# Herbert Spohn

List of Publications by Year
in descending order



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|---|---|---|---|
| 112 papers | 7,942 citations | 76326 40 h-index | 66911 78 g-index |
| 117 all docs | 117 docs citations | 117 times ranked | 2179 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 |

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| 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 SchrÃ¶dinger 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 Wellâ€Posedness of the Spatially Homogeneous Hubbardâ€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 |

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| 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 SchrÃ¶dinger equation withÂrandom 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 |

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| 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 Boseâ€"Einstein condensation. Physica D: Nonlinear Phenomena, 2010, 239, 627-634. | 2.8 | 49 |
| 59 | The 1 + 1-dimensional Kardarâ€"Parisiâ€"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 Orderâ€"Notes on the Kinetic Limit forÂWeakly 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 Pauliâ€"Fierz hamiltonian. Journal of Functional Analysis, 2009, 256, 2123-2156. | 1.4 | 17 |
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| 68 | Anomalous energy transport in the FPUâ€Î² 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 |

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| 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 |
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| 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 |
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| 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 |
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| 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 SchrÃ¶dinger EquationÂ¶with a Short Scale Periodic Potential. Communications in Mathematical Physics, 2001, 215, 609-629. | 2.2 | 23 |
| 101 | Adiabatic Decoupling and Time-Dependent Bornâ€“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 |
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| 109 | Effective mass of the polaron: A functional integral approach. Annals of Physics, 1987, 175, 278-318. | 2.8 | 73 |
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| 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 |