

# Jyrki Piilo

## List of Publications by Year in descending order

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112  
papers

7,106  
citations

81743

39  
h-index

56606

83  
g-index

113  
all docs

113  
docs citations

113  
times ranked

2525  
citing authors

#	ARTICLE	IF	CITATIONS
1	Interferometric approach to open quantum systems and non-Markovian dynamics. Physical Review A, 2021, 103, .	1.0	10
2	High-frequency trading and networked markets. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	9
3	Probing the spectral dimension of quantum network geometries. Journal of Physics Complexity, 2021, 2, 015001.	0.9	4
4	Engineering of Hong-Ou-Mandel interference with effective noise. Physical Review A, 2021, 104, .	1.0	2
5	Open quantum dynamics with singularities: Master equations and degree of non-Markovianity. Physical Review A, 2021, 104, .	1.0	3
6	Diffusive Limit of Non-Markovian Quantum Jumps. Physical Review Letters, 2020, 125, 150403.	2.9	11
7	Experimental quantum probing measurements with no knowledge of the system-probe interaction. Physical Review A, 2020, 102, .	1.0	3
8	Distributing memory effects in an open two-qubit system. Physical Review A, 2020, 102, .	1.0	4
9	Experimental realization of high-fidelity teleportation via a non-Markovian open quantum system. Physical Review A, 2020, 102, .	1.0	13
10	Rate Operator Unraveling for Open Quantum System Dynamics. Physical Review Letters, 2020, 124, 190402.	2.9	17
11	Efficient quantum transport in a multi-site system combining classical noise and quantum baths. New Journal of Physics, 2020, 22, 013028.	1.2	10
12	Photonic dephasing dynamics and the role of initial correlations. Physical Review A, 2020, 101, .	1.0	7
13	Non-Markovian quantum dynamics: What does it mean?. Europhysics Letters, 2019, 127, 50001.	0.7	45
14	Covariance and correlation estimators in bipartite complex systems with a double heterogeneity. Journal of Statistical Mechanics: Theory and Experiment, 2019, 2019, 053404.	0.9	3
15	Non-Markovian quantum dynamics: What is it good for?. Europhysics Letters, 2019, 128, 30001.	0.7	48
16	Local probe for connectivity and coupling strength in quantum complex networks. Scientific Reports, 2018, 8, 13010.	1.6	7
17	Experimental implementation of fully controlled dephasing dynamics and synthetic spectral densities. Nature Communications, 2018, 9, 3453.	5.8	43
18	Reconfigurable optical implementation of quantum complex networks. New Journal of Physics, 2018, 20, 053024.	1.2	39

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19	Long-term ecology of investors in a financial market. Palgrave Communications, 2018, 4, .	4.7	35
20	Noisy quantum walks of two indistinguishable interacting particles. Physical Review A, 2017, 95, .	1.0	21
21	Symmetry in the open-system dynamics of quantum correlations. Scientific Reports, 2017, 7, 8367.	1.6	4
22	Divisibility of quantum dynamical maps and collision models. Physical Review A, 2017, 96, .	1.0	70
23	Remote polarization-entanglement generation by local dephasing and frequency up-conversion. Physical Review A, 2017, 96, .	1.0	3
24	Eternal non-Markovianity: from random unitary to Markov chain realisations. Scientific Reports, 2017, 7, 6379.	1.6	64
25	Non-Markovianity over Ensemble Averages in Quantum Complex Networks. Open Systems and Information Dynamics, 2017, 24, 1740018.	0.5	2
26	Structure and Evolution of a European Parliament via a Network and Correlation Analysis. SSRN Electronic Journal, 2016, , .	0.4	0
27	Quantum Zeno-type effect and non-Markovianity in a three-level system. Scientific Reports, 2016, 6, 39061.	1.6	2
28	Thermodynamic power of non-Markovianity. Scientific Reports, 2016, 6, 27989.	1.6	58
29	Time-invariant entanglement and sudden death of nonlocality. Physical Review A, 2016, 94, .	1.0	17
30	Complex quantum networks as structured environments: engineering and probing. Scientific Reports, 2016, 6, 26861.	1.6	39
31	Discrete dynamics and non-Markovianity. Journal of Physics B: Atomic, Molecular and Optical Physics, 2016, 49, 125501.	0.6	8
32	<i>Colloquium</i>: Non-Markovian dynamics in open quantum systems. Reviews of Modern Physics, 2016, 88, .	16.4	870
33	Efficient superdense coding in the presence of non-Markovian noise. Europhysics Letters, 2016, 114, 10005.	0.7	46
34	Structure and evolution of a European Parliament via a network and correlation analysis. Physica A: Statistical Mechanics and Its Applications, 2016, 462, 167-185.	1.2	2
35	Non-Markovian dynamics in two-qubit dephasing channels with an application to superdense coding. Physical Review A, 2016, 93, .	1.0	11
36	Non-Markovian discrete qubit dynamics. Science Bulletin, 2016, 61, 1031-1036.	4.3	11

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37	Patterns of trading profiles at the Nordic Stock Exchange. A correlation-based approach.. Chaos, Solitons and Fractals, 2016, 88, 267-278.	2.5	13
38	Controlling entropic uncertainty bound through memory effects. Europhysics Letters, 2015, 111, 50006.	0.7	30
39	How news affects the trading behaviour of different categories of investors in a financial market. Quantitative Finance, 2015, 15, 213-229.	0.9	58
40	Detecting non-Markovianity from continuous monitoring. Physical Review A, 2014, 90, .	1.0	5
41	Entanglement distribution in optical fibers assisted by nonlocal memory effects. Europhysics Letters, 2014, 107, 54006.	0.7	24
42	Locality and universality of quantum memory effects. Scientific Reports, 2014, 4, 6327.	1.6	14
43	Nonlocal memory effects allow perfect teleportation with mixed states. Scientific Reports, 2014, 4, 4620.	1.6	109
44	Memory assisted entanglement distribution in optical fibers. , 2014, , .		0
45	Photonic realization of nonlocal memory effects and non-Markovian quantum probes. Scientific Reports, 2013, 3, .	1.6	81
46	Quantitative Analysis of Gender Stereotypes and Information Aggregation in a National Election. PLoS ONE, 2013, 8, e58910.	1.1	6
47	Role of correlations in the thermalization of quantum systems. New Journal of Physics, 2012, 14, 113034.	1.2	4
48	Identification of clusters of investors from their real trading activity in a financial market. New Journal of Physics, 2012, 14, 013041.	1.2	88
49	Local-in-time master equations with memory effects: applicability and interpretation. Journal of Physics B: Atomic, Molecular and Optical Physics, 2012, 45, 154004.	0.6	17
50	Measuring non-Markovianity of processes with controllable system-environment interaction. Europhysics Letters, 2012, 97, 10002.	0.7	98
51	Optimal state pairs for non-Markovian quantum dynamics. Physical Review A, 2012, 86, .	1.0	137
52	Non-Markovian waiting-time distribution for quantum jumps in open systems. Physical Review A, 2012, 86, .	1.0	7
53	Entanglement trapping in a nonstationary structured reservoir. Physical Review A, 2012, 86, .	1.0	23
54	Nonlocal Memory Effects in the Dynamics of Open Quantum Systems. Physical Review Letters, 2012, 108, 210402.	2.9	115

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55	Correlations in quantum states and the local creation of quantum discord. <i>Physical Review A</i> , 2012, 85, .	1.0	40
56	Markovianity and non-Markovianity in quantum and classical systems. <i>New Journal of Physics</i> , 2011, 13, 093004.	1.2	141
57	FROZEN DISCORD IN NON-MARKOVIAN DEPHASING CHANNELS. <i>International Journal of Quantum Information</i> , 2011, 09, 981-991.	0.6	69
58	Generation of entanglement density within a reservoir. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2011, 44, 065505.	0.6	8
59	Identification of Clusters of Investors from Their Real Trading Activity in a Financial Market. <i>SSRN Electronic Journal</i> , 2011, , .	0.4	2
60	Statistically Validated Networks in Bipartite Complex Systems. <i>PLoS ONE</i> , 2011, 6, e17994.	1.1	179
61	Experimental control of the transition from Markovian to non-Markovian dynamics of open quantum systems. <i>Nature Physics</i> , 2011, 7, 931-934.	6.5	442
62	Quantifying non-Markovianity of continuous-variable Gaussian dynamical maps. <i>Physical Review A</i> , 2011, 84, .	1.0	100
63	Connecting two jumplike unravelings for non-Markovian open quantum systems. <i>Physical Review A</i> , 2011, 84, .	1.0	5
64	Community characterization of heterogeneous complex systems. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2011, 2011, P01019.	0.9	44
65	The 16th Central European Workshop on Quantum Optics. <i>Physica Scripta</i> , 2010, T140, 011001.	1.2	0
66	Phenomenological memory-kernel master equations and time-dependent Markovian processes. <i>Physical Review A</i> , 2010, 81, .	1.0	64
67	Measure for the non-Markovianity of quantum processes. <i>Physical Review A</i> , 2010, 81, .	1.0	378
68	Initial correlations in open-systems dynamics: The Jaynes-Cummings model. <i>Physical Review A</i> , 2010, 82, .	1.0	109
69	Non-Markovian dynamics and quantum jumps. <i>Optics and Spectroscopy (English Translation of Optika i Opticheskoy Elektroniki)</i> , 2010, 14, 102.	0.784314	14
70	Interplay between entanglement and entropy in two-qubit systems. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2010, 43, 085505.	0.6	19
71	Witness for initial system-environment correlations in open-system dynamics. <i>Europhysics Letters</i> , 2010, 92, 60010.	0.7	133
72	Sudden Transition between Classical and Quantum Decoherence. <i>Physical Review Letters</i> , 2010, 104, 200401.	2.9	469

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73	Environment-dependent dissipation in quantum Brownian motion. <i>Physical Review A</i> , 2009, 79, .	1.0	40
74	Stochastic jump processes for non-Markovian quantum dynamics. <i>Europhysics Letters</i> , 2009, 85, 50004.	0.7	51
75	NON-MARKOVIAN DYNAMICS OF CAVITY LOSSES. <i>International Journal of Quantum Information</i> , 2009, 07, 41-47.	0.6	2
76	Non-Markovian weak coupling limit of quantum Brownian motion. <i>European Physical Journal D</i> , 2009, 55, 181-187.	0.6	11
77	Pseudomodes as an effective description of memory: Non-Markovian dynamics of two-state systems in structured reservoirs. <i>Physical Review A</i> , 2009, 80, .	1.0	107
78	Measure for the Degree of Non-Markovian Behavior of Quantum Processes in Open Systems. <i>Physical Review Letters</i> , 2009, 103, 210401.	2.9	1,072
79	Off-resonant entanglement generation in a lossy cavity. <i>Physical Review A</i> , 2009, 79, .	1.0	43
80	Sudden death and sudden birth of entanglement in common structured reservoirs. <i>Physical Review A</i> , 2009, 79, .	1.0	213
81	Open system dynamics with non-Markovian quantum jumps. <i>Physical Review A</i> , 2009, 79, .	1.0	114
82	Non-Markovian Quantum Jumps. <i>Physical Review Letters</i> , 2008, 100, 180402.	2.9	271
83	Population trapping due to cavity losses. <i>Physical Review A</i> , 2008, 77, .	1.0	33
84	Quantum Brownian motion for periodic coupling to an Ohmic bath. <i>Physical Review A</i> , 2007, 75, .	1.0	7
85	Microscopic derivation of the Jaynes-Cummings model with cavity losses. <i>Physical Review A</i> , 2007, 75, .	1.0	109
86	Quantum Zeno and anti-Zeno effects for the damped harmonic oscillator. <i>Proceedings of SPIE</i> , 2007, , .	0.8	0
87	Monte Carlo simulations of non-Markovian open systems. , 2007, , .		0
88	Cavity losses for the dissipative Jaynes-Cummings Hamiltonian beyond rotating wave approximation. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2007, 40, 14527-14536.	0.7	52
89	Cold collisions in strong laser fields: partial wave analysis of magnesium collisions. <i>European Physical Journal D</i> , 2006, 40, 211-222.	0.6	1
90	Zeno and Anti-Zeno Effects for Quantum Brownian Motion. <i>Physical Review Letters</i> , 2006, 97, 130402.	2.9	68

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91	Driven harmonic oscillator as a quantum simulator for open systems. <i>Physical Review A</i> , 2006, 74, .	1.0	25
92	Transient dynamics of linear quantum amplifiers. <i>European Physical Journal D</i> , 2005, 36, 329-338.	0.6	3
93	Cold collisions in dissipative optical lattices. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2005, 7, R37-R52.	1.4	2
94	Feshbach-Resonant Interactions in $^4\text{He}$ and $^6\text{Li}$ Degenerate Fermi Gases. <i>Physical Review Letters</i> , 2005, 94, 060403.	2.9	15
95	Scaling of non-Markovian Monte Carlo wave-function methods. <i>Physical Review E</i> , 2005, 71, 056701.	0.8	2
96	Counterintuitive transitions between crossing energy levels. <i>Physical Review A</i> , 2005, 72, .	1.0	27
97	Misbeliefs and misunderstandings about the non-Markovian dynamics of a damped harmonic oscillator. <i>Journal of Optics B: Quantum and Semiclassical Optics</i> , 2004, 6, S98-S103.	1.4	31
98	Raman photoassociation of Bose-Fermi mixtures and the subsequent prospects for atom-molecule Cooper pairing. <i>Physical Review A</i> , 2004, 69, .	1.0	7
99	Simulating quantum Brownian motion with single trapped ions. <i>Physical Review A</i> , 2004, 69, .	1.0	44
100	Radiative collisional heating at the Doppler limit for laser-cooled magnesium atoms. <i>Physical Review A</i> , 2004, 70, .	1.0	6
101	New directions in degenerate dipolar molecules via collective association. <i>European Physical Journal D</i> , 2004, 31, 273-282.	0.6	6
102	Lindblad- and non-Lindblad-type dynamics of a quantum Brownian particle. <i>Physical Review A</i> , 2004, 70, .	1.0	85
103	Quantum theory of heating of a single trapped ion. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003, 308, 6-10.	0.9	16
104	Collision rates in near-resonant optical lattices. <i>Journal of the Optical Society of America B: Optical Physics</i> , 2003, 20, 1135.	0.9	3
105	Optical shielding of cold collisions in blue-detuned near-resonant optical lattices. <i>Physical Review A</i> , 2002, 66, .	1.0	6
106	Atomic collision dynamics in optical lattices. <i>Physical Review A</i> , 2002, 65, .	1.0	11
107	Cold collisions between atoms in optical lattices. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2001, 34, L231-L237.	0.6	5
108	Towards exact analytic calculation of electron gas. <i>European Physical Journal D</i> , 1996, 46, 2641-2642.	0.4	0

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109	Novel Analytic Calculation of Electron Gas Properties. Physical Review Letters, 1996, 77, 4237-4240.	2.9	31
110	How News Affect the Trading Behavior of Different Categories of Investors in a Financial Market. SSRN Electronic Journal, 0, , .	0.4	1
111	Quantitative Analysis of Gender Stereotypes and Information Aggregation in a National Election. SSRN Electronic Journal, 0, , .	0.4	0
112	Patterns of Trading Profiles at the Nordic Stock Exchange. A Correlation-Based Approach.. SSRN Electronic Journal, 0, , .	0.4	0