Jerzy Luczka

List of Publications by Year in Descending Order

148 papers	2,557 citations	29 h-index	43 g-index
156 ext. papers	2,808 ext. citations	2.6 avg, IF	5.46 L-index

#	Paper	IF	Citations
148	Comment on "Deformed Fokker-Planck equation: Inhomogeneous medium with a position-dependent mass". *Physical Review E*, **2021**, 103, 036101	2.4	
147	Energy of a free Brownian particle coupled to thermal vacuum. *Scientific Reports*, **2021**, 11, 4088	4.9	4
146	Arcsine law and multistable Brownian dynamics in a tilted periodic potential. *Physical Review E*, **2021**, 104, 024132	2.4	4
145	Conundrum of weak-noise limit for diffusion in a tilted periodic potential. *Physical Review E*, **2021**, 104, 034104	2.4	1
144	Quantum Counterpart of Classical Equipartition of Energy. *Journal of Statistical Physics*, **2020**, 179, 839-845	1.5	5
143	Diffusion in a biased washboard potential revisited. *Physical Review E*, **2020**, 101, 032123	2.4	12
142	Binary Communication with Gazeau-Klauder Coherent States. *Entropy*, **2020**, 22,	2.8	1
141	Many Faces of Non-equilibrium: Anomalous Transport Phenomena in Driven Periodic Systems. *Acta Physica Polonica B*, **2020**, 51, 1131	1.9	7
140	Colossal Brownian yet non-Gaussian diffusion induced by nonequilibrium noise. *Physical Review E*, **2020**, 102, 042121	2.4	10
139	Coexistence of absolute negative mobility and anomalous diffusion. *New Journal of Physics*, **2019**, 21, 083029	2.9	24
138	Quantum analogue of energy equipartition theorem. *Journal of Physics A: Mathematical and Theoretical*, **2019**, 52, 15LT01	2	9
137	Tunable Mass Separation via Negative Mobility. *Physical Review Letters*, **2019**, 122, 070602	7.4	24
136	On superstatistics of energy for a free quantum Brownian particle. *Journal of Statistical Mechanics: Theory and Experiment*, **2019**, 2019, 064002	1.9	4
135	Temperature-Induced Tunable Particle Separation. *Physical Review Applied*, **2019**, 12,	4.3	8
134	SQUID ratchet: Statistics of transitions in dynamical localization. *Chaos*, **2019**, 29, 013105	3.3	13
133	Kinetic Energy of a Free Quantum Brownian Particle. *Entropy*, **2018**, 20,	2.8	12
132	Self-averaging of random quantum dynamics. *Physical Review A*, **2018**, 98,	2.6	4

131	Negative mobility of a Brownian particle: Strong damping regime. *Communications in Nonlinear Science and Numerical Simulation*, **2018**, 55, 316-325	3.7	19
130	Partition of energy for a dissipative quantum oscillator. *Scientific Reports*, **2018**, 8, 16080	4.9	10
129	Quantum partition of energy for a free Brownian particle: Impact of dissipation. *Physical Review A*, **2018**, 98,	2.6	7
128	Brownian ratchets: How stronger thermal noise can reduce diffusion. *Chaos*, **2017**, 27, 023111	3.3	17
127	Energetics of a driven Brownian harmonic oscillator. *Journal of Statistical Mechanics: Theory and Experiment*, **2017**, 2017, 113206	1.9	5
126	Work distributions for random sudden quantum quenches. *Physical Review E*, **2017**, 95, 052137	2.4	12
125	Subdiffusion via dynamical localization induced by thermal equilibrium fluctuations. *Scientific Reports*, **2017**, 7, 16451	4.9	21
124	Transient anomalous diffusion in periodic systems: ergodicity, symmetry breaking and velocity relaxation. *Scientific Reports*, **2016**, 6, 30948	4.9	48
123	Leggett〖Garg inequalities for a quantum top affected by classical noise. *Quantum Information Processing*, **2016**, 15, 4911-4925	1.6	2
122	Efficiency of transport in periodic potentials: dichotomous noise contra deterministic force. *Journal of Statistical Mechanics: Theory and Experiment*, **2016**, 2016, 054038	1.9	18
121	Quantum cloning disturbed by thermal Davies environment. *Quantum Information Processing*, **2016**, 15, 2661-2673	1.6	2
120	Comment on 〖Absolute negative mobility in a one-dimensional overdamped system〗*Physics Letters, Section A: General, Atomic and Solid State Physics*, **2016**, 380, 1499-1501	2.3	
119	Non-monotonic temperature dependence of chaos-assisted diffusion in driven periodic systems. *New Journal of Physics*, **2016**, 18, 123029	2.9	17
118	Leggett-Garg inequality for qubits coupled to thermal environment. *Physical Review A*, **2015**, 91,	2.6	13
117	Efficiency of the SQUID ratchet driven by external current. *New Journal of Physics*, **2015**, 17, 023054	2.9	17
116	Josephson phase diffusion in the superconducting quantum interference device ratchet. *Chaos*, **2015**, 25, 053110	3.3	14
115	Persistent currents in metallic rings containing a quantum dot. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2015**, 379, 1654-1660	2.3	
114	Diffusion anomalies in ac-driven Brownian ratchets. *Physical Review E*, **2015**, 91, 062104	2.4	25

113	Poissonian noise assisted transport in periodic systems. *Physica Scripta*, **2015**, T165, 014015	2.6	3
112	Energetics of an rf SQUID Coupled to Two Thermal Reservoirs. *PLoS ONE*, **2015**, 10, e0143912	3.7	1
111	Reply to Comment on 'Gazeau–Klauder cat states'. *Journal of Physics A: Mathematical and Theoretical*, **2015**, 48, 238002	2	
110	Josephson junction ratchet: The impact of finite capacitances. *Physical Review B*, **2014**, 90,	3.3	19
109	Brownian motors in the microscale domain: enhancement of efficiency by noise. *Physical Review E*, **2014**, 90, 032104	2.4	47
108	Swapping of correlations via teleportation with decoherence. *Physical Review A*, **2013**, 87,	2.6	13
107	Relation Between Purity of an Open Qubit Dynamics and Its Initial Correlation with an Environment. *International Journal of Theoretical Physics*, **2013**, 52, 1148-1159	1.1	5
106	Interference phenomenon and geometric phase for Dirac neutrino in β decay. *Physical Review D*, **2013**, 87,	4.9	5
105	Absolute negative mobility induced by white Poissonian noise. *Journal of Statistical Mechanics: Theory and Experiment*, **2013**, 2013, P02044	1.9	27
104	The Trace Distance and Linear Entropy of Qubit States: The Role of Initial Qubit-Environment Correlations. *Reports on Mathematical Physics*, **2012**, 70, 193-204	0.8	4
103	Two coupled Josephson junctions: dc voltage controlled by biharmonic current. *Journal of Physics Condensed Matter*, **2012**, 24, 085702	1.8	3
102	Directed transport in coupled noisy Josephson junctions controlled via ac signals. *Physica Scripta*, **2012**, T151, 014021	2.6	0
101	Gazeau–Klauder cat states. *Journal of Physics A: Mathematical and Theoretical*, **2012**, 45, 244006	2	3
100	Negativity and quantum discord in Davies environments. *Journal of Physics A: Mathematical and Theoretical*, **2012**, 45, 485306	2	14
99	Squeezing of magnetic flux in nanorings. *Journal of Physics Condensed Matter*, **2012**, 24, 495701	1.8	
98	Hyperbolic diffusion in chaotic systems. *European Physical Journal B*, **2011**, 83, 223-233	1.2	0
97	Geometric phase as a determinant of a qubit–environment coupling. *Quantum Information Processing*, **2011**, 10, 85-96	1.6	22
96	Geometric phase of neutrino propagating through dissipative matter. *Physical Review D*, **2011**, 83,	4.9	15

95	Distance between quantum states in the presence of initial qubit-environment correlations: A comparative study. *Physical Review A*, **2011**, 84,	2.6	57
94	Indirect control of transport and interaction-induced negative mobility in an overdamped system of two coupled particles. *Physical Review E*, **2011**, 83, 051117	2.4	18
93	Current-flux characteristics in mesoscopic non-superconducting rings. *Journal of Physics Condensed Matter*, **2010**, 22, 422201	1.8	3
92	Current in Hubbard rings manipulated via magnetic flux. *Journal of Physics Condensed Matter*, **2010**, 22, 245301	1.8	3
91	Transport driven by biharmonic forces: impact of correlated thermal noise. *Physical Review E*, **2010**, 82, 031133	2.4	14
90	Thermal-inertial ratchet effects: negative mobility, resonant activation, noise-enhanced stability, and noise-weakened stability. *Physical Review E*, **2010**, 82, 041104	2.4	32
89	Current characteristics of mesoscopic rings in quantum Smoluchowski regime. *European Physical Journal: Special Topics*, **2010**, 187, 5-14	2.3	1
88	Distance growth of quantum states due to initial system-environment correlations. *Physical Review A*, **2010**, 82,	2.6	62
87	Inertial Brownian motors driven by biharmonic signals. *Chemical Physics*, **2010**, 375, 445-449	2.3	20
86	Negative conductances of Josephson junctions: Voltage fluctuations and energetics. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 42, 590-594	3	13
85	Dephasing of qubits by the Schrödinger cat. *Physica E: Low-Dimensional Systems and Nanostructures*, **2010**, 42, 374-377	3	13
84	Magnetic flux in a mesoscopic SQUID controlled by nonclassical electromagnetic fields. *Physical Review B*, **2009**, 80,	3.3	3
83	Fidelity of asymmetric dephasing channels. *Physical Review A*, **2009**, 79,	2.6	15
82	Geometric phase of interacting qubits: Mean-field analysis. *Physical Review A*, **2009**, 80,	2.6	1
81	Analytically solvable model for the entanglement via scattering-like mechanisms. *Quantum Information Processing*, **2009**, 8, 461-475	1.6	1
80	Entanglement swapping in presence of dephasing. *Physica Status Solidi (B): Basic Research*, **2009**, 246, 936-940	1.3	1
79	Negative mobility induced by colored thermal fluctuations. *Physical Review E*, **2009**, 80, 051121	2.4	34
78	Transmission of magnetic signals in noisy mesorings. *Journal of Statistical Mechanics: Theory and Experiment*, **2009**, 2009, P01030	1.9	2

77	Non-Markovian entanglement evolution of two uncoupled qubits. *Physical Review A*, **2008**, 77,	2.6	63
76	Anomalous transport in biased ac-driven Josephson junctions: Negative conductances. *Physical Review B*, **2008**, 77,	3.3	58
75	Origination and survival of qudit-qudit entanglement in open systems. *Physical Review A*, **2008**, 77,	2.6	27
74	Geometric phase of a qubit in dephasing environments. *Journal of Physics A: Mathematical and Theoretical*, **2008**, 41, 012001	2	18
73	KINETICS OF CRYSTAL GROWTH LIMITED BY RANDOM VELOCITY FIELDS. *International Journal of Bifurcation and Chaos in Applied Sciences and Engineering*, **2008**, 18, 2673-2679	2	3
72	Bifurcations of the geometric phase of a qubit asymmetrically coupled to the environment. *Journal of Physics A: Mathematical and Theoretical*, **2008**, 41, 442001	2	11
71	Transport characteristics of molecular motors. *BioSystems*, **2008**, 94, 253-7	1.9	12
70	Flux-biased mesoscopic rings. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 2432-2436	1.3	1
69	Entanglement persistence in contact with the environment: exact results. *Journal of Physics A: Mathematical and Theoretical*, **2007**, 40, F879-F886	2	19
68	Magnetic flux in mesoscopic rings: Quantum Smoluchowski regime. *Physical Review B*, **2007**, 76,	3.3	9
67	Absolute negative mobility induced by thermal equilibrium fluctuations. *Physical Review Letters*, **2007**, 98, 040601	7.4	136
66	Dynamical bimodality in equilibrium monostable systems. *Physical Review E*, **2006**, 74, 041102	2.4	7
65	Quantum diffusion in biased washboard potentials: strong friction limit. *Physical Review E*, **2006**, 73, 031105	2.4	34
64	Optimal strategy for controlling transport in inertial Brownian motors. *Journal of Physics Condensed Matter*, **2006**, 18, 4111-4112	1.8	10
63	Noisy dynamics of magnetic flux in mesoscopic cylinders. *Journal of Physics: Conference Series*, **2006**, 30, 321-324	0.3	
62	Forcing inertial Brownian motors: Efficiency and negative differential mobility. *Physica A: Statistical Mechanics and Its Applications*, **2006**, 371, 20-24	3.3	37
61	Non-Markovian stochastic processes: colored noise. *Chaos*, **2005**, 15, 26107	3.3	73
60	Statistics of transition times, phase diffusion and synchronization in periodically driven bistable systems. *New Journal of Physics*, **2005**, 7, 14-14	2.9	38

59	The diffusion in the quantum Smoluchowski equation. *Physica A: Statistical Mechanics and Its Applications*, **2005**, 351, 60-68	3.3	31
58	On temperature- and space-dimension dependent matter agglomerations in a mature growing stage. *Chemical Physics*, **2005**, 310, 153-161	2.3	12
57	Collective behavior of coupled mesoscopic cylinders. *Physica Status Solidi (B): Basic Research*, **2005**, 242, 196-202	1.3	5
56	Optimal strategy for controlling transport in inertial Brownian motors. *Journal of Physics Condensed Matter*, **2005**, 17, S3741-52	1.8	32
55	Rate description of Fokker-Planck processes with time-dependent parameters. *Physical Review E*, **2004**, 69, 046109	2.4	34
54	Brownian motors: current fluctuations and rectification efficiency. *Physical Review E*, **2004**, 70, 061105	2.4	96
53	Consistent description of quantum Brownian motors operating at strong friction. *Physical Review E*, **2004**, 70, 031107	2.4	57
52	Optimal transport and phase transition in dichotomic ratchets. *Physica A: Statistical Mechanics and Its Applications*, **2003**, 325, 69-77	3.3	1
51	Finite volume effects in a model grain growth. *Physica A: Statistical Mechanics and Its Applications*, **2003**, 325, 284-291	3.3	6
50	Currents in a system of noisy mesoscopic rings. *Physical Review B*, **2003**, 67,	3.3	12
49	Kinetics of growth process controlled by convective fluctuations. *Physical Review E*, **2002**, 65, 051401	2.4	9
48	Nonequilibrium coupled Brownian phase oscillators. *Physical Review E*, **2002**, 65, 051115	2.4	18
47	Multiple current reversal in Brownian ratchets. *Physical Review E*, **2001**, 63, 021101	2.4	49
46	Transport of particles for a spatially periodic stochastic system with correlated noises. *Physical Review E*, **2001**, 64, 011113	2.4	43
45	On the kinetics of polymer crystallization: a possible mechanism. *Journal of Molecular Liquids*, **2000**, 86, 237-247	6	7
44	Diffusion of Brownian particles governed by fluctuating friction. *Physica A: Statistical Mechanics and Its Applications*, **2000**, 278, 18-31	3.3	35
43	Rectified steady flow induced by white shot noise: diffusive and non-diffusive regimes. *Annalen Der Physik*, **2000**, 9, 721-734	2.6	9
42	Rectified steady flow induced by white shot noise: diffusive and non-diffusive regimes **2000**, 9, 721		2

41 Brownian Motion in a d-Dimensional Space with Fluctuating Friction **2000**, 85-96 — 1

40 Application of statistical mechanics to stochastic transport. *Physica A: Statistical Mechanics and Its Applications*, **1999**, 274, 200-215 — 3.3 — 25

39 Brownian transport controlled by dichotomic and thermal fluctuations. *Chemical Physics*, **1998**, 235, 27-37 — 2.3 — 23

38 Brownian motion in a fluctuating medium. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1998**, 249, 409-414 — 2.3 — 31

37 Phase transformation kinetics in d-dimensional grains-containing systems: diffusion-type model. *Physica A: Statistical Mechanics and Its Applications*, **1998**, 248, 365-378 — 3.3 — 11

36 Brownian Ratchets: Transport Controlled by Thermal Noise. *Physical Review Letters*, **1998**, 80, 1377-1380 — 7.4 — 55

35 Tunneling Center as a Source of Voltage Rectification in Josephson Junctions. *Physical Review Letters*, **1998**, 80, 829-832 — 7.4 — 59

34 Symmetric white noise can induce directed current in ratchets. *Physical Review E*, **1997**, 56, 3968-3975 — 2.4 — 63

33 Thermal ratchets driven by Poissonian white shot noise. *Physical Review E*, **1997**, 55, 4057-4066 — 2.4 — 36

32 Randomly flashing diffusion: Asymptotic properties. *Journal of Statistical Physics*, **1996**, 83, 1149-1164 — 1.5 — 7

31 Transport generated by dichotomous fluctuations. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1996**, 214, 14-20 — 2.3 — 37

30 LONG-TIME ASYMPTOTICS FOR DIFFUSING CLUSTERS WITH POISSON GROWTH STATISTICS. *Fractals*, **1996**, 04, 543-546 — 3.2 — 3

29 Noise-induced transport in symmetric periodic potentials: White shot noise versus deterministic noise. *Europhysics Letters*, **1996**, 35, 315-317 — 1.6 — 56

28 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 — 2.3 — 7

27 Diffusion of clusters with randomly growing masses. *Physical Review E*, **1995**, 51, 5762-5769 — 2.4 — 25

26 Non-Markovian process driven by quadratic noise: Kramers-Moyal expansion and Fokker-Planck modeling. *Physical Review E*, **1995**, 51, 2933-2938 — 2.4 — 24

25 First-passage time for randomly flashing diffusion. *Physical Review E*, **1995**, 52, 5810-5816 — 2.4 — 9

24 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 — 3

23	Some remarks concerning spherulitic growth. *International Journal of Quantum Chemistry*, **1994**, 52, 301-308	2.08	10
22	The growing processes in diffusive and convective fields. *Chemical Engineering Science*, **1993**, 48, 3713-3724	4.1	13
21	Randomly interrupted diffusion. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1992**, 167, 475-478	2.3	18
20	On the diffusion-driven growth: The perturbed sphere problem revisited. *European Physical Journal D*, **1992**, 42, 577-590		6
19	Quantum open systems in a two-state stochastic reservoir. *European Physical Journal D*, **1991**, 41, 289-292		9
18	Spin in contact with thermostat: Exact reduced dynamics. *Physica A: Statistical Mechanics and Its Applications*, **1990**, 167, 919-934	3.3	78
17	The asymptotic dynamics of processes with multiplicative quadratic noise. *European Physical Journal D*, **1989**, 39, 689-695		1
16	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	2.3	5
15	On Markovian kinetic equations: Zubarev's nonequilibrium statistical operator approach. *Physica A: Statistical Mechanics and Its Applications*, **1988**, 149, 245-266	3.3	7
14	An approximate master equation for systems driven by linear Ornstein-Uhlenbeck noise. *Physica A: Statistical Mechanics and Its Applications*, **1988**, 153, 619-635	3.3	9
13	Relaxation problem with a quadratic noise: Analysis. *Journal of Statistical Physics*, **1987**, 47, 505-526	1.5	8
12	Simple Derivation of the Direct Spin-Phonon Interaction. *Physica Status Solidi (B): Basic Research*, **1986**, 136, K27-K31	1.3	1
11	Exact probability distribution for soluble model with quadratic noise. *Journal of Statistical Physics*, **1986**, 42, 1009-1018	1.5	8
10	Relaxation of a single two-level system. *European Physical Journal D*, **1986**, 36, 674-680		
9	The Dynamics of Classical Spins Interacting with Pump Field and Quantum Reservoir. *Physica Scripta*, **1986**, 34, 97-100	2.6	1
8	The exact equation of motion for a two level system. Zubarev like approach. *European Physical Journal D*, **1985**, 35, 386-400		3
7	Dynamics of a class of processes with Smoluchowski noises. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1984**, 102, 401-404	2.3	2
6	Evolution equation for two level systems interacting with pump and relaxation mechanisms. *European Physical Journal D*, **1984**, 34, 1150-1156		1

5	Kinetic theory of resonance and relaxation in spin systems. *Physica A: Statistical Mechanics and Its Applications*, **1983**, 120, 219-237	3.3	2
4	Kinetic theory of resonance and relaxation in spin systems. *Physica A: Statistical Mechanics and Its Applications*, **1982**, 111, 240-254	3.3	5
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2	Generalized kinetic equations with memory. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **1979**, 69, 393-395	2.3	12

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