Thomas H Seligman

List of Publications by Year
in descending order

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96 papers	3,890 citations	136940 32 h-index	128286 60 g-index
96 all docs	96 docs citations	96 times ranked	1605 citing authors

#	Article	IF	Citations
1	Hidden duality and accidental degeneracy in cycloacene and MÃ¶bius cycloacene. Journal of Mathematical Physics, 2021, 62, 052102.	1.1	2
2	Current vortices in aromatic carbon molecules. Physical Review B, 2020, 102, .	3.2	8
3	Emerging spectra characterization of catastrophic instabilities in complex systems. New Journal of Physics, 2020, 22, 063043.	2.9	10
4	Complex Market Dynamics in the Light of Random Matrix Theory. New Economic Windows, 2019, , 13-34.	1.0	13
5	Identifying long-term precursors of financial market crashes using correlation patterns. New Journal of Physics, 2018, 20, 103041.	2.9	35
6	Random matrix ensembles for many-body quantum systems. AIP Conference Proceedings, 2018, , .	0.4	4
7	Correlation networks from random walk time series. Physical Review E, 2018, 98, .	2.1	1
8	Rich structure in the correlation matrix spectra in non-equilibrium steady states. Scientific Reports, 2017, 7, 40506.	3.3	3
9	Protecting coherence by environmental decoherence: a solvable paradigmatic model. New Journal of Physics, 2017, 19, 113016.	2.9	5
10	Transport gap engineering by contact geometry in graphene nanoribbons: Experimental and theoretical studies on artificial materials. Physical Review B, 2017, 95, .	3.2	15
11	Chains of benzenes with lithium-atom adsorption: Vibrations and spontaneous symmetry breaking. Chemical Physics Letters, 2017, 684, 86-90.	2.6	1
12	Microwave emulations and tight-binding calculations of transport in polyacetylene. Physics Letters, Section A: General, Atomic and Solid State Physics, 2017, 381, 24-29.	2.1	8
13	Random density matrices versus random evolution of open system. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 425005.	2.1	6
14	Time series, correlation matrices and random matrix models. AIP Conference Proceedings, 2014, , .	0.4	15
15	First Experimental Realization of the Dirac Oscillator. Physical Review Letters, 2013, 111, 170405.	7.8	124
16	Spontaneous symmetry breaking and strong deformations in metal adsorbed graphene sheets. Chemical Physics Letters, 2013, 564, 69-72.	2.6	11
17	Emerging spectra of singular correlation matrices under small power-map deformations. Physical Review E, 2013, 88, 032115.	2.1	14
18	Identifying States of a Financial Market. Scientific Reports, 2012, 2, 644.	3.3	160

#	ARTICLE	IF	CITATIONS
19	Fourier's law for quasi-one-dimensional chaotic quantum systems. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 205302.	2.1	1
20	Fidelity decay in interacting two-level boson systems: Freezing and revivals. Physical Review E, 2011, 83, 056216.	2.1	6
21	Quantization over boson operator spaces. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 392004.	2.1	67
22	Two interacting atoms in a cavity: exact solutions, entanglement and decoherence. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 192002.	2.1	18
23	Spontaneous symmetry breaking by double lithium adsorption in polyacenes. , 2010, , .		3
24	The Dirac-Moshinsky oscillator coupled to an external field and its connection to quantum optics. AIP Conference Proceedings, 2010, , .	0.4	8
25	Fidelity decay of the two-level bosonic embedded ensembles of random matrices. , 2010, , .		1
26	Third quantization. , 2010, , .		2
27	Dynamics of a Dirac oscillator coupled to an external field: a new class of solvable problems. Journal of Physics A: Mathematical and Theoretical, 2010, 43, 285204.	2.1	36
28	The chaotic set and the cross section for chaotic scattering in three degrees of freedom. New Journal of Physics, 2010, 12, 103021.	2.9	22
29	Electron Localization on Molecular Surfaces by Metal Adsorption. Journal of Computational and Theoretical Nanoscience, 2009, 6, 541-544.	0.4	6
30	Random matrix models for decoherence and fidelity decay in quantum information systems. AIP Conference Proceedings, 2008, , .	0.4	1
31	A random matrix theory of decoherence. New Journal of Physics, 2008, 10, 115016.	2.9	17
32	The two-body random spin ensemble and a new type of quantum phase transition. New Journal of Physics, 2008, 10, 023020.	2.9	10
33	Surprising Relations between Parametric Level Correlations and Fidelity Decay. Physical Review Letters, 2008, 100, 190404.	7.8	15
34	Decoherence of two-qubit systems: a random matrix description. New Journal of Physics, 2007, 9, 106-106.	2.9	38
35	Loschmidt echoes in two-body random matrix ensembles. Physical Review B, 2007, 76, .	3.2	10
36	Decoherence of ann-Qubit Quantum Memory. Physical Review Letters, 2007, 99, 240405.	7.8	19

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37	Bell pair in a generic random matrix environment. Physical Review A, 2007, 75, .	2.5	20
38	Dynamics of Loschmidt echoes and fidelity decay. Physics Reports, 2006, 435, 33-156.	25.6	509
39	Efficient method for scattering problems in open billiards: Theory and applications. Physical Review B, 2006, 74, .	3.2	12
40	Evolution of pairwise entanglement in a coupledn-body system. Physical Review A, 2006, 73, .	2.5	21
41	Anomalous Slow Fidelity Decay for Symmetry-Breaking Perturbations. Physical Review Letters, 2006, 96, 244105.	7.8	11
42	Fidelity amplitude of the scattering matrix in microwave cavities. New Journal of Physics, 2005, 7, 152-152.	2.9	49
43	Experimental Verification of Fidelity Decay: From Perturbative to Fermi Golden Rule Regime. Physical Review Letters, 2005, 95, 184102.	7.8	46
44	First Experimental Evidence for Quantum Echoes in Scattering Systems. Physical Review Letters, 2004, 93, 134102.	7.8	24
45	Unified theory of bound and scattering molecular Rydberg states as quantum maps. Annals of Physics, 2004, 312, 441-479.	2.8	6
46	Self-pulsing effect in chaotic scattering. New Journal of Physics, 2004, 6, 48-48.	2.9	19
47	A random matrix formulation of fidelity decay. New Journal of Physics, 2004, 6, 20-20.	2.9	74
48	Decoherence in chaotic and integrable systems: a random matrix approach. Physics Letters, Section A: General, Atomic and Solid State Physics, 2003, 309, 61-67.	2.1	23
49	Theory of Quantum Loschmidt Echoes. Progress of Theoretical Physics Supplement, 2003, 150, 200-228.	0.1	62
50	Evolution of entanglement under echo dynamics. Physical Review A, 2003, 67, .	2.5	19
51	Estimation of purity in terms of correlation functions. Physical Review A, 2003, 67, .	2.5	6
52	Decoherence of spin echoes. Journal of Physics A, 2002, 35, 4707-4727.	1.6	45
53	A random matrix approach to decoherence. Journal of Optics B: Quantum and Semiclassical Optics, 2002, 4, S386-S392.	1.4	28
54	Semiclassical properties of eigenfunctions and occupation number distribution for a model of two interacting particles. Physics Letters, Section A: General, Atomic and Solid State Physics, 2000, 277, 87-93.	2.1	22

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55	Narrow Rings: A Scattering Billiard Model. Progress of Theoretical Physics Supplement, 2000, 139, 234-245.	0.1	3
56	Semi-Poisson statistics and beyond. Physical Review E, 1999, 60, 449-452.	2.1	28
57	The Inverse Scattering Problem for Chaotic Hamiltonian Systems. Annals of Physics, 1999, 275, 151-189.	2.8	55
58	Chaotic Scattering in the Restricted Threeâ€Body Problem II. Small mass parameters. Celestial Mechanics and Dynamical Astronomy, 1998, 71, 167-189.	1.4	37
59	Scars of Invariant Manifolds in Interacting Few-Body Systems. Physical Review Letters, 1998, 80, 3057-3060.	7.8	12
60	Correlations between resonances in a statistical scattering model. Physical Review E, 1997, 56, 2481-2491.	2.1	21
61	Integrability of the S-matrix versus integrability of the Hamiltonian. Physics Reports, 1997, 285, 77-141.	25.6	42
62	Transition from localized to extended eigenstates in the ensemble of power-law random banded matrices. Physical Review E, 1996, 54, 3221-3230.	2.1	324
63	Scattering one step from chaos. Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 198, 306-314.	2.1	24
64	Resonant response models for the Valley of Mexico-II. The trapping of horizontal P waves. Geophysical Journal International, 1993, 113, 449-462.	2.4	20
65	Quantum signatures of classical chaos: Sensitivity of wave functions to perturbations. Physical Review Letters, 1993, 71, 529-532.	7.8	28
66	Universal and nonuniversal statistical properties of levels and intensities for chaotic Rydberg molecules. Physical Review A, 1993, 47, 3571-3586.	2.5	54
67	Is there incomplete mixing of states with differentKquantum numbers in the neutron resonance region?. Physical Review C, 1992, 45, R1417-R1419.	2.9	10
68	Structural invariance and the statistics of quasi-energies. Physics Letters, Section A: General, Atomic and Solid State Physics, 1992, 168, 348-352.	2.1	24
69	Chaotic behaviour of scattering induced by strong external coupling. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 158, 14-18.	2.1	37
70	Resonant response models for the Valley of Mexico-I; the elastic inclusion approach. Geophysical Journal International, 1989, 99, 789-799.	2.4	30
71	Sequences of point transformations and linear canonical transformations in classical and quantum mechanics. Journal of Mathematical Physics, 1989, 30, 2512-2515.	1.1	18
72	Possible resonance effect in the distribution of earthquake damage in Mexico City. Nature, 1987, 326, 783-785.	27.8	45

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73	Energy-Level Statistics of Integrable Quantum Systems. Physical Review Letters, 1986, 56, 2767-2767.	7.8	27
74	Quantum spectra of classically chaotic systems without time reversal invariance. Physics Letters, Section A: General, Atomic and Solid State Physics, 1985, 108, 183-187.	2.1	60
75	Information theory and statistical nuclear reactions. I. General theory and applications to few-channel problems. Annals of Physics, 1985, 161, 254-275.	2.8	156
76	The maximum entropy method. , 1985, , 78-91.		0
77	Quantum Spectra and Transition from Regular to Chaotic Classical Motion. Physical Review Letters, 1984, 53, 215-217.	7.8	248
78	Spectroscopic amplitudes for complex cluster systems. Nuclear Physics A, 1981, 356, 146-222.	1.5	38
79	Canonical transformations to action and angle variables and their representations in quantum mechanics. Annals of Physics, 1980, 127, 458-477.	2.8	27
80	On the entropy approach to statistical nuclear reactions. Nuclear Physics A, 1980, 344, 489-508.	1.5	54
81	Generalization of a theorem by Hardy, Littlewood, and PÃ³lya. Journal of Mathematical Analysis and Applications, 1980, 76, 222-229.	1.0	36
82	Canonical transformations to action and angle variables and their representation in quantum mechanics II. The coulomb problem. Annals of Physics, 1979, 120, 402-422.	2.8	32
83	Canonical transformations to action and angle variables and their representations in quantum mechanics. Annals of Physics, 1978, 114, 243-272.	2.8	70
84	Nonbijective canonical transformations and their representation in quantum mechanics. Journal of Mathematical Physics, 1978, 19, 683-693.	1.1	27
85	The mixing distance. Journal of Chemical Physics, 1978, 69, 386.	3.0	70
86	Î±âˆ— clusters in 12C. Nuclear Physics A, 1976, 259, 445-451.	1.5	13
87	Applications of the Bargmann-Segal transform to nuclear systems of complex clusters. Journal of Physics G: Nuclear Physics, 1976, 2, 79-92.	0.8	30
88	A second quantized formulation of valence bond theory. Theoretica Chimica Acta, 1975, 38, 341-354.	0.8	33
89	A connection between the representations of U(n) and bases for representations of U(n) â‹‡ U(n). Reports on Mathematical Physics, 1975, 8, 233-239.	0.8	3
90	Alpha particle model calculations for 12C and 16O. Nuclear Physics A, 1974, 221, 381-391.	1.5	15

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91	Canonical transformations applied to the free Landau electron. Journal of Mathematical Physics, 1973, 14, 1224-1227.	1.1	42
92	Canonical Transformations and the Radial Oscillator and Coulomb Problems. Journal of Mathematical Physics, 1972, 13, 901-907.	1.1	89
93	Studies in the nuclear cluster model. Nuclear Physics A, 1972, 186, 49-64.	1.5	52
94	Group theory and second quantization for nonorthogonal orbitals. Annals of Physics, 1971, 66, 311-334.	2.8	154
95	Studies in the nuclear cluster model. Nuclear Physics A, 1969, 123, 161-172.	1.5	24
96	Studies in the nuclear cluster model. Nuclear Physics A, 1969, 136, 545-563.	1.5	67