Thomas Guhr

List of Publications by Year
in descending order

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82	3,936	304743	118850
papers	citations	22 h-index	62 g-index

82	82	82	1941
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Two price regimes in limit order books: liquidity cushion and fragmented distant field. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 023401.	2.3	0
2	Winding number statistics of a parametric chiral unitary random matrix ensemble*. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 224011.	2.1	3
3	Special issue in honour of the life and work of Fritz Haake. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 130301.	2.1	2
4	Matrix moments in a real, doubly correlated algebraic generalization of the Wishart model. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 125203.	2.1	0
5	Exact multivariate amplitude distributions for non-stationary Gaussian or algebraic fluctuations of covariances or correlations. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 125002.	2.1	1
6	A mapping between the spin and fermion algebra. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 345201.	2.1	0
7	Generic features in the spectral decomposition of correlation matrices. Journal of Mathematical Physics, 2021, 62, 083505.	1.1	0
8	Collective behavior in the North Rhine-Westphalia motorway network. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 123401.	2.3	3
9	Correlated power time series of individual wind turbines: A data driven model approach. Journal of Renewable and Sustainable Energy, 2020, 12, .	2.0	10
10	Uncovering the dynamics of correlation structures relative to the collective market motion. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 103402.	2.3	26
11	Quasi-stationary states in temporal correlations for traffic systems: Cologne orbital motorway as an example. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 103404.	2.3	13
12	Semiclassical prediction of large spectral fluctuations in interacting kicked spin chains. Annals of Physics, 2018, 389, 250-282.	2.8	7
13	Impact and recovery process of mini flash crashes: An empirical study. PLoS ONE, 2018, 13, e0196920.	2.5	12
14	Extreme Portfolio Loss Correlations in Credit Risk. Risks, 2018, 6, 72.	2.4	0
15	Credit Risk Meets Random Matrices: Coping with Non-Stationary Asset Correlations. Risks, 2018, 6, 42.	2.4	2
16	Concurrent credit portfolio losses. PLoS ONE, 2018, 13, e0190263.	2.5	5
17	Asymptotic coincidence of the statistics for degenerate and non-degenerate correlated real Wishart ensembles. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 235203.	2.1	1
18	The importance of antipersistence for traffic jams. Europhysics Letters, 2017, 118, 38005.	2.0	9

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19	Semiclassical Identification of Periodic Orbits in a Quantum Many-Body System. Physical Review Letters, 2017, 118, 164101.	7.8	32
20	Distribution of Off-Diagonal Cross Sections in Quantum Chaotic Scattering: Exact Results and Data Comparison. Physical Review Letters, 2017, 119, 244102.	7.8	16
21	Regularities and irregularities in order flow data. European Physical Journal B, 2017, 90, 1.	1.5	3
22	Regularities and Irregularities in Order Flow Data. SSRN Electronic Journal, 2017, , .	0.4	0
23	Exact results for chaotic scattering and applications to microwave experiments. , 2016, , .		1
24	Exact spectral densities of complex noise-plus-structure random matrices. Physical Review E, 2016, 94, 042130.	2.1	5
25	Spreading in integrable and non-integrable many-body systems. Physica A: Statistical Mechanics and Its Applications, 2016, 461, 683-693.	2.6	3
26	Spatial dependence in stock returns: local normalization and VaR forecasts. Empirical Economics, 2016, 50, 1091-1109.	3.0	4
27	Equilibrium pricing in an order book environment: Case study for a spin model. Physica A: Statistical Mechanics and Its Applications, 2016, 453, 228-235.	2.6	4
28	Compounding approach for univariate time series with nonstationary variances. Physical Review E, 2015, 92, 062901.	2.1	5
29	PORTFOLIO RETURN DISTRIBUTIONS: SAMPLE STATISTICS WITH STOCHASTIC CORRELATIONS. International Journal of Theoretical and Applied Finance, 2015, 18, 1550012.	0.5	9
30	Zooming into market states. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P01029.	2.3	15
31	QUANTILE CORRELATIONS: UNCOVERING TEMPORAL DEPENDENCIES IN FINANCIAL TIME SERIES. International Journal of Theoretical and Applied Finance, 2015, 18, 1550044.	0.5	2
32	Limiting statistics of the largest and smallest eigenvalues in the correlated Wishart model. Europhysics Letters, 2015, 109, 20005.	2.0	8
33	Dynamics of quasi-stationary systems: Finance as an example. Europhysics Letters, 2015, 110, 68003.	2.0	21
34	Eigenvalue density of the doubly correlated Wishart model: exact results. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 175204.	2.1	11
35	Stability and hierarchy of quasi-stationary states: financial markets as an example. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P08011.	2.3	24
36	Constructing analytically tractable ensembles of stochastic covariances with an application to financial data. Journal of Statistical Mechanics: Theory and Experiment, 2015, 2015, P11025.	2.3	7

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37	Spectral statistics in directed complex networks and universality of the Ginibre ensemble. Communications in Nonlinear Science and Numerical Simulation, 2015, 20, 1026-1032.	3.3	8
38	Credit risk: taking fluctuating asset correlations into account. Journal of Credit Risk, 2015, 11, 73-94.	0.2	8
39	A Random Matrix Approach to Credit Risk. PLoS ONE, 2014, 9, e98030.	2.5	17
40	Distribution of the smallest eigenvalue in complex and real correlated Wishart ensembles. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 075004.	2.1	9
41	The supersymmetry method for chiral random matrix theory with arbitrary rotation-invariant weights. Journal of Physics A: Mathematical and Theoretical, 2014, 47, 295201.	2.1	10
42	Credit risk and the instability of the financial system: An ensemble approach. Europhysics Letters, 2014, 105, 38004.	2.0	15
43	Distributions of off-diagonal scattering matrix elements: Exact results. Annals of Physics, 2014, 342, 103-132.	2.8	22
44	Distribution of the Smallest Eigenvalue in the Correlated Wishart Model. Physical Review Letters, 2013, 111, 094101.	7.8	21
45	Non-stationarity in financial time series: Generic features and tail behavior. Europhysics Letters, 2013, 103, 58003.	2.0	42
46	Identifying States of a Financial Market. Scientific Reports, 2012, 2, 644.	3.3	160
47	Microscopic understanding of heavy-tailed return distributions in an agent-based model. Europhysics Letters, 2012, 100, 38005.	2.0	20
48	Supersymmetry Approach to Wishart Correlation Matrices: Exact Results. Journal of Statistical Physics, 2012, 148, 981-998.	1.2	25
49	STATISTICAL CAUSES FOR THE EPPS EFFECT IN MICROSTRUCTURE NOISE. International Journal of Theoretical and Applied Finance, 2011, 14, 1231-1246.	0.5	15
50	Compensating asynchrony effects in the calculation of financial correlations. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 767-779.	2.6	16
51	Local normalization: Uncovering correlations in non-stationary financial time series. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 3856-3865.	2.6	28
52	Impact of the tick-size on financial returns and correlations. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 4828-4843.	2.6	45
53	Eigenvalue Densities of Real and Complex Wishart Correlation Matrices. Physical Review Letters, 2010, 105, 244101.	7.8	30
54	A new approach to derive Pfaffian structures for random matrix ensembles. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 135204.	2.1	13

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55	Collective versus single-particle motion in quantum many-body systems from the perspective of an integrable model. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 265101.	2.1	6
56	Power mapping with dynamical adjustment for improved portfolio optimization. Quantitative Finance, 2010, 10, 107-119.	1.7	27
57	A comparison of the superbosonization formula and the generalized Hubbardâ€“Stratonovichâ€‰transformation. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 275206.	2.1	17
58	Arbitrary rotation invariant random matrix ensembles and supersymmetry: orthogonal and unitary-symplectic case. Journal of Physics A: Mathematical and Theoretical, 2009, 42, 275205.	2.1	17
59	Credit riskâ€”A structural model with jumps and correlations. Physica A: Statistical Mechanics and Its Applications, 2007, 383, 533-569.	2.6	19
60	Semiclassical limits for the QCD Dirac operator. Annals of Physics, 2007, 322, 287-314.	2.8	6
61	Arbitrary unitarily invariant random matrix ensembles and supersymmetry. Journal of Physics A, 2006, 39, 13191-13223.	1.6	28
62	Derivation of the supersymmetric Harish-Chandra integral for UOSp(k1/2k2). Journal of Mathematical Physics, 2004, 45, 3636-3644.	1.1	6
63	Angular Gelfandâ€“Tzetlin coordinates for the supergroup UOSp(k[sub 1]/2k[sub 2]). Journal of Mathematical Physics, 2003, 44, 4267.	1.1	0
64	Recursive construction for a class of radial functions. I. Ordinary space. Journal of Mathematical Physics, 2002, 43, 2707.	1.1	31
65	Recursive construction for a class of radial functions. II. Superspace. Journal of Mathematical Physics, 2002, 43, 2741.	1.1	21
66	Random matrix approach to cross correlations in financial data. Physical Review E, 2002, 65, 066126.	2.1	758
67	Is quantum chromodynamics on the lattice a disordered system?. Physica E: Low-Dimensional Systems and Nanostructures, 2001, 9, 418-423.	2.7	0
68	Spectral correlations in the crossover transition from a superposition of harmonic oscillators to the Gaussian unitary ensemble. Physical Review E, 1999, 59, 330-336.	2.1	2
69	Random-matrix theories in quantum physics: common concepts. Physics Reports, 1998, 299, 189-425.	25.6	1,829
70	Between Poisson and GUE Statistics: Role of the Breitâ€“Wigner Width. Annals of Physics, 1998, 270, 292-327.	2.8	17
71	Spectral correlations in the crossover between GUE and Poisson regularity: On the identification of scales. Journal of Mathematical Physics, 1997, 38, 1870-1887.	1.1	27
72	Quantization of HyperbolicN-Sphere Scattering Systems in Three Dimensions. Annals of Physics, 1997, 258, 286-319.	2.8	23

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73	Gelfand-Tzetlin coordinates for the unitary supergroup. Communications in Mathematical Physics, 1996, 176, 555-576.	2.2	29
74	Transitions toward Quantum Chaos: With Supersymmetry from Poisson to Gauss. Annals of Physics, 1996, 250, 145-192.	2.8	70
75	Comment on: The Itzyksonâ€“Zuber integral for U(m|n) [J. Math. Phys. 36, 3085â€“3093 (1995)]. Journal of Mathematical Physics, 1996, 37, 3099-3099.	1.1	1
76	Transition from Poisson Regularity to Chaos in a Time-Reversal NonInvariant System. Physical Review Letters, 1996, 76, 2258-2261.	7.8	44
77	An Itzyksonâ€“Zuberâ€like integral and diffusion for complex ordinary and supermatrices. Journal of Mathematical Physics, 1996, 37, 6395-6413.	1.1	67
78	On the level density of coupled gaussian unitary ensembles. Nuclear Physics A, 1993, 560, 223-252.	1.5	14
79	On the graded group U(1/1). Journal of Mathematical Physics, 1993, 34, 2541-2553.	1.1	13
80	Fourierâ€“Bessel analysis for ordinary and graded 2Ã—2 Hermitian matrices. Journal of Mathematical Physics, 1993, 34, 2523-2540.	1.1	10
81	Dysonâ€™s correlation functions and graded symmetry. Journal of Mathematical Physics, 1991, 32, 336-347.	1.1	86
82	Credit Risk Meets Random Matrices: Coping with Non-Stationary Asset Correlations. SSRN Electronic Journal, 0, , .	0.4	0