Craig A Tracy

List of Publications by Year
in descending order

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95 papers	6,536 citations	117571 34 h-index	64755 79 g-index
99 all docs	99 docs citations	99 times ranked	1760 citing authors

#	Article	IF	Citations
1	Level-spacing distributions and the Airy kernel. Communications in Mathematical Physics, 1994, 159, 151-174.	1.0	1,303
2	On orthogonal and symplectic matrix ensembles. Communications in Mathematical Physics, 1996, 177, 727-754.	1.0	743
3	Spin-spin correlation functions for the two-dimensional Ising model: Exact theory in the scaling region. Physical Review B, 1976, 13, 316-374.	1.1	550
4	Fredholm determinants, differential equations and matrix models. Communications in Mathematical Physics, 1994, 163, 33-72.	1.0	281
5	Level spacing distributions and the Bessel kernel. Communications in Mathematical Physics, 1994, 161, 289-309.	1.0	271
6	PainlevÃ© functions of the third kind. Journal of Mathematical Physics, 1977, 18, 1058-1092.	0.5	260
7	Asymptotics in ASEP with Step Initial Condition. Communications in Mathematical Physics, 2009, 290, 129-154.	1.0	197
8	Correlation Functions, Cluster Functions, and Spacing Distributions for Random Matrices. Journal of Statistical Physics, 1998, 92, 809-835.	0.5	165
9	Integral Formulas for the Asymmetric Simple Exclusion Process. Communications in Mathematical Physics, 2008, 279, 815-844.	1.0	146
10	Limit Theorems for Height Fluctuations in a Class of Discrete Space and Time Growth Models. Journal of Statistical Physics, 2001, 102, 1085-1132.	0.5	129
11	Two-Dimensional Ising Model as an Exactly Solvable Relativistic Quantum Field Theory: Explicit Formulas forn-Point Functions. Physical Review Letters, 1977, 38, 793-796.	2.9	127
12	Examination of the phenomenological scaling functions for critical scattering. Physical Review B, 1975, 12, 368-387.	1.1	117
13	One-Particle Reduced Density Matrix of Impenetrable Bosons in One Dimension at Zero Temperature. Physical Review Letters, 1979, 42, 3-6.	2.9	111
14	Neutron Scattering and the Correlation Functions of the Ising Model nearTc. Physical Review Letters, 1973, 31, 1500-1504.	2.9	104
15	A Fredholm Determinant Representation in ASEP. Journal of Statistical Physics, 2008, 132, 291-300.	0.5	98
16	The Pearcey Process. Communications in Mathematical Physics, 2006, 263, 381-400.	1.0	93
17	? n Baxter model: Symmetries and the Belavin parametrization. Journal of Statistical Physics, 1986, 42, 311-348.	0.5	86
18	Level-spacing distributions and the Airy kernel. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 305, 115-118.	1.5	86

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19	The Fisher-Hartwig conjecture and generalizations. Physica A: Statistical Mechanics and Its Applications, 1991, 177, 167-173.	1.2	79
20	One particle reduced density matrix of impenetrable bosons in one dimension at zero temperature. Journal of Mathematical Physics, 1979, 20, 2291-2312.	0.5	78
21	Two-dimensional Ising correlations: Convergence of the scaling limit. Advances in Applied Mathematics, 1981, 2, 329-388.	0.4	72
22	Transverse time-dependent spin correlation functions for the one-dimensional XY model at zero temperature. Physica A: Statistical Mechanics and Its Applications, 1978, 92, 1-41.	1.2	69
23	On the distributions of the lengths of the longest monotone subsequences in random words. Probability Theory and Related Fields, 2001, 119, 350-380.	0.9	69
24	Random Unitary Matrices, Permutations and PainlevÃ©. Communications in Mathematical Physics, 1999, 207, 665-685.	1.0	64
25	On exact solutions to the cylindrical Poisson-Boltzmann equation with applications to polyelectrolytes. Physica A: Statistical Mechanics and Its Applications, 1997, 244, 402-413.	1.2	55
26	Differential Equations for Dyson Processes. Communications in Mathematical Physics, 2004, 252, 7-41.	1.0	55
27	Introduction to random matrices. , 1993, , 103-130.		54
28	The Distribution of the Largest Eigenvalue in the Gaussian Ensembles: Î² = 1, 2, 4. , 2000, , 461-472.		51
29	Nonintersecting Brownian excursions. Annals of Applied Probability, 2007, 17, .	0.6	51
30	Proofs of two conjectures related to the thermodynamic Bethe Ansatz. Communications in Mathematical Physics, 1996, 179, 667-680.	1.0	45
31	Universality classes of some aperiodic Ising models. Journal of Physics A, 1988, 21, L603-L605.	1.6	42
32	Asymptotics of level-spacing distributions for random matrices. Physical Review Letters, 1992, 69, 5-8.	2.9	42
33	Total current fluctuations in the asymmetric simple exclusion process. Journal of Mathematical Physics, 2009, 50, 095204.	0.5	41
34	On ASEP with Step Bernoulli Initial Condition. Journal of Statistical Physics, 2009, 137, 825-838.	0.5	41
35	Asymptotics of a Ï„-function arising in the two-dimensional Ising model. Communications in Mathematical Physics, 1991, 142, 297-311.	1.0	40
36	Fredholm determinants and the mKdV/Sinh-Gordon hierarchies. Communications in Mathematical Physics, 1996, 179, 1-9.	1.0	39

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37	Random words, Toeplitz determinants and integrable systems: II. Physica D: Nonlinear Phenomena, 2001, 152-153, 199-224.	1.3	36
38	The Distributions of Random Matrix Theory and their Applications. , 2009, , 753-765.		34
39	Crossover scaling function for the one-dimensional XY model at zero temperature. Physics Letters, Section A: General, Atomic and Solid State Physics, 1978, 68, 378-380.	0.9	32
40	Matrix kernels for the Gaussian orthogonal and symplectic ensembles. Annales De L'Institut Fourier, 2005, 55, 2197-2207.	0.2	27
41	Two-dimensional ising correlations: The SMJ analysis. Advances in Applied Mathematics, 1983, 4, 46-102.	0.4	25
42	Asymptotics of a Class of Solutions to the Cylindrical Toda Equations. Communications in Mathematical Physics, 1998, 190, 697-721.	1.0	25
43	Tau functions for the Dirac operator on the PoincarÃ© disk. Communications in Mathematical Physics, 1994, 165, 97-173.	1.0	24
44	A growth model in a random environment. Annals of Probability, 2002, 30, 1340.	0.8	24
45	Embedded elliptic curves and the Yang-Baxter equations. Physica D: Nonlinear Phenomena, 1985, 16, 203-220.	1.3	23
46	A limit theorem for shifted Schur measures. Duke Mathematical Journal, 2004, 123, 171.	0.8	23
47	Variance calculations and the Bessel kernel. Journal of Statistical Physics, 1993, 73, 415-421.	0.5	22
48	A System of Differential Equations for the Airy Process. Electronic Communications in Probability, 2003, 8, .	0.1	21
49	On the ground state energy of theÎ´-function Bose gas. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 294001.	0.7	20
50	Universality class of a Fibonacci Ising model. Journal of Statistical Physics, 1988, 51, 481-490.	0.5	18
51	The dynamics of the one-dimensional delta-function Bose gas. Journal of Physics A: Mathematical and Theoretical, 2008, 41, 485204.	0.7	18
52	On the Asymmetric Simple Exclusion Process with Multiple Species. Journal of Statistical Physics, 2013, 150, 457-470.	0.5	18
53	Connection between the KdV equation and the two-dimensional Ising model. Physics Letters, Section A: General, Atomic and Solid State Physics, 1977, 61, 283-284.	0.9	15
54	ASYMPTOTICS OF A TAU-FUNCTION AND TOEPLITZ DETERMINANTS WITH SINGULAR GENERATING FUNCTIONS. International Journal of Modern Physics A, 1992, 07, 83-107.	0.5	15

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55	Largest eigenvalue distribution in the double scaling limit of matrix models: a Coulomb fluid approach. Journal of Physics A, 1995, 28, L207-L211.	1.6	14
56	PainlevÃ© Functions in Statistical Physics. Publications of the Research Institute for Mathematical Sciences, 2011, , 361-374.	0.4	14
57	Universality of the distribution functions of random matrix theory. CRM Proceedings & Lecture Notes, 2000, , 251-264.	0.1	14
58	Modular properties of the hard hexagon model. Journal of Statistical Physics, 1987, 48, 477-502.	0.5	13
59	On the Limit of Some Toeplitz-Like Determinants. SIAM Journal on Matrix Analysis and Applications, 2002, 23, 1194-1196.	0.7	13
60	Fluctuations in the Composite Regime of a Disordered Growth Model. Communications in Mathematical Physics, 2002, 229, 433-458.	1.0	12
61	Formulas for ASEP with Two-Sided Bernoulli Initial Condition. Journal of Statistical Physics, 2010, 140, 619-634.	0.5	12
62	The Bose Gas and Asymmetric Simple Exclusion Process on the Half-Line. Journal of Statistical Physics, 2013, 150, 1-12.	0.5	12
63	Airy kernel and PainlevÃ© II. CRM Proceedings & Lecture Notes, 2002, , 85-96.	0.1	12
64	On the distribution of a second-class particle in the asymmetric simple exclusion process. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 425002.	0.7	9
65	The asymmetric simple exclusion process with an open boundary. Journal of Mathematical Physics, 2013, 54, .	0.5	9
66	On the ground state energy of the delta-function Fermi gas. Journal of Mathematical Physics, 2016, 57, 103301.	0.5	9
67	PainlevÃ© Transcendents and Scaling Functions of the Two-Dimensional Ising Model. , 1978, , 221-237.		9
68	Holonomic quantum field theory of bosons in the PoincarÃ© disk and the zero curvature limit. Nuclear Physics B, 1990, 340, 568-594.	0.9	8
69	Formulas for joint probabilities for the asymmetric simple exclusion process. Journal of Mathematical Physics, 2010, 51, 063302.	0.5	8
70	From Newton to Einstein. American Mathematical Monthly, 1992, 99, 507.	0.2	7
71	Application of Random Matrix Theory to Multivariate Statistics. , 2011, , 443-507.		7
72	Complete integrability in statistical mechanics and the Yang-Baxter equations. Physica D: Nonlinear Phenomena, 1985, 14, 253-264.	1.3	6

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73	Asymptotics for the Covariance of the Airy2 Process. Journal of Statistical Physics, 2011, 143, 60-71.	0.5	6
74	The emerging role of number theory in exactly solvable models in lattice statistical mechanics. Physica D: Nonlinear Phenomena, 1987, 25, 1-19.	1.3	5
75	From Newton to Einstein. American Mathematical Monthly, 1992, 99, 507-521.	0.2	5
76	Variational Approximation to the Ising Model in a Magnetic Field. Physical Review Letters, 1973, 30, 750-753.	2.9	4
77	On the maximum of the k-dependent susceptibility for fixed k and T > Tc. Physics Letters, Section A: General, Atomic and Solid State Physics, 1974, 46, 371-372.	0.9	4
78	Formulas and Asymptotics for the Asymmetric Simple Exclusion Process. Mathematical Physics Analysis and Geometry, 2011, 14, 211-235.	0.4	4
79	On the decay rate of order-parameter fluctuations. Physics Letters, Section A: General, Atomic and Solid State Physics, 1974, 48, 9-10.	0.9	3
80	Blocks in the asymmetric simple exclusion process. Journal of Mathematical Physics, 2017, 58, 123302.	0.5	3
81	Symmetry group for a completely symmetric vertex model. Journal of Physics A, 1987, 20, 2667-2677.	1.6	2
82	On asymmetric simple exclusion process with periodic step Bernoulli initial condition. Journal of Mathematical Physics, 2011, 52, .	0.5	2
83	On the diagonal susceptibility of the two-dimensional Ising model. Journal of Mathematical Physics, 2013, 54, 123302.	0.5	2
84	Spin-Spin Correlation Functions for the Two-Dimensional Ising Model. , 1977, , 83-97.		2
85	Variational approximation to a ferromagnet in a magnetic field. Physical Review B, 1974, 9, 4808-4815.	1.1	1
86	Remarks on the rotational invariance of two-dimensional Ising model correlation functions. Physics Letters, Section A: General, Atomic and Solid State Physics, 1976, 57, 111.	0.9	1
87	?n Baxter model: Critical behavior. Journal of Statistical Physics, 1986, 44, 183-191.	0.5	1
88	Algorithms for the computation of polynomial relationships for the hard hexagon model. Nuclear Physics B, 1990, 330, 681-704.	0.9	1
89	Blocks and gaps in the asymmetric simple exclusion process: Asymptotics. Journal of Mathematical Physics, 2018, 59, 091401.	0.5	1
90	Monodromy Preserving Deformation of Linear Ordinary and Partial Differential Equations. The IMA Volumes in Mathematics and Its Applications, 1990, , 165-174.	0.5	1

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91	Monodramy preserving deformation theory of the Klein-Gordon equation in the hyperbolic plane. Physica D: Nonlinear Phenomena, 1989, 34, 347-365.	1.3	0
92	Some Isomonodromy Problems in Hyperbolic Space. NATO ASI Series Series B: Physics, 1992, , 407-424.	0.2	0
93	The Thermodynamic Bethe Ansatz and a Connection with PainlevÃ© Equations. International Journal of Modern Physics B, 1997, 11, 69-74.	1.0	0
94	On the Singularities in the Susceptibility Expansion for the Two-Dimensional Ising Model. Journal of Statistical Physics, 2014, 156, 1125-1135.	0.5	0
95	On a Distribution Function Arising in Computational Biology. , 2002, , 467-474.		0