Herbert Spohn

List of Publications by Year
in descending order

112	7,942	76322	66906
papers	citations	40	78
		h-index	g-index

117	117	117	2179
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High-low pressure domain wall for the classical Toda lattice. SciPost Physics Core, 2022, 5, .	2.8	3
2	Hydrodynamic equations for the Ablowitzâ€"Ladik discretization of the nonlinear SchrÃ¶dinger equation. Journal of Mathematical Physics, 2022, 63, .	1.1	9
3	Form factors and generalized hydrodynamics for integrable systems. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 114002.	2.3	15
4	Generalized Gibbs Ensembles of the Classical Toda Chain. Journal of Statistical Physics, 2020, 180, 4-22.	1.2	42
5	Nonlinear Fluctuating Hydrodynamics for the Classical XXZ Spin Chain. Journal of Statistical Physics, 2020, 180, 238-262.	1.2	27
6	Collision rate ansatz for the classical Toda lattice. Physical Review E, 2020, 101, 060103.	2.1	23
7	The 1â€‰â€‰+â€‰â€‰1 dimensional Kardarâ€"Parisiâ€"Zhang equation: more surprises. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 044001.	2.3	10
8	High Frequency Limit for a Chain of Harmonic Oscillators with a Point Langevin Thermostat. Archive for Rational Mechanics and Analysis, 2020, 237, 497-543.	2.4	8
9	Introduction to the Special Issue in Honor of Joel Lebowitz. Journal of Statistical Physics, 2020, 180, 1-3.	1.2	1
10	Effective Mass of the Polaronâ€"Revisited. Annales Henri Poincare, 2020, 21, 1573-1594.	1.7	12
11	Ballistic space-time correlators of the classical toda lattice. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 265004.	2.1	8
12	Collision rate ansatz for quantum integrable systems. SciPost Physics, 2020, 9, .	4.9	26
13	Kardar-Parisi-Zhang scaling for an integrable lattice Landau-Lifshitz spin chain. Physical Review E, 2019, 100, 042116.	2.1	39
14	The GGE averaged currents of the classical Toda chain. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 495003.	2.1	17
15	Fourier's law based on microscopic dynamics. Comptes Rendus Physique, 2019, 20, 393-401.	0.9	9
16	Interacting and noninteracting integrable systems. Journal of Mathematical Physics, 2018, 59, .	1.1	41
17	Reflected Brownian Motions in the KPZ Universality Class. SpringerBriefs in Mathematical Physics, 2017, , .	0.2	13
18	On invariants for the PoincarÃ© equations and applications. Journal of Mathematical Physics, 2017, 58, .	1.1	2

#	Article	IF	Citations
19	Shocks, Rarefaction Waves, and Current Fluctuations for Anharmonic Chains. Journal of Statistical Physics, 2017, 166, 841-875.	1.2	11
20	Dynamics of hard rods with initial domain wall state. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 073210.	2.3	95
21	Drude Weight for the Lieb-Liniger Bose Gas. SciPost Physics, 2017, 3, .	4.9	120
22	Airy Processes. SpringerBriefs in Mathematical Physics, 2017, , 31-43.	0.2	0
23	One-Sided Reflected Brownian Motions and Related Models. SpringerBriefs in Mathematical Physics, 2017, , 9-23.	0.2	0
24	Stationary Initial Conditions. SpringerBriefs in Mathematical Physics, 2017, , 71-95.	0.2	0
25	Determinantal Point Processes. SpringerBriefs in Mathematical Physics, 2017, , 25-30.	0.2	0
26	Fluctuating Hydrodynamics Approach to Equilibrium Time Correlations for Anharmonic Chains. Lecture Notes in Physics, 2016, , 107-158.	0.7	26
27	Searching for the Tracy-Widom distribution in nonequilibrium processes. Physical Review E, 2016, 93, 060101.	2.1	14
28	Fluctuating hydrodynamics for a discrete Gross-Pitaevskii equation: Mapping onto the Kardar-Parisi-Zhang universality class. Physical Review A, 2015, 92, .	2.5	35
29	Point-interacting Brownian motions in the KPZ universality class. Electronic Journal of Probability, 2015, 20, .	1.0	3
30	Low temperature dynamics of the one-dimensional discrete nonlinear Schrödinger equation. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P08028.	2.3	27
31	Current fluctuations for anharmonic chains in thermal equilibrium. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P03007.	2.3	35
32	Quantum Boltzmann equation for spin-dependent reactions in the kinetic regime. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 095204.	2.1	1
33	Nonlinear Fluctuating Hydrodynamics in One Dimension: The Case of Two Conserved Fields. Journal of Statistical Physics, 2015, 160, 861-884.	1.2	53
34	The One-Dimensional KPZ Equation and Its Universality Class. Journal of Statistical Physics, 2015, 160, 965-984.	1.2	159
35	Global Well‐Posedness of the Spatially Homogeneous Hubbard‐Boltzmann Equation. Communications on Pure and Applied Mathematics, 2015, 68, 758-807.	3.1	3
36	Scaling limit for Brownian motions with one-sided collisions. Annals of Applied Probability, 2015, 25, .	1.3	17

#	ARTICLE	IF	CITATIONS
37	On the Lagrangian theory for rotating charge in the Maxwell field. Physics Letters, Section A: General, Atomic and Solid State Physics, 2015, 379, 5-10.	2.1	4
38	Equilibrium time-correlation functions for one-dimensional hard-point systems. Physical Review E, 2014, 90, 012147.	2.1	47
39	Numerical test of hydrodynamic fluctuation theory in the Fermi-Pasta-Ulam chain. Physical Review E, 2014, 90, 012124.	2.1	92
40	Dynamics of the Bose-Hubbard chain for weak interactions. Physical Review B, 2014, 89, .	3.2	0
41	Nonlinear Fluctuating Hydrodynamics for Anharmonic Chains. Journal of Statistical Physics, 2014, 154, 1191-1227.	1.2	265
42	Coupled Kardar-Parisi-Zhang Equations in One Dimension. Journal of Statistical Physics, 2013, 153, 377-399.	1.2	44
43	Derivation of a matrix-valued Boltzmann equation for the Hubbard model. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 485002.	2.1	11
44	Matrix-valued Boltzmann equation for the nonintegrable Hubbard chain. Physical Review E, 2013, 88, 012108.	2.1	18
45	Dynamic Correlators of Fermi-Pasta-Ulam Chains and Nonlinear Fluctuating Hydrodynamics. Physical Review Letters, 2013, 111, 230601.	7.8	107
46	Matrix-valued Boltzmann equation for the Hubbard chain. Physical Review E, 2012, 86, 031122.	2.1	25
47	The one-dimensional KPZ equation and the Airy process. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P03020.	2.3	34
48	The propagator of the attractive delta-Bose gas in one dimension. Journal of Mathematical Physics, 2011, 52, 122106.	1.1	22
49	KPZ, ASEP and Delta-Bose Gas. Journal of Physics: Conference Series, 2011, 297, 012016.	0.4	3
50	Weakly nonlinear Schrödinger equation with random initial data. Inventiones Mathematicae, 2011, 183, 79-188.	2.5	71
51	Two-point generating function of the free energy for a directed polymer in a random medium. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P01031.	2.3	26
52	Height distribution of the Kardar-Parisi-Zhang equation with sharp-wedge initial condition: Numerical evaluations. Physical Review E, 2011, 84, 011119.	2.1	25
53	Growing interfaces uncover universal fluctuations behind scale invariance. Scientific Reports, 2011, 1, 34.	3.3	214
54	One-Dimensional Kardar-Parisi-Zhang Equation: An Exact Solution and its Universality. Physical Review Letters, 2010, 104, 230602.	7.8	330

#	Article	IF	Citations
55	Dynamical Phase Transition for a Quantum Particle Source. Annales Henri Poincare, 2010, 10, 1223-1249.	1.7	6
56	Energy Transport in Stochastically Perturbed Lattice Dynamics. Archive for Rational Mechanics and Analysis, 2010, 195, 171-203.	2.4	43
57	The Crossover Regime for the Weakly Asymmetric Simple Exclusion Process. Journal of Statistical Physics, 2010, 140, 209-231.	1.2	80
58	Kinetics of the Bose–Einstein condensation. Physica D: Nonlinear Phenomena, 2010, 239, 627-634.	2.8	49
59	The 1 + 1-dimensional Kardar–Parisi–Zhang equation and its universality class. Journal of Statistical Mechanics: Theory and Experiment, 2010, 2010, P11013.	2.3	60
60	Heat transport and phonon localization in mass-disordered harmonic crystals. Physical Review B, 2010, 81, .	3.2	69
61	Exact height distributions for the KPZ equation with narrow wedge initial condition. Nuclear Physics B, 2010, 834, 523-542.	2.5	154
62	The retarded van der Waals potential: Revisited. Journal of Mathematical Physics, 2009, 50, .	1.1	8
63	Kramers Degeneracy Theorem in Nonrelativistic QED. Letters in Mathematical Physics, 2009, 89, 21-31.	1.1	11
64	Not to Normal Order—Notes on the Kinetic Limit for Weakly Interacting Quantum Fluids. Journal of Statistical Physics, 2009, 134, 1133-1172.	1.2	36
65	Superdiffusivity of the 1D Lattice Kardar-Parisi-Zhang Equation. Journal of Statistical Physics, 2009, 137, 917-935.	1.2	32
66	Spectral analysis of the semi-relativistic Pauli–Fierz hamiltonian. Journal of Functional Analysis, 2009, 256, 2123-2156.	1.4	17
67	Energy Current Correlations for Weakly Anharmonic Lattices. , 2009, , 629-641.		0
68	Anomalous energy transport in the FPU–β chain. Communications on Pure and Applied Mathematics, 2008, 61, 1753-1786.	3.1	59
69	Notes on coherent backscattering from a random potential. Journal of Mathematical Physics, 2007, 48, 092103.	1.1	0
70	The time-dependent Born-Oppenheimer approximation. ESAIM: Mathematical Modelling and Numerical Analysis, 2007, 41, 297-314.	1.9	39
71	Irreversible Thermodynamics for Quantum Systems Weakly Coupled to Thermal Reservoirs. Advances in Chemical Physics, 2007, , 109-142.	0.3	163
72	Lowest energy states in nonrelativistic QED: Atoms and ions in motion. Journal of Functional Analysis, 2007, 243, 353-393.	1.4	39

#	Article	IF	Citations
73	The Bipolaron in the Strong Coupling Limit. Annales Henri Poincare, 2007, 8, 1333-1370.	1.7	19
74	Exact solutions for KPZ-type growth processes, random matrices, and equilibrium shapes of crystals. Physica A: Statistical Mechanics and Its Applications, 2006, 369, 71-99.	2.6	68
75	The Phonon Boltzmann Equation, Properties and Link to Weakly Anharmonic Lattice Dynamics. Journal of Statistical Physics, 2006, 124, 1041-1104.	1.2	89
76	Erratum on â€œThe Phonon Boltzmann Equation, Properties and Link to Weakly Anharmonic Lattice Dynamicsâ€. Journal of Statistical Physics, 2006, 123, 707-707.	1.2	3
77	Energy Transport in Weakly Anharmonic Chains. Journal of Statistical Physics, 2006, 124, 1105-1129.	1.2	59
78	Collisional Invariants for the Phonon Boltzmann Equation. Journal of Statistical Physics, 2006, 124, 1131-1135.	1.2	19
79	A Remark on the Strict Positivity of the Entropy Production. Letters in Mathematical Physics, 2006, 75, 17-23.	1.1	8
80	Kinetic Limit for Wave Propagation in a Random Medium. Archive for Rational Mechanics and Analysis, 2006, 183, 93-162.	2.4	61
81	Scaling Limit for the Space-Time Covariance of the Stationary Totally Asymmetric Simple Exclusion Process. Communications in Mathematical Physics, 2006, 265, 1-44.	2.2	148
82	Domino tilings and the six-vertex model at its free-fermion point. Journal of Physics A, 2006, 39, 10297-10306.	1.6	41
83	Motion of Electrons in Adiabatically Perturbed Periodic Structures. , 2006, , 595-617.		12
84	Constrained Brownian motion: Fluctuations away from circular and parabolic barriers. Annals of Probability, 2005, 33, 1302.	1.8	33
85	A determinantal formula for the GOE Tracyâ€"Widom distribution. Journal of Physics A, 2005, 38, L557-L561.	1.6	60
86	A central limit theorem for Gibbs measures relative to Brownian motion. Probability Theory and Related Fields, 2005, 131, 459-478.	1.8	22
87	Kardarâ€"Parisiâ€"Zhang equation in one dimension and line ensembles. Pramana - Journal of Physics, 2005, 64, 847-857.	1.8	11
88	Gibbs Measures on Brownian Paths: Theory and Applications. , 2005, , 75-102.		4
89	Exact Scaling Functions for One-Dimensional Stationary KPZ Growth. Journal of Statistical Physics, 2004, 115, 255-279.	1.2	207
90	Fluctuations of an atomic ledge bordering a crystalline facet. Physical Review E, 2004, 69, 035102.	2.1	24

#	Article	IF	Citations
91	Step Fluctuations for a Faceted Crystal. Journal of Statistical Physics, 2003, 113, 1-46.	1.2	68
92	Condensation in the Zero Range Process: Stationary and Dynamical Properties. Journal of Statistical Physics, 2003, 113, 389-410.	1.2	161
93	Effective Dynamics for Bloch Electrons: Peierls Substitution and Beyond. Communications in Mathematical Physics, 2003, 242, 547-578.	2.2	129
94	Stationary measures and hydrodynamics of zero range processes with several species of particles. Bulletin of the Brazilian Mathematical Society, 2003, 34, 489-507.	0.8	36
95	Space-adiabatic perturbation theory. Advances in Theoretical and Mathematical Physics, 2003, 7, 145-204.	0.6	62
96	Space-Adiabatic Perturbation Theory in Quantum Dynamics. Physical Review Letters, 2002, 88, 250405.	7.8	28
97	GROUND STATE PROPERTIES OF THE NELSON HAMILTONIAN: A GIBBS MEASURE-BASED APPROACH. Reviews in Mathematical Physics, 2002, 14, 173-198.	1.7	43
98	Scale Invariance of the PNG Droplet and the Airy Process. Journal of Statistical Physics, 2002, 108, 1071-1106.	1.2	402
99	Current Fluctuations for the Totally Asymmetric Simple Exclusion Process. , 2002, , 185-204.		95
100	Semiclassical Limit for the Schrödinger Equation with a Short Scale Periodic Potential. Communications in Mathematical Physics, 2001, 215, 609-629.	2.2	23
101	Adiabatic Decoupling and Time-Dependent Born–Oppenheimer Theory. Communications in Mathematical Physics, 2001, 224, 113-132.	2.2	57
102	Statistical self-similarity of one-dimensional growth processes. Physica A: Statistical Mechanics and Its Applications, 2000, 279, 342-352.	2.6	101
103	Universal Distributions for Growth Processes in1+1Dimensions and Random Matrices. Physical Review Letters, 2000, 84, 4882-4885.	7.8	375
104	Brownian motion and microscopic chaos. Nature, 1998, 394, 831-833.	27.8	13
105	Six-vertex model, roughened surfaces, and an asymmetric spin Hamiltonian. Physical Review Letters, 1992, 68, 725-728.	7.8	276
106	Bethe solution for the dynamical-scaling exponent of the noisy Burgers equation. Physical Review A, 1992, 46, 844-854.	2.5	269
107	Large Scale Dynamics of Interacting Particles. , 1991, , .		1,155
108	Tracer dynamics in Dyson's model of interacting Brownian particles. Journal of Statistical Physics, 1987, 47, 669-679.	1.2	15

#	Article	IF	Citations
109	Effective mass of the polaron: A functional integral approach. Annals of Physics, 1987, 175, 278-318.	2.8	73
110	Hydrodynamical theory for equilibrium time correlation functions of hard rods. Annals of Physics, 1982, 141, 353-364.	2.8	27
111	An algebraic condition for the approach to equilibrium of an open N-level system. Letters in Mathematical Physics, 1977, 2, 33-38.	1.1	141
112	Approach to equilibrium for completely positive dynamical semigroups of N-level systems. Reports on Mathematical Physics, 1976, 10, 189-194.	0.8	65