David S Dean

List of Publications by Year
in descending order

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71 papers	2,292 citations	218677 26 h-index	223800 46 g-index
71 all docs	71 docs citations	71 times ranked	1451 citing authors

#	Article	IF	Citations
1	Langevin equation for the density of a system of interacting Langevin processes. Journal of Physics A, 1996, 29, L613-L617.	1.6	337
2	Large Deviations of Extreme Eigenvalues of Random Matrices. Physical Review Letters, 2006, 97, 160201.	7.8	158
3	Extreme value statistics of eigenvalues of Gaussian random matrices. Physical Review E, 2008, 77, 041108.	2.1	126
4	Statistics of Critical Points of Gaussian Fields on Large-Dimensional Spaces. Physical Review Letters, 2007, 98, 150201.	7.8	102
5	Electrotransfer as a Non Viral Method of Gene Delivery. Current Gene Therapy, 2007, 7, 67-77.	2.0	97
6	Transport and dispersion across wiggling nanopores. Nature Physics, 2018, 14, 1108-1113.	16.7	81
7	Electromediated formation of DNA complexes with cell membranes and its consequences for gene delivery. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 1538-1543.	2.6	79
8	Noninteracting fermions at finite temperature in a<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>d</mml:mi></mml:math>-dimensional trap: Universal correlations. Physical Review A, 2016, 94, .	2.5	74
9	Visualization of Membrane Loss during the Shrinkage of Giant Vesicles under Electropulsation. Biophysical Journal, 2009, 96, 4109-4121.	0.5	63
10	Tapping Spin Glasses and Ferromagnets on Random Graphs. Physical Review Letters, 2001, 86, 5639-5642.	7.8	50
11	Drag Forces in Classical Fields. Physical Review Letters, 2010, 104, 080601.	7.8	50
12	Finite-Temperature Free Fermions and the Kardar-Parisi-Zhang Equation at Finite Time. Physical Review Letters, 2015, 114, 110402.	7.8	49
13	Fluctuation-Induced Interaction between Randomly Charged Dielectrics. Physical Review Letters, 2010, 104, 060601.	7.8	48
14	Optimal estimates of the diffusion coefficient of a single Brownian trajectory. Physical Review E, 2012, 85, 031136.	2.1	44
15	Noninteracting fermions in a trap and random matrix theory. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 144006.	2.1	42
16	Destabilizing Giant Vesicles with Electric Fields: An Overview of Current Applications. Journal of Membrane Biology, 2012, 245, 555-564.	2.1	37
17	Possible Test of the Thermodynamic Approach to Granular Media. Physical Review Letters, 2003, 90, 198301.	7.8	35
18	Out-of-equilibrium behavior of Casimir-type fluctuation-induced forces for free classical fields. Physical Review E, 2010, 81, 041126.	2.1	34

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19	Exact results on Sinai's diffusion. Journal of Physics A, 1998, 31, 8595-8605.	1.6	31
20	Insights into the mechanisms of electromediated gene delivery and application to the loading of giant vesicles with negatively charged macromolecules. Soft Matter, 2011, 7, 3872.	2.7	31
21	Universal ground-state properties of free fermions in a d -dimensional trap. Europhysics Letters, 2015, 112, 60001.	2.0	31
22	Wigner function of noninteracting trapped fermions. Physical Review A, 2018, 97, .	2.5	31
23	One-dimensional counterion gas between charged surfaces: Exact results compared with weak- and strong-coupling analyses. Journal of Chemical Physics, 2009, 130, 094504.	3.0	30
24	Perturbative path-integral study of active- and passive-tracer diffusion in fluctuating fields. Physical Review E, 2011, 84, 011148.	2.1	30
25	On polymer conformations in elongational flows. Communications in Mathematical Physics, 1994, 160, 239-257.	2.2	27
26	Nonmonotoic fluctuation-induced interactions between dielectric slabs carrying charge disorder. Journal of Chemical Physics, 2010, 133, 174702.	3.0	26
27	Electrostatic interactions mediated by polarizable counterions: Weak and strong coupling limits. Journal of Chemical Physics, 2012, 137, 174903.	3.0	26
28	Diffusion in periodic, correlated random forcing landscapes. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 372001.	2.1	26
29	Stresses in non-equilibrium fluids: Exact formulation and coarse-grained theory. Journal of Chemical Physics, 2018, 148, 084503.	3.0	24
30	Nonequilibrium Tuning of the Thermal Casimir Effect. Physical Review Letters, 2016, 116, 240602.	7.8	22
31	Effects of dielectric disorder on van der Waals interactions in slab geometries. Physical Review E, 2010, 81, 051117.	2.1	20
32	Thermal Casimir drag in fluctuating classical fields. Physical Review E, 2011, 84, 010103.	2.1	19
33	Sample-to-sample fluctuations of power spectrum of a random motion in a periodic Sinai model. Physical Review E, 2016, 94, 032131.	2.1	19
34	Steady state behavior of mechanically perturbed spin glasses and ferromagnets. Physical Review E, 2001, 64, 046110.	2.1	18
35	Coarsening in the Presence of Kinetic Disorders: Analogy to Granular Compaction. Physical Review Letters, 2001, 86, 2301-2304.	7.8	18
36	Nonequilibrium dynamics of noninteracting fermions in a trap. Europhysics Letters, 2019, 126, 20006.	2.0	18

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37	Thermal Casimir effect between random layered dielectrics. Physical Review A, 2009, 79, .	2.5	17
38	Relaxation of the thermal Casimir force between net neutral plates containing Brownian charges. Physical Review E, 2014, 89, 032117.	2.1	17
39	The non-equilibrium behavior of pseudo-Casimir forces. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, L08001.	2.3	16
40	Sample-to-sample fluctuations of electrostatic forces generated by quenched charge disorder. Physical Review E, 2011, 83, 011102.	2.1	15
41	On the distribution of estimators of diffusion constants for Brownian motion. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 335003.	2.1	15
42	Ordering of anisotropic polarizable polymer chains on the full many-body level. Journal of Chemical Physics, 2012, 136, 154905.	3.0	15
43	Sample-to-sample torque fluctuations in a system of coaxial randomly charged surfaces. European Physical Journal E, 2012, 35, 1-7.	1.6	15
44	Nonequilibrium Dynamics Induced by Scattering Forces for Optically Trapped Nanoparticles in Strongly Inertial Regimes. Physical Review Letters, 2019, 122, 183901.	7.8	15
45	Brownian excursions on combs. Journal of Statistical Physics, 1993, 70, 1313-1332.	1.2	14
46	A Gaussian theory for fluctuations in simple liquids. Journal of Chemical Physics, 2017, 146, 134507.	3.0	14
47	Statistics of the maximal distance and momentum in a trapped Fermi gas at low temperature. Journal of Statistical Mechanics: Theory and Experiment, 2017, 2017, 063301.	2.3	14
48	Diffusion of active tracers in fluctuating fields. Journal of Physics Condensed Matter, 2011, 23, 234114.	1.8	13
49	Optimal fits of diffusion constants from single-time data points of Brownian trajectories. Physical Review E, 2012, 86, 060101.	2.1	13
50	Out-of-equilibrium relaxation of the thermal Casimir effect in a model polarizable material. Physical Review E, 2012, 85, 031108.	2.1	13
51	Distribution of the least-squares estimators of a single Brownian trajectory diffusion coefficient. Journal of Statistical Mechanics: Theory and Experiment, 2013, 2013, P04017.	2.3	13
52	Slow relaxation in a constrained Ising spin chain: Toy model for granular compaction. Physical Review E, 2002, 66, 056114.	2.1	11
53	Approach to asymptotically diffusive behavior for Brownian particles in periodic potentials: Extracting information from transients. Physical Review E, 2014, 90, 022112.	2.1	11
54	Role of nonconservative scattering forces and damping on Brownian particles in optical traps. Physical Review E, 2019, 99, 052107.	2.1	11

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55	Phase transitions in the steady-state behavior of mechanically perturbed spin glasses and ferromagnets. Physical Review B, 2002, 65, .	3.2	10
56	A self-similar renormalization group applied to diffusion in non-Gaussian potentials. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 335002.	2.1	10
57	Excursions for polymers in elongational flows. Journal of Statistical Physics, 1995, 79, 265-297.	1.2	9
58	Exact Solution of a Drop-Push Model for Percolation. Physical Review Letters, 2002, 89, 115701.	7.8	8
59	Optimal least-squares estimators of the diffusion constant from a single Brownian trajectory. European Physical Journal: Special Topics, 2013, 216, 57-71.	2.6	8
60	Fluctuation mediated interactions due to rigidity mismatch and their effect on miscibility of lipid mixtures in multicomponent membranes. Journal of Physics Condensed Matter, 2015, 27, 214004.	1.8	6
61	Noninteracting trapped fermions in double-well potentials: Inverted-parabola kernel. Physical Review A, 2020, 101, .	2.5	6
62	Ergodic least-squares estimators of the generalized diffusion coefficient for fractional Brownian motion. Physical Review E, 2013, 87, .	2.1	5
63	Kernels for non interacting fermions via a Greenâ€™s function approach with applications to step potentials. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 084001.	2.1	5
64	Wigner function for noninteracting fermions in hard-wall potentials. Physical Review A, 2021, 104, .	2.5	5
65	Approach to asymptotically diffusive behavior for Brownian particles in media with periodic diffusivities. Physical Review E, 2014, 90, 062114.	2.1	4
66	Particles with nonlinear electric response: Suppressing van der Waals forces by an external field. Physical Review E, 2017, 95, 012151.	2.1	4
67	Path integrals for higher derivative actions. Journal of Physics A: Mathematical and Theoretical, 2019, 52, 505003.	2.1	3
68	Dipole diffusion in a random electrical potential. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 375001.	2.1	2
69	THE STEADY STATE OF THE TAPPED ISING MODEL. International Journal of Modeling, Simulation, and Scientific Computing, 2001, 04, 333-343.	1.4	1
70	The effect of driving on model C interfaces. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 033206.	2.3	1
71	Steady state of overdamped particles in the non-conservative force field of a simple non-linear model of optical trap. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 113205.	2.3	0