

Benjamin Doyon

List of Publications by Year in descending order

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72
papers

3,939
citations

117625

34
h-index

123424

61
g-index

72
all docs

72
docs citations

72
times ranked

946
citing authors

#	ARTICLE	IF	CITATIONS
1	Emergent Hydrodynamics in Integrable Quantum Systems Out of Equilibrium. <i>Physical Review X</i> , 2016, 6, .	8.9	446
2	Entanglement entropy in extended quantum systems. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 500301.	2.1	231
3	Hydrodynamic Diffusion in Integrable Systems. <i>Physical Review Letters</i> , 2018, 121, 160603.	7.8	166
4	Soliton Gases and Generalized Hydrodynamics. <i>Physical Review Letters</i> , 2018, 120, 045301.	7.8	143
5	A note on generalized hydrodynamics: inhomogeneous fields and other concepts. <i>SciPost Physics</i> , 2017, 2, .	4.9	137
6	Energy flow in non-equilibrium conformal field theory. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2012, 45, 362001.	2.1	131
7	Diffusion in generalized hydrodynamics and quasiparticle scattering. <i>SciPost Physics</i> , 2019, 6, .	4.9	131
8	Conformal field theory out of equilibrium: a review. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2016, 2016, 064005.	2.3	121
9	Large-Scale Description of Interacting One-Dimensional Bose Gases: Generalized Hydrodynamics Supersedes Conventional Hydrodynamics. <i>Physical Review Letters</i> , 2017, 119, 195301.	7.8	121
10	Drude Weight for the Lieb-Liniger Bose Gas. <i>SciPost Physics</i> , 2017, 3, .	4.9	120
11	Lecture notes on Generalised Hydrodynamics. <i>SciPost Physics Lecture Notes</i> , 0, , .	0.0	103
12	Dynamics of hard rods with initial domain wall state. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2017, 2017, 073210.	2.3	95
13	Universal aspects of nonequilibrium currents in a quantum dot. <i>Physical Review B</i> , 2006, 73, .	3.2	90
14	Non-Equilibrium Steady States in Conformal Field Theory. <i>Annales Henri Poincare</i> , 2015, 16, 113-161.	1.7	90
15	Quantum Generalized Hydrodynamics. <i>Physical Review Letters</i> , 2020, 124, 140603.	7.8	89
16	A geometric viewpoint on generalized hydrodynamics. <i>Nuclear Physics B</i> , 2018, 926, 570-583.	2.5	83
17	Generalized hydrodynamics of classical integrable field theory: the sinh-Gordon model. <i>SciPost Physics</i> , 2018, 4, .	4.9	80
18	Energy flow in quantum critical systems far from equilibrium. <i>Nature Physics</i> , 2015, 11, 509-514.	16.7	78

#	ARTICLE	IF	CITATIONS
19	Exact large-scale correlations in integrable systems out of equilibrium. , 2018, 5, .		77
20	Nonequilibrium thermal transport in the quantum Ising chain. Physical Review B, 2013, 88, .	3.2	73
21	Hydrodynamics of the interacting Bose gas in the Quantum Newton Cradle setup. SciPost Physics, 2019, 6, .	4.9	70
22	Non-equilibrium steady states in the Kleinâ€“Gordon theory. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 095002.	2.1	68
23	New Method for Studying Steady States in Quantum Impurity Problems: The Interacting Resonant Level Model. Physical Review Letters, 2007, 99, 076806.	7.8	65
24	Entanglement negativity and entropy in non-equilibrium conformal field theory. Nuclear Physics B, 2015, 898, 78-112.	2.5	63
25	Thermalization and Pseudolocality in Extended Quantum Systems. Communications in Mathematical Physics, 2017, 351, 155-200.	2.2	52
26	Generalized hydrodynamics of the classical Toda system. Journal of Mathematical Physics, 2019, 60, 073302.	1.1	52
27	Universal scaling of the logarithmic negativity in massive quantum field theory. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 125401.	2.1	49
28	Bipartite Entanglement Entropy in Massive Two-Dimensional Quantum Field Theory. Physical Review Letters, 2009, 102, 031602.	7.8	44
29	Thermalization of a Trapped One-Dimensional Bose Gas via Diffusion. Physical Review Letters, 2020, 125, 240604.	7.8	43
30	Entanglement Content of Quasiparticle Excitations. Physical Review Letters, 2018, 121, 170602.	7.8	42
31	Bi-partite Entanglement Entropy in Massive QFT with a Boundary: the Ising Model. Journal of Statistical Physics, 2009, 134, 105-145.	1.2	41
32	Entanglement Entropy of Highly Degenerate States and Fractal Dimensions. Physical Review Letters, 2012, 108, 120401.	7.8	40
33	A hydrodynamic approach to non-equilibrium conformal field theories. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 033104.	2.3	37
34	Fluctuations in Ballistic Transport from Euler Hydrodynamics. Annales Henri Poincare, 2020, 21, 255-302.	1.7	37
35	Introduction to the Special Issue on Emergent Hydrodynamics in Integrable Many-Body Systems. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 014001.	2.3	37
36	Transport fluctuations in integrable models out of equilibrium. SciPost Physics, 2020, 8, .	4.9	34

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37	Correlation functions and transport coefficients in generalised hydrodynamics. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 014002.	2.3	34
38	Time-reversal symmetry and fluctuation relations in non-equilibrium quantum steady states. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 372001.	2.1	33
39	Thermodynamic Bethe ansatz for non-equilibrium steady states: exact energy current and fluctuations in integrable QFT. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P03011.	2.3	33
40	Finite-temperature form factors in the free Majorana theory. Journal of Statistical Mechanics: Theory and Experiment, 2005, 2005, P11006-P11006.	2.3	32
41	Nonequilibrium Dynamics and Weakly Broken Integrability. Physical Review Letters, 2021, 127, 130601.	7.8	32
42	Entanglement content of quantum particle excitations. Part I. Free field theory. Journal of High Energy Physics, 2018, 2018, 1.	4.7	28
43	Entanglement entropy of non-unitary integrable quantum field theory. Nuclear Physics B, 2015, 896, 835-880.	2.5	27
44	Permutation operators, entanglement entropy, and the XXZ spin chain in the limit $\Delta \rightarrow 0^+$. Journal of Statistical Mechanics: Theory and Experiment, 2011, 2011, P02001.	2.3	26
45	Lower bounds for ballistic current and noise in non-equilibrium quantum steady states. Nuclear Physics B, 2015, 892, 190-210.	2.5	23
46	Entanglement content of quantum particle excitations. Part II. Disconnected regions and logarithmic negativity. Journal of High Energy Physics, 2019, 2019, 1.	4.7	23
47	Shock waves, rarefaction waves, and nonequilibrium steady states in quantum critical systems. Physical Review D, 2016, 94, .	4.7	21
48	Full counting statistics in the resonant-level model. Journal of Mathematical Physics, 2012, 53, .	1.1	20
49	Euler-scale dynamical correlations in integrable systems with fluid motion. SciPost Physics Core, 2020, 3, .	2.8	20
50	Entanglement content of quantum particle excitations. III. Graph partition functions. Journal of Mathematical Physics, 2019, 60, .	1.1	19
51	Finite-Temperature Form Factors: a Review. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 2007, , .	0.5	17
52	T deformations and the width of fundamental particles. Journal of High Energy Physics, 2022, 2022, .	4.7	16
53	Energy flow and fluctuations in non-equilibrium conformal field theory on star graphs. Journal of Statistical Mechanics: Theory and Experiment, 2014, 2014, P03002.	2.3	15
54	Diffusion and Signatures of Localization in Stochastic Conformal Field Theory. Physical Review Letters, 2017, 119, 110201.	7.8	15

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55	Euler-scale dynamical fluctuations in non-equilibrium interacting integrable systems. <i>SciPost Physics</i> , 2021, 10, .	4.9	15
56	Hydrodynamic Projections and the Emergence of Linearised Euler Equations in One-Dimensional Isolated Systems. <i>Communications in Mathematical Physics</i> , 2022, 391, 293-356.	2.2	15
57	Conformal Loop Ensembles and the Stress-Energy Tensor. <i>Letters in Mathematical Physics</i> , 2013, 103, 233-284.	1.1	13
58	Universal corrections to the entanglement entropy in gapped quantum spin chains: A numerical study. <i>Physical Review B</i> , 2013, 88, .	3.2	10
59	Form factors in equilibrium and non-equilibrium mixed states of the Ising model. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P09021.	2.3	10
60	Expectation values of twist fields and universal entanglement saturation of the free massive boson. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2017, 50, 274001.	2.1	9
61	Conical twist fields and null polygonal Wilson loops. <i>Nuclear Physics B</i> , 2018, 931, 146-178.	2.5	9
62	On the hydrodynamics of unstable excitations. <i>Journal of High Energy Physics</i> , 2020, 2020, 1.	4.7	7
63	Free energy fluxes and the Kubo-Martin-Schwinger relation. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2021, 2021, 043206.	2.3	6
64	The hydrodynamic theory of dynamical correlation functions in the XX chain. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2022, 2022, 053102.	2.3	6
65	Calculus on manifolds of conformal maps and CFT. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2012, 45, 315202.	2.1	5
66	Monte Carlo method for critical systems in infinite volume: The planar Ising model. <i>Physical Review E</i> , 2016, 94, 043322.	2.1	5
67	Random loops and conformal field theory. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2014, 2014, P02015.	2.3	4
68	Diffusion and Superdiffusion from Hydrodynamic Projections. <i>Journal of Statistical Physics</i> , 2022, 186, 1.	1.2	4
69	Tails of Instability and Decay: a Hydrodynamic Perspective. <i>SciPost Physics</i> , 2022, 12, .	4.9	3
70	Hypotrochoids in conformal restriction systems and Virasoro descendants. <i>Journal of Statistical Mechanics: Theory and Experiment</i> , 2013, 2013, P09008.	2.3	2
71	Twisted Modules for Vertex Operator Algebras. , 0, , 144-187.		2
72	Generalised hydrodynamics of particle creation and decay. <i>Journal of High Energy Physics</i> , 2022, 2022, 1.	4.7	1