Fokker-Planck equation: Inhomogeneous medium with a position-dependent massâ€. Physical Review E, 2021, 103, 036101.	0.8	0
4	Arcsine law and multistable Brownian dynamics in a tilted periodic potential. Physical Review E, 2021, 104, 024132.	0.8	11
5	Conundrum of weak-noise limit for diffusion in a tilted periodic potential. Physical Review E, 2021, 104, 034104.	0.8	9
6	Colossal Brownian yet non-Gaussian diffusion induced by nonequilibrium noise. Physical Review E, 2020, 102, 042121.	0.8	23
7	Quantum Counterpart of Classical Equipartition of Energy. Journal of Statistical Physics, 2020, 179, 839-845.	0.5	14
8	Diffusion in a biased washboard potential revisited. Physical Review E, 2020, 101, 032123.	0.8	20
9	Binary Communication with Gazeauâ€“Klauder Coherent States. Entropy, 2020, 22, 201.	1.1	4
10	Many Faces of Non-equilibrium: Anomalous Transport Phenomena in Driven Periodic Systems. Acta Physica Polonica B, 2020, 51, 1131.	0.3	9
11	On superstatistics of energy for a free quantum Brownian particle. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 064002.	0.9	7
12	Temperature-Induced Tunable Particle Separation. Physical Review Applied, 2019, 12, .	1.5	13
13	Coexistence of absolute negative mobility and anomalous diffusion. New Journal of Physics, 2019, 21, 083029.	1.2	39
14	Quantum analogue of energy equipartition theorem. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 15LT01.	0.7	21
15	Tunable Mass Separation via Negative Mobility. Physical Review Letters, 2019, 122, 070602.	2.9	40
16	SQUID ratchet: Statistics of transitions in dynamical localization. Chaos, 2019, 29, 013105.	1.0	22
17	Negative mobility of a Brownian particle: Strong damping regime. Communications in Nonlinear Science and Numerical Simulation, 2018, 55, 316-325.	1.7	22
18	Partition of energy for a dissipative quantum oscillator. Scientific Reports, 2018, 8, 16080.	1.6	16

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19	Quantum partition of energy for a free Brownian particle: Impact of dissipation. Physical Review A, 2018, 98, .	1.0	15
20	Kinetic Energy of a Free Quantum Brownian Particle. Entropy, 2018, 20, 123.	1.1	16
21	Self-averaging of random quantum dynamics. Physical Review A, 2018, 98, .	1.0	4
22	Brownian ratchets: How stronger thermal noise can reduce diffusion. Chaos, 2017, 27, 023111.	1.0	22
23	Energetics of a driven Brownian harmonic oscillator. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 113206.	0.9	10
24	Work distributions for random sudden quantum quenches. Physical Review E, 2017, 95, 052137.	0.8	18
25	Subdiffusion via dynamical localization induced by thermal equilibrium fluctuations. Scientific Reports, 2017, 7, 16451.	1.6	31
26	Non-monotonic temperature dependence of chaos-assisted diffusion in driven periodic systems. New Journal of Physics, 2016, 18, 123029.	1.2	21
27	Transient anomalous diffusion in periodic systems: ergodicity, symmetry breaking and velocity relaxation. Scientific Reports, 2016, 6, 30948.	1.6	62
28	Leggettâ€“Garg inequalities for a quantum top affected by classical noise. Quantum Information Processing, 2016, 15, 4911-4925.	1.0	2
29	Efficiency of transport in periodic potentials: dichotomous noise contra deterministic force. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 054038.	0.9	18
30	Quantum cloning disturbed by thermal Davies environment. Quantum Information Processing, 2016, 15, 2661-2673.	1.0	2
31	Comment on â€˜Absolute negative mobility in a one-dimensional overdamped systemâ€™. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016, 380, 1499-1501.	0.9	0
32	Diffusion anomalies in ac-driven Brownian ratchets. Physical Review E, 2015, 91, 062104.	0.8	33
33	Poissonian noise assisted transport in periodic systems. Physica Scripta, 2015, T165, 014015.	1.2	4
34	Energetics of an rf SQUID Coupled to Two Thermal Reservoirs. PLoS ONE, 2015, 10, e0143912.	1.1	1
35	Reply to Comment on â€˜Gazeauâ€“Klauder cat statesâ€™. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 238002.	0.7	0
36	Leggett-Garg inequality for qubits coupled to thermal environment. Physical Review A, 2015, 91, .	1.0	14

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37	Efficiency of the SQUID ratchet driven by external current. New Journal of Physics, 2015, 17, 023054.	1.2	19
38	Josephson phase diffusion in the superconducting quantum interference device ratchet. Chaos, 2015, 25, 053110.	1.0	17
39	Persistent currents in metallic rings containing a quantum dot. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 1654-1660.	0.9	0
40	Brownian motor efficiency enhanced by nonequilibrium noise. , 2015, , .		0
41	Josephson junction ratchet: The impact of finite capacitances. Physical Review B, 2014, 90, .	1.1	21
42	Brownian motors in the microscale domain: Enhancement of efficiency by noise. Physical Review E, 2014, 90, 032104.	0.8	62
43	Absolute negative mobility of inertial Brownian particles induced by noise. , 2013, , .		0
44	Swapping of correlations via teleportation with decoherence. Physical Review A, 2013, 87, .	1.0	15
45	Relation Between Purity of an Open Qubit Dynamics and Its Initial Correlation with an Environment. International Journal of Theoretical Physics, 2013, 52, 1148-1159.	0.5	5
46	Interference phenomenon and geometric phase for Dirac neutrino inÏ€+decay. Physical Review D, 2013, 87, .	1.6	6
47	Absolute negative mobility induced by white Poissonian noise. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P02044.	0.9	35
48	Title is missing!. Acta Physica Polonica B, 2012, 43, 921.	0.3	1
49	Gazeauâ€“Klauder cat states. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 244006.	0.7	4
50	Title is missing!. Acta Physica Polonica B, 2012, 43, 1203.	0.3	0
51	Negativity and quantum discord in Davies environments. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 485306.	0.7	17
52	Squeezing of magnetic flux in nanorings. Journal of Physics Condensed Matter, 2012, 24, 495701.	0.7	0
53	The Trace Distance and Linear Entropy of Qubit States: The Role of Initial Qubit-Environment Correlations. Reports on Mathematical Physics, 2012, 70, 193-204.	0.4	4
54	Two coupled Josephson junctions: dc voltage controlled by biharmonic current. Journal of Physics Condensed Matter, 2012, 24, 085702.	0.7	4

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55	Directed transport in coupled noisy Josephson junctions controlled via ac signals. Physica Scripta, 2012, T151, 014021.	1.2	1
56	Geometric phase of neutrino propagating through dissipative matter. Physical Review D, 2011, 83, .	1.6	17
57	Hyperbolic diffusion in chaotic systems. European Physical Journal B, 2011, 83, 223-233.	0.6	1
58	Geometric phase as a determinant of a qubitâ€“ environment coupling. Quantum Information Processing, 2011, 10, 85-96.	1.0	23
59	Distance between quantum states in the presence of initial qubit-environment correlations: A comparative study. Physical Review A, 2011, 84, .	1.0	71
60	Indirect control of transport and interaction-induced negative mobility in an overdamped system of two coupled particles. Physical Review E, 2011, 83, 051117.	0.8	19
61	Current characteristics of mesoscopic rings in quantum Smoluchowski regime. European Physical Journal: Special Topics, 2010, 187, 5-14.	1.2	1
62	Distance growth of quantum states due to initial system-environment correlations. Physical Review A, 2010, 82, .	1.0	74
63	Inertial Brownian motors driven by biharmonic signals. Chemical Physics, 2010, 375, 445-449.	0.9	21
64	Negative conductances of Josephson junctions: Voltage fluctuations and energetics. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 590-594.	1.3	16
65	Dephasing of qubits by the SchrÃ¶dinger cat. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 374-377.	1.3	14
66	Currentâ€“flux characteristics in mesoscopic non-superconducting rings. Journal of Physics Condensed Matter, 2010, 22, 422201.	0.7	4
67	Current in Hubbard rings manipulated via magnetic flux. Journal of Physics Condensed Matter, 2010, 22, 245301.	0.7	4
68	Transport driven by biharmonic forces: Impact of correlated thermal noise. Physical Review E, 2010, 82, 031133.	0.8	15
69	Thermal-inertial ratchet effects: Negative mobility, resonant activation, noise-enhanced stability, and noise-weakened stability. Physical Review E, 2010, 82, 041104.	0.8	33
70	Magnetic flux in a mesoscopic SQUID controlled by nonclassical electromagnetic fields. Physical Review B, 2009, 80, .	1.1	4
71	Fidelity of asymmetric dephasing channels. Physical Review A, 2009, 79, .	1.0	18
72	Geometric phase of interacting qubits: Mean-field analysis. Physical Review A, 2009, 80, .	1.0	2

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73	Analytically solvable model for the entanglement via scattering-like mechanisms. Quantum Information Processing, 2009, 8, 461-475.	1.0	1
74	Entanglement swapping in presence of dephasing. Physica Status Solidi (B): Basic Research, 2009, 246, 936-940.	0.7	2
75	Negative mobility induced by colored thermal fluctuations. Physical Review E, 2009, 80, 051121.	0.8	39
76	Transmission of magnetic signals in noisy mesorings. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P01030.	0.9	2
77	Transport characteristics of molecular motors. BioSystems, 2008, 94, 253-257.	0.9	14
78	Non-Markovian entanglement evolution of two uncoupled qubits. Physical Review A, 2008, 77, .	1.0	68
79	Anomalous transport in biased ac-driven Josephson junctions: Negative conductances. Physical Review B, 2008, 77, .	1.1	65
80	Origination and survival of qudit-qudit entanglement in open systems. Physical Review A, 2008, 77, .	1.0	30
81	Geometric phase of a qubit in dephasing environments. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 012001.	0.7	20
82	KINETICS OF CRYSTAL GROWTH LIMITED BY RANDOM VELOCITY FIELDS. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2008, 18, 2673-2679.	0.7	4
83	Bifurcations of the geometric phase of a qubit asymmetrically coupled to the environment. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 442001.	0.7	12
84	Entanglement persistence in contact with the environment: exact results. Journal of Physics A: Mathematical and Theoretical, 2007, 40, F879-F886.	0.7	19
85	Frequency Windows of Absolute Negative Conductance in Josephson Junctions. AIP Conference Proceedings, 2007, , .	0.3	0
86	Magnetic flux in mesoscopic rings: Quantum Smoluchowski regime. Physical Review B, 2007, 76, .	1.1	9
87	Absolute Negative Mobility Induced by Thermal Equilibrium Fluctuations. Physical Review Letters, 2007, 98, 040601.	2.9	158
88	Flux-biased mesoscopic rings. Physica Status Solidi (B): Basic Research, 2007, 244, 2432-2436.	0.7	1
89	Quantum diffusion in biased washboard potentials: Strong friction limit. Physical Review E, 2006, 73, 031105.	0.8	36
90	Optimal strategy for controlling transport in inertial Brownian motors. Journal of Physics Condensed Matter, 2006, 18, 4111-4112.	0.7	11

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91	Noisy dynamics of magnetic flux in mesoscopic cylinders. Journal of Physics: Conference Series, 2006, 30, 321-324.	0.3	0
92	Forcing inertial Brownian motors: Efficiency and negative differential mobility. Physica A: Statistical Mechanics and Its Applications, 2006, 371, 20-24.	1.2	41
93	Dynamical bimodality in equilibrium monostable systems. Physical Review E, 2006, 74, 041102.	0.8	9
94	Statistics of transition times, phase diffusion and synchronization in periodically driven bistable systems. New Journal of Physics, 2005, 7, 14-14.	1.2	39
95	The diffusion in the quantum Smoluchowski equation. Physica A: Statistical Mechanics and Its Applications, 2005, 351, 60-68.	1.2	31
96	On temperature- and space-dimension dependent matter agglomerations in a mature growing stage. Chemical Physics, 2005, 310, 153-161.	0.9	15
97	Collective behavior of coupled mesoscopic cylinders. Physica Status Solidi (B): Basic Research, 2005, 242, 196-202.	0.7	5
98	Can Self-Sustaining Currents Be Induced In A System Of Mesoscopic Rings?. AIP Conference Proceedings, 2005, , .	0.3	1
99	Optimal strategy for controlling transport in inertial Brownian motors. Journal of Physics Condensed Matter, 2005, 17, S3741-S3752.	0.7	33
100	Non-Markovian stochastic processes: Colored noise. Chaos, 2005, 15, 026107.	1.0	95
101	Rate description of Fokker-Planck processes with time-dependent parameters. Physical Review E, 2004, 69, 046109.	0.8	38
102	Brownian motors: Current fluctuations and rectification efficiency. Physical Review E, 2004, 70, 061105.	0.8	99
103	Consistent description of quantum Brownian motors operating at strong friction. Physical Review E, 2004, 70, 031107.	0.8	59
104	Optimal transport and phase transition in dichotomic ratchets. Physica A: Statistical Mechanics and Its Applications, 2003, 325, 69-77.	1.2	1
105	Finite volume effects in a model grain growth. Physica A: Statistical Mechanics and Its Applications, 2003, 325, 284-291.	1.2	8
106	Currents in a system of noisy mesoscopic rings. Physical Review B, 2003, 67, .	1.1	12
107	STATIONARY FLUX IN MESOSCOPIC NOISY CYLINDERS. , 2003, , .		0
108	Kinetics of growth process controlled by convective fluctuations. Physical Review E, 2002, 65, 051401.	0.8	10

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109	Nonequilibrium coupled Brownian phase oscillators. Physical Review E, 2002, 65, 051115.	0.8	22
110	Multiple current reversal in Brownian ratchets. Physical Review E, 2001, 63, 021101.	0.8	51
111	Transport of particles for a spatially periodic stochastic system with correlated noises. Physical Review E, 2001, 64, 011113.	0.8	45
112	On the kinetics of polymer crystallization: a possible mechanism. Journal of Molecular Liquids, 2000, 86, 237-247.	2.3	8
113	Diffusion of Brownian particles governed by fluctuating friction. Physica A: Statistical Mechanics and Its Applications, 2000, 278, 18-31.	1.2	37
114	Rectified steady flow induced by white shot noise: diffusive and non-diffusive regimes. Annalen Der Physik, 2000, 9, 721-734.	0.9	10
115	Rectified steady flow induced by white shot noise: diffusive and non-diffusive regimes. , 2000, 9, 721.		2
116	Brownian Motion in a d-Dimensional Space with Fluctuating Friction. , 2000, , 85-96.		1
117	Application of statistical mechanics to stochastic transport. Physica A: Statistical Mechanics and Its Applications, 1999, 274, 200-215.	1.2	28
118	Brownian transport controlled by dichotomic and thermal fluctuations. Chemical Physics, 1998, 235, 27-37.	0.9	26
119	Brownian motion in a fluctuating medium. Physics Letters, Section A: General, Atomic and Solid State Physics, 1998, 249, 409-414.	0.9	33
120	Phase transformation kinetics in d-dimensional grains-containing systems: diffusion-type model. Physica A: Statistical Mechanics and Its Applications, 1998, 248, 365-378.	1.2	11
121	Brownian Ratchets: Transport Controlled by Thermal Noise. Physical Review Letters, 1998, 80, 1377-1380.	2.9	57
122	Tunneling Center as a Source of Voltage Rectification in Josephson Junctions. Physical Review Letters, 1998, 80, 829-832.	2.9	63
123	Symmetric white noise can induce directed current in ratchets. Physical Review E, 1997, 56, 3968-3975.	0.8	67
124	Thermal ratchets driven by Poissonian white shot noise. Physical Review E, 1997, 55, 4057-4066.	0.8	37
125	Randomly flashing diffusion: Asymptotic properties. Journal of Statistical Physics, 1996, 83, 1149-1164.	0.5	8
126	Transport generated by dichotomous fluctuations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 214, 14-20.	0.9	38

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127	LONG-TIME ASYMPTOTICS FOR DIFFUSING CLUSTERS WITH POISSON GROWTH STATISTICS. Fractals, 1996, 04, 543-546.	1.8	3
128	Noise-induced transport in symmetric periodic potentials: White shot noise versus deterministic noise. Europhysics Letters, 1996, 35, 315-317.	0.7	59
129	Diffusion-migration concept applied to growth and structure formation in model biomembranes. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 203, 367-372.	0.9	7
130	Diffusion of clusters with randomly growing masses. Physical Review E, 1995, 51, 5762-5769.	0.8	29
131	Non-Markovian process driven by quadratic noise: Kramers-Moyal expansion and Fokker-Planck modeling. Physical Review E, 1995, 51, 2933-2938.	0.8	27
132	First-passage time for randomly flashing diffusion. Physical Review E, 1995, 52, 5810-5816.	0.8	10
133	On anomalous diffusion of fractal clusters under certain realistic physical conditions. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1265-1270.	0.4	3
134	Some remarks concerning spherulitic growth. International Journal of Quantum Chemistry, 1994, 52, 301-308.	1.0	10
135	The growing processes in diffusive and convective fields. Chemical Engineering Science, 1993, 48, 3713-3721.	1.9	16
136	Randomly interrupted diffusion. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 167, 475-478.	0.9	18
137	On the diffusion-driven growth: The perturbed sphere problem revisited. European Physical Journal D, 1992, 42, 577-590.	0.4	6
138	Quantum open systems in a two-state stochastic reservoir. European Physical Journal D, 1991, 41, 289-292.	0.4	10
139	Spin in contact with thermostat: Exact reduced dynamics. Physica A: Statistical Mechanics and Its Applications, 1990, 167, 919-934.	1.2	88
140	The asymptotic dynamics of processes with multiplicative quadratic noise. European Physical Journal D, 1989, 39, 689-695.	0.4	1
141	Stochastic processes with colored Gaussian noise: The small noise limit revisited. Physics Letters, Section A: General, Atomic and Solid State Physics, 1989, 139, 29-34.	0.9	5
142	On Markovian kinetic equations: Zubarev's nonequilibrium statistical operator approach. Physica A: Statistical Mechanics and Its Applications, 1988, 149, 245-266.	1.2	7
143	An approximate master equation for systems driven by linear Ornstein-Uhlenbeck noise. Physica A: Statistical Mechanics and Its Applications, 1988, 153, 619-635.	1.2	9
144	Relaxation problem with a quadratic noise: Analysis. Journal of Statistical Physics, 1987, 47, 505-526.	0.5	8

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145	Simple Derivation of the Direct Spinâ€Phonon Interaction. Physica Status Solidi (B): Basic Research, 1986, 136, K27.	0.7	1
146	Exact probability distribution for soluble model with quadratic noise. Journal of Statistical Physics, 1986, 42, 1009-1018.	0.5	8
147	Relaxation of a single two-level system. European Physical Journal D, 1986, 36, 674-680.	0.4	0
148	The Dynamics of Classical Spins Interacting with Pump Field and Quantum Reservoir. Physica Scripta, 1986, 34, 97-100.	1.2	1
149	The exact equation of motion for a two level system. Zubarev like approach. European Physical Journal D, 1985, 35, 386-400.	0.4	3
150	Dynamics of a class of processes with Smoluchowski noises. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 102, 401-404.	0.9	2
151	Evolution equation for two level systems interacting with pump and relaxation mechanisms. European Physical Journal D, 1984, 34, 1150-1156.	0.4	1
152	Kinetic theory of resonance and relaxation in spin systems. Physica A: Statistical Mechanics and Its Applications, 1983, 120, 219-237.	1.2	2
153	Kinetic theory of resonance and relaxation in spin systems. Physica A: Statistical Mechanics and Its Applications, 1982, 111, 240-254.	1.2	5
154	Kinetic theory of resonance and relaxation in spin systems I. Physica A: Statistical Mechanics and Its Applications, 1980, 101, 552-570.	1.2	3
155	Generalized kinetic equations with memory. Physics Letters, Section A: General, Atomic and Solid State Physics, 1979, 69, 393-395.	0.9	12
156	Brownian motors: Current fluctuations and rectification efficiency. , 0, .		1