

Animesh Datta

List of Publications by Year in descending order

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106
papers

7,604
citations

94269

37
h-index

56606

83
g-index

107
all docs

107
docs citations

107
times ranked

4028
citing authors

#	ARTICLE	IF	CITATIONS
1	Advantage of Coherent States in Ring Resonators over Any Quantum Probe Single-Pass Absorption Estimation Strategy. <i>Physical Review Letters</i> , 2022, 128, .	2.9	12
2	Model-Independent Simulation Complexity of Complex Quantum Dynamics. <i>Physical Review Letters</i> , 2021, 126, 150402.	2.9	2
3	Signatures of the quantum nature of gravity in the differential motion of two masses. <i>Quantum Science and Technology</i> , 2021, 6, 045014.	2.6	16
4	Experimental accreditation of outputs of noisy quantum computers. <i>Physical Review A</i> , 2021, 104, .	1.0	8
5	Quantum multiparameter estimation and metrologyâ€”preface. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2021, 54, 460301.	0.7	1
6	Towards a spectroscopic protocol for unambiguous detection of quantum coherence in excitonic energy transport. <i>Faraday Discussions</i> , 2020, 221, 110-132.	1.6	7
7	Quantum Semiparametric Estimation. <i>Physical Review X</i> , 2020, 10, .	2.8	38
8	Approaching Quantum-Limited Metrology with Imperfect Detectors by Using Weak-Value Amplification. <i>Physical Review Letters</i> , 2020, 125, 080501.	2.9	41
9	Quantum-enhanced stimulated emission detection for label-free microscopy. <i>Applied Physics Letters</i> , 2020, 117, .	1.5	31
10	Quantum correlations of light mediated by gravity. <i>Physical Review A</i> , 2020, 101, .	1.0	34
11	Photo-induced electron transfer: general discussion. <i>Faraday Discussions</i> , 2019, 216, 434-459.	1.6	0
12	Energy and charge-transfer in natural photosynthesis: general discussion. <i>Faraday Discussions</i> , 2019, 216, 133-161.	1.6	1
13	Evaluating the Holevo CramÃ©r-Rao Bound for Multiparameter Quantum Metrology. <i>Physical Review Letters</i> , 2019, 123, 200503.	2.9	66
14	Quantum enhanced estimation of diffusion. <i>Physical Review A</i> , 2019, 100, .	1.0	9
15	Fault-tolerant quantum metrology. <i>Physical Review A</i> , 2019, 100, .	1.0	9
16	Covert sensing using floodlight illumination. <i>Physical Review A</i> , 2019, 99, .	1.0	12
17	Quantum leakage detection using a model-independent dimension witness. <i>Physical Review A</i> , 2019, 99, .	1.0	10
18	Accrediting outputs of noisy intermediate-scale quantum computing devices. <i>New Journal of Physics</i> , 2019, 21, 113038.	1.2	19

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19	Quantum limits of localisation microscopy. <i>New Journal of Physics</i> , 2019, 21, 123032.	1.2	28
20	Emerging opportunities and future directions: general discussion. <i>Faraday Discussions</i> , 2019, 221, 564-581.	1.6	5
21	Spectroscopic signatures of quantum effects: general discussion. <i>Faraday Discussions</i> , 2019, 221, 322-349.	1.6	2
22	Quantum coherence in complex environments: general discussion. <i>Faraday Discussions</i> , 2019, 221, 168-201.	1.6	5
23	Covert sensing using floodlight illumination. , 2019, , .		2
24	The von Neumann Theil index: characterizing graph centralization using the von Neumann index. <i>Journal of Complex Networks</i> , 2018, 6, 859-876.	1.1	10
25	Subtleties of witnessing quantum coherence in nonisolated systems. <i>Physical Review A</i> , 2018, 98, .	1.0	17
26	Fundamental Quantum Limits of Multicarrier Optomechanical Sensors. <i>Physical Review Letters</i> , 2018, 121, 110505.	2.9	14
27	Reducing resources for verification of quantum computations. <i>Physical Review A</i> , 2018, 98, .	1.0	7
28	Structure-Dynamics Relation in Physically-Plausible Multi-Chromophore Systems. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2328-2333.	2.1	14
29	Optimal Measurements for Simultaneous Quantum Estimation of Multiple Phases. <i>Physical Review Letters</i> , 2017, 119, 130504.	2.9	119
30	Reaching for the quantum limits in the simultaneous estimation of phase and phase diffusion. <i>Quantum Science and Technology</i> , 2017, 2, 044004.	2.6	27
31	Symmetric Laplacians, quantum density matrices and their Von-Neumann entropy. <i>Linear Algebra and Its Applications</i> , 2017, 532, 534-549.	0.4	8
32	Bounding the quantum limits of precision for phase estimation with loss and thermal noise. <i>Physical Review A</i> , 2017, 96, .	1.0	14
33	Fundamental limits of quantum-secure covert optical sensing. , 2017, , .		11
34	Quantum Enhanced Classical Sensor Networks. , 2017, , .		0
35	Quantum limits of sensing and imaging: Fundamental science while developing technology. , 2017, , .		0
36	Trade-offs in the simultaneous quantum-limited estimation of phase and phase diffusion. , 2017, , .		0

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37	Quantum Discord in Quantum Communication Protocols. Quantum Science and Technology, 2017, , 241-255.	1.5	0
38	Gaussian systems for quantum-enhanced multiple phase estimation. Physical Review A, 2016, 94, .	1.0	70
39	Multi-parameter quantum metrology. Advances in Physics: X, 2016, 1, 621-639.	1.5	148
40	Quantum Enhanced Estimation of a Multidimensional Field. Physical Review Letters, 2016, 116, 030801.	2.9	159
41	Quantum enhanced estimation of optical detector efficiencies. Quantum Measurements and Quantum Metrology, 2016, 3, .	3.3	2
42	Tomography of photon-number resolving continuous-output detectors. New Journal of Physics, 2015, 17, 103044.	1.2	45
43	Precision Metrology Using Weak Measurements. Physical Review Letters, 2015, 114, 210801.	2.9	127
44	Quantum estimation of the Schwarzschild spacetime parameters of the Earth. Physical Review D, 2014, 90, .	1.6	53
45	Observing optical coherence across Fock layers with weak-field homodyne detectors. Nature Communications, 2014, 5, 5584.	5.8	34
46	Tradeoff in simultaneous quantum-limited phase and loss estimation in interferometry. Physical Review A, 2014, 89, .	1.0	101
47	Joint estimation of phase and phase diffusion for quantum metrology. Nature Communications, 2014, 5, 3532.	5.8	150
48	Continuous-Variable Quantum Computing in Optical Time-Frequency Modes Using Quantum Memories. Physical Review Letters, 2014, 113, 130502.	2.9	53
49	Quantum Discord in Quantum Information Theory “ From Strong Subadditivity to the Mother Protocol. Lecture Notes in Computer Science, 2014, , 188-197.	1.0	0
50	Identifying nonclassicality of multiphoton and multimode quantum states directly from experimental detector outcomes. , 2014, , .		0
51	Compact entanglement distillery using realistic quantum memories. Physical Review A, 2013, 88, .	1.0	5
52	Boson Sampling on a Photonic Chip. Science, 2013, 339, 798-801.	6.0	686
53	Quantifying the Nonclassicality of Operations. Physical Review Letters, 2013, 110, 070502.	2.9	30
54	QUANTUM DISCORD AS A RESOURCE IN QUANTUM COMMUNICATION. International Journal of Modern Physics B, 2013, 27, 1345041.	1.0	57

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55	Strategies for enhancing quantum entanglement by local photon subtraction. Physical Review A, 2013, 87, .	1.0	54
56	Vanishing quantum discord is not necessary for completely positive maps. Physical Review A, 2013, 87, .	1.0	54
57	Direct Observation of Sub-Binomial Light. Physical Review Letters, 2013, 110, 173602.	2.9	57
58	Quantum Detector Tomography. Experimental Methods in the Physical Sciences, 2013, 45, 283-313.	0.1	0
59	Requirements for two-source entanglement concentration. Quantum Measurements and Quantum Metrology, 2013, 1, 5-11.	3.3	2
60	Quantum Enhanced Multiple Phase Estimation. Physical Review Letters, 2013, 111, 070403.	2.9	266
61	Measuring nonlocal coherence with weak-field homodyne detection. , 2013, , .		0
62	Direct observation of sub-binomial light. , 2013, , .		0
63	Scalable Photonic Quantum Networks. , 2013, , .		0
64	Surpassing the conventional Heisenberg limit using classical resources. , 2013, , .		0
65	Scalable Photonic Quantum Networks. , 2013, , .		0
66	Recursive quantum detector tomography. New Journal of Physics, 2012, 14, 115005.	1.2	38
67	Multiphoton state engineering by heralded interference between single photons and coherent states. Physical Review A, 2012, 86, .	1.0	69
68	Turning classical states quantum with linear optics and photon counting. , 2012, , .		0
69	Discord in the ranks. Nature Photonics, 2012, 6, 724-725.	15.6	6
70	Compact Continuous-Variable Entanglement Distillation. Physical Review Letters, 2012, 108, 060502.	2.9	54
71	QUANTUM METROLOGY WITHOUT QUANTUM ENTANGLEMENT. Modern Physics Letters B, 2012, 26, 1230010.	1.0	16
72	Mapping coherence in measurement via full quantum tomography of a hybrid optical detector. Nature Photonics, 2012, 6, 364-368.	15.6	74

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73	Quantum metrology with imperfect states and detectors. <i>Physical Review A</i> , 2011, 83, .	1.0	106
74	QUANTUM DISCORD AND QUANTUM COMPUTING – AN APPRAISAL. <i>International Journal of Quantum Information</i> , 2011, 09, 1787-1805.	0.6	39
75	Interpreting quantum discord through quantum state merging. <i>Physical Review A</i> , 2011, 83, .	1.0	311
76	Real-World Quantum Sensors: Evaluating Resources for Precision Measurement. <i>Physical Review Letters</i> , 2011, 107, 113603.	2.9	93
77	Integrated photonic sensing. <i>New Journal of Physics</i> , 2011, 13, 055024.	1.2	23
78	Complete Characterization of Weak-Homodyne Photon-Number-Resolving Detectors: Applications to Non-Classical Photonic State Reconstructions. , 2010, , .		0
79	Noise-assisted energy transfer in quantum networks and light-harvesting complexes. <i>New Journal of Physics</i> , 2010, 12, 065002.	1.2	262
80	Nonlinear interferometry with Bose-Einstein condensates. <i>Physical Review A</i> , 2010, 82, .	1.0	26
81	Entanglement quantification from incomplete measurements: applications using photon-number-resolving weak homodyne detectors. <i>New Journal of Physics</i> , 2010, 12, 033042.	1.2	14
82	Entanglement and entangling power of the dynamics in light-harvesting complexes. <i>Physical Review A</i> , 2010, 81, .	1.0	181
83	Quantum versus Classical Correlations in Gaussian States. <i>Physical Review Letters</i> , 2010, 105, 030501.	2.9	424
84	Negativity of random pure states. <i>Physical Review A</i> , 2010, 81, .	1.0	11
85	Joint Photon Statistics of Photon-Subtracted Squeezed Light. , 2009, , .		1
86	Quantum-limited metrology and Bose-Einstein condensates. <i>Physical Review A</i> , 2009, 80, .	1.0	53
87	Quantum metrology from an information theory perspective. , 2009, , .		2
88	Quantum metrology with Bose-Einstein condensates. , 2009, , .		2
89	Quantum discord between relatively accelerated observers. <i>Physical Review A</i> , 2009, 80, .	1.0	149
90	Highly efficient energy excitation transfer in light-harvesting complexes: The fundamental role of noise-assisted transport. <i>Journal of Chemical Physics</i> , 2009, 131, .	1.2	527

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91	Signatures of nonclassicality in mixed-state quantum computation. <i>Physical Review A</i> , 2009, 79, .	1.0	148
92	Quantum Discord and the Power of One Qubit. <i>Physical Review Letters</i> , 2008, 100, 050502.	2.9	1,111
93	Quantum-limited metrology with product states. <i>Physical Review A</i> , 2008, 77, .	1.0	84
94	Quantum Metrology: Dynamics versus Entanglement. <i>Physical Review Letters</i> , 2008, 101, 040403.	2.9	176
95	Role of entanglement and correlations in mixed-state quantum computation. <i>Physical Review A</i> , 2007, 75, .	1.0	219
96	Constrained bounds on measures of entanglement. <i>Physical Review A</i> , 2007, 75, .	1.0	10
97	On decoherence in quantum clock synchronization. <i>Laser Physics</i> , 2006, 16, 1525-1532.	0.6	14
98	Entanglement and the power of one qubit. <i>Physical Review A</i> , 2005, 72, .	1.0	301
99	Information transfer through a one-atom micromaser. <i>Europhysics Letters</i> , 2004, 67, 934-940.	0.7	25
100	Bohmian picture of Rydberg atoms. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2004, 322, 277-281.	0.9	4
101	Klein paradox for bosons. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2003, 315, 23-27.	0.9	24
102	Spin-based all-optical quantum computation with quantum dots: Understanding and suppressing decoherence. <i>Physical Review A</i> , 2003, 68, .	1.0	224
103	Ferromagnetism in a dilute magnetic semiconductor: Generalized RKKY interaction and spin-wave excitations. <i>Physical Review B</i> , 2003, 68, .	1.1	25
104	Bohmian picture of Rydberg atoms. <i>Pramana - Journal of Physics</i> , 2002, 59, 425-428.	0.9	0
105	Getting a Handle on Timing. <i>Physics Magazine</i> , 0, 14, .	0.1	0
106	Nonadaptive fault-tolerant verification of quantum supremacy with noise. <i>Quantum - the Open Journal for Quantum Science</i> , 0, 3, 164.	0.0	6