

Sz Borsanyi

List of Publications by Year in descending order

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Version: 2024-02-01

70
papers

7,031
citations

136950

32
h-index

128289

60
g-index

70
all docs

70
docs citations

70
times ranked

3405
citing authors

#	ARTICLE	IF	CITATIONS
1	Full result for the QCD equation of state with $2+1$ flavors. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 730, 99-104.	4.1	753
2	The QCD equation of state with dynamical quarks. Journal of High Energy Physics, 2010, 2010, 1.	4.7	721
3	Is there still any T_c mystery in lattice QCD? Results with physical masses in the continuum limit III. Journal of High Energy Physics, 2010, 2010, 1.	4.7	659
4	The QCD transition temperature: results with physical masses in the continuum limit II. Journal of High Energy Physics, 2009, 2009, 088-088.	4.7	503
5	Calculation of the axion mass based on high-temperature lattice quantum chromodynamics. Nature, 2016, 539, 69-71.	27.8	467
6	Leading hadronic contribution to the muon magnetic moment from lattice QCD. Nature, 2021, 593, 51-55.	27.8	458
7	Fluctuations of conserved charges at finite temperature from lattice QCD. Journal of High Energy Physics, 2012, 2012, 1.	4.7	295
8	Ab initio calculation of the neutron-proton mass difference. Science, 2015, 347, 1452-1455.	12.6	263
9	High-precision scale setting in lattice QCD. Journal of High Energy Physics, 2012, 2012, 1.	4.7	213
10	QCD equation of state at nonzero chemical potential: continuum results with physical quark masses at order $\hat{1}/4$ 2. Journal of High Energy Physics, 2012, 2012, 1.	4.7	211
11	Precision SU(3) lattice thermodynamics for a large temperature range. Journal of High Energy Physics, 2012, 2012, 1.	4.7	178
12	The QCD phase diagram from analytic continuation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 751, 559-564.	4.1	163
13	Fluctuations and correlations in high temperature QCD. Physical Review D, 2015, 92, .	4.7	150
14	Freeze-Out Parameters: Lattice Meets Experiment. Physical Review Letters, 2013, 111, 062005.	7.8	149
15	Is There a Flavor Hierarchy in the Deconfinement Transition of QCD?. Physical Review Letters, 2013, 111, 202302.	7.8	143
16	Nonperturbative renormalization for 2PI effective action techniques. Annals of Physics, 2005, 320, 344-398.	2.8	139
17	QCD Crossover at Finite Chemical Potential from Lattice Simulations. Physical Review Letters, 2020, 125, 052001.	7.8	139
18	Freeze-Out Parameters from Electric Charge and Baryon Number Fluctuations: Is There Consistency?. Physical Review Letters, 2014, 113, 052301.	7.8	132

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19	Hadronic Vacuum Polarization Contribution to the Anomalous Magnetic Moments of Leptons from First Principles. Physical Review Letters, 2018, 121, 022002.	7.8	116
20	Higher order fluctuations and correlations of conserved charges from lattice QCD. Journal of High Energy Physics, 2018, 2018, 1.	4.7	114
21	Thermalization of fermionic quantum fields. Nuclear Physics B, 2003, 660, 51-80.	2.5	112
22	Lattice simulations of real-time quantum fields. Physical Review D, 2007, 75, .	4.7	86
23	Constraining the hadronic spectrum through QCD thermodynamics on the lattice. Physical Review D, 2017, 96, .	4.7	77
24	The QCD equation of state at finite density from analytical continuation. Nuclear Physics A, 2017, 967, 720-723.	1.5	72
25	Renormalized thermodynamics from the two-particle irreducible effective action. Physical Review D, 2005, 71, .	4.7	66
26	Lattice QCD Equation of State at Finite Chemical Potential from an Alternative Expansion Scheme. Physical Review Letters, 2021, 126, 232001.	7.8	60
27	QCD thermodynamics with continuum extrapolated Wilson fermions I. Journal of High Energy Physics, 2012, 2012, 1.	4.7	46
28	The QCD equation of state at finite density from analytical continuation. EPJ Web of Conferences, 2017, 137, 07008.	0.3	44
29	SU(2) chiral perturbation theory low-energy constants from $2+1$ flavour staggered lattice simulations. Physical Review D, 2013, 88, .	4.7	42
30	Off-diagonal correlators of conserved charges from lattice QCD and how to relate them to experiment. Physical Review D, 2020, 101, .	4.7	42
31	Charmonium spectral functions from $2+1$ flavour lattice QCD. Journal of High Energy Physics, 2014, 2014, 1.	4.7	39
32	Thermodynamics of the QCD transition from lattice. Nuclear Physics A, 2013, 904-905, 270c-277c.	1.5	34
33	Recent results on QCD thermodynamics: lattice QCD versus Hadron Resonance Gas model. Nuclear Physics A, 2011, 855, 253-256.	1.5	32
34	Static $Q\bar{Q}$ pair free energy and screening masses from correlators of Polyakov loops: continuum extrapolated lattice results at the QCD physical point. Journal of High Energy Physics, 2015, 2015, 1.	4.7	30
35	Isotropization far from equilibrium. Nuclear Physics B, 2005, 727, 244-263.	2.5	24
36	QCD thermodynamics with continuum extrapolated Wilson fermions. II. Physical Review D, 2015, 92, .	4.7	24

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37	QCD thermodynamics with dynamical overlap fermions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 713, 342-346.	4.1	22
38	Semiclassical decay of topological defects. Physical Review D, 2008, 77, .	4.7	20
39	Slope and curvature of the hadronic vacuum polarization at vanishing virtuality from lattice QCD. Physical Review D, 2017, 96, .	4.7	20
40	Renormalized nonequilibrium quantum field theory: Scalar fields. Physical Review D, 2009, 80, .	4.7	19
41	High statistics lattice study of stress tensor correlators in pure $SU(3)$ gauge theory. Physical Review D, 2011, 83, 054011.	4.7	19
42	Correlations and fluctuations from lattice QCD. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 124060.	3.6	15
43	Topological susceptibility of pure gauge theory using density of states. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 815, 136148.	4.1	14
44	Frontiers of finite temperature lattice QCD. EPJ Web of Conferences, 2017, 137, 01006.	0.3	13
45	Lattice simulations of the QCD chiral transition at real baryon density. Physical Review D, 2022, 105, .	4.7	10
46	Resummed lattice QCD equation of state at finite baryon density: Strangeness neutrality and beyond. Physical Review D, 2022, 105, .	4.7	10
47	Lattice thermodynamics at finite chemical potential from analytical Continuation. Journal of Physics: Conference Series, 2018, 1070, 012002.	0.4	9
48	Transition temperature and the equation of state from lattice QCD, Wuppertal-Budapest results. Journal of Physics: Conference Series, 2011, 316, 012020.	0.4	8
49	Lattice QCD thermodynamics in the presence of the charm quark. Nuclear Physics A, 2013, 904-905, 869c-872c.	1.5	8
50	Towards the equation of state at finite density from the lattice. Nuclear Physics A, 2019, 982, 223-226.	1.5	8
51	Precision study of the continuum SU(3) Yang-Mills theory: How to use parallel tempering to improve on supercritical slowing down for first order phase transitions. Physical Review D, 2022, 105, .	4.7	8
52	Transition temperature and the equation of state from lattice QCD, Wuppertal-Budapest results. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 124101.	3.6	6
53	Lattice QCD on nonorientable manifolds. Physical Review D, 2017, 95, .	4.7	6
54	Corrections to the hadron resonance gas from lattice QCD and their effect on fluctuation-ratios at finite density. Physical Review D, 2021, 104, .	4.7	6

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55	QCD thermodynamics on the lattice and in the Hadron Resonance Gas model. Journal of Physics: Conference Series, 2011, 336, 012019.	0.4	4
56	Freeze-out conditions from fluctuations of conserved charges. Nuclear Physics A, 2014, 931, 802-807.	1.5	3
57	Fluctuations of conserved charges on the lattice and in heavy ion collisions. Journal of Physics: Conference Series, 2014, 535, 012030.	0.4	3
58	Prethermalization and the First 1 fm/c of a Heavy Ion Collision. Acta Physica Hungarica A Heavy Ion Physics, 2005, 22, 317-323.	0.4	1
59	QCD equation of state from the lattice. , 2011, , .		1
60	Fluctuations of conserved charges at finite temperature from lattice QCD. Journal of Physics: Conference Series, 2013, 432, 012012.	0.4	1
61	Lattice QCD thermodynamics up to the perturbative regime. Nuclear Physics A, 2017, 967, 732-735.	1.5	1
62	Phenomenology of Strange Resonances. , 2018, , 61-76.		0
63	Cross-correlations of conserved charges from the lattice. Nuclear Physics A, 2019, 982, 303-306.	1.5	0
64	The QCD Phase Diagram from the Lattice. , 2019, , 75-88.		0
65	Searching the QCD critical endpoint with lattice simulations. EPJ Web of Conferences, 2020, 235, 02004.	0.3	0
66	The QCD transition line from lattice simulations. Journal of Physics: Conference Series, 2020, 1602, 012011.	0.4	0
67	THERMAL FEATURES FAR FROM EQUILIBRIUM: PRETHERMALIZATION. , 2005, , .		0
68	Cross-Correlators of Conserved Charges in QCD. Springer Proceedings in Physics, 2020, , 191-196.	0.2	0
69	Finite chemical potential equation of state for QCD from an alternative expansion scheme. EPJ Web of Conferences, 2022, 259, 10015.	0.3	0
70	Lattice simulations of the QCD chiral transition at real μ_B . SciPost Physics Proceedings, 2022, , .	0.4	0