

Francesco Becattini

List of Publications by Year in descending order

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104
papers

5,941
citations

66343

42
h-index

69250

77
g-index

110
all docs

110
docs citations

110
times ranked

1724
citing authors

#	ARTICLE	IF	CITATIONS
1	Relativistic quantum fluid with boost invariance. <i>Physical Review D</i> , 2022, 105, .	4.7	3
2	Does the spin tensor play any role in non-gravitational physics?. <i>Nuclear Physics A</i> , 2021, 1005, 121833.	1.5	4
3	Strongly Interacting Matter Under Rotation: An Introduction. <i>Lecture Notes in Physics</i> , 2021, , 1-14.	0.7	5
4	Polarization in Relativistic Fluids: A Quantum Field Theoretical Derivation. <i>Lecture Notes in Physics</i> , 2021, , 15-52.	0.7	19
5	Exact equilibrium distributions in statistical quantum field theory with rotation and acceleration: scalar field. <i>Journal of High Energy Physics</i> , 2021, 2021, 1.	4.7	16
6	Spin-thermal shear coupling in a relativistic fluid. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2021, 820, 136519.	4.1	80
7	Exact equilibrium distributions in statistical quantum field theory with rotation and acceleration: Dirac field. <i>Journal of High Energy Physics</i> , 2021, 2021, 1.	4.7	15
8	Polarization as a signature of local parity violation in hot QCD matter. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2021, 822, 136706.	4.1	11
9	Local Polarization and Isothermal Local Equilibrium in Relativistic Heavy Ion Collisions. <i>Physical Review Letters</i> , 2021, 127, 272302.	7.8	76
10	Polarization and Vorticity in the Quark-Gluon Plasma. <i>Annual Review of Nuclear and Particle Science</i> , 2020, 70, 395-423.	10.2	117
11	Polarization transfer in hyperon decays and its effect in relativistic nuclear collisions. <i>European Physical Journal C</i> , 2019, 79, 1.	3.9	62
12	The QCD Phase Diagram from Statistical Model Analysis. <i>Nuclear Physics A</i> , 2019, 982, 827-830.	1.5	6
13	Lambda polarization in heavy ion collisions: from RHIC BES to LHC energies. <i>Nuclear Physics A</i> , 2019, 982, 519-522.	1.5	20
14	Polarization and Chirality: the quantum features of the Quark Gluon Plasma. <i>Nuclear Physics A</i> , 2019, 982, 57-63.	1.5	2
15	Spin tensor and its role in non-equilibrium thermodynamics. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 789, 419-425.	4.1	93
16	Extensivity, entropy current, area law, and Unruh effect. <i>Physical Review D</i> , 2019, 99, .	4.7	12
17	Reworking Zubarev's Approach to Nonequilibrium Quantum Statistical Mechanics. <i>Particles</i> , 2019, 2, 197-207.	1.7	39
18	Thermodynamic equilibrium with acceleration and the Unruh effect. <i>Physical Review D</i> , 2018, 97, .	4.7	35

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19	Collective Longitudinal Polarization in Relativistic Heavy-Ion Collisions at Very High Energy. <i>Physical Review Letters</i> , 2018, 120, 012302.	7.8	145
20	General thermodynamic equilibrium with axial chemical potential for the free Dirac field. <i>Journal of High Energy Physics</i> , 2018, 2018, 1.	4.7	27
21	Polarization in relativistic heavy ion collisions: a theoretical perspective. <i>EPJ Web of Conferences</i> , 2018, 171, 07001.	0.3	4
22	Study of Lambda polarization at RHIC BES and LHC energies. <i>EPJ Web of Conferences</i> , 2018, 171, 17001.	0.3	3
23	Perfect-fluid Hydrodynamics with Constant Acceleration Along the Stream Lines and Spin Polarization. <i>Acta Physica Polonica B</i> , 2018, 49, 1409.	0.8	51
24	Hadronization conditions in relativistic nuclear collisions and the QCD pseudo-critical line. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2017, 764, 241-246.	4.1	54
25	Alice in strangeland. <i>Nature Physics</i> , 2017, 13, 531-532.	16.7	0
26	Vorticity in the QGP liquid and \hat{b} polarization at the RHIC Beam Energy Scan. <i>Nuclear Physics A</i> , 2017, 967, 764-767.	1.5	12
27	Global hyperon polarization at local thermodynamic equilibrium with vorticity, magnetic field, and feed-down. <i>Physical Review C</i> , 2017, 95, .	2.9	193
28	Study of Λ polarization in relativistic nuclear collisions at $\sqrt{s_{\text{NN}}} = 7.7$ s NN = 7.7 \hat{a} €“200 \hat{A} GeV. <i>European Physical Journal C</i> , 2017, 77, 1.	3.9	174
29	General equilibrium second-order hydrodynamic coefficients for free quantum fields. <i>Journal of High Energy Physics</i> , 2017, 2017, 1.	4.7	54
30	Vorticity in the QGP liquid and hyperon polarization at the RHIC BES energies. <i>Journal of Physics: Conference Series</i> , 2017, 779, 012068.	0.4	2
31	Thermodynamic Equilibrium and Relativity: Killing Vectors and Lie Derivatives. <i>Lecture Notes in Computer Science</i> , 2017, , 442-447.	1.3	0
32	Investigating the QCD phase diagram with hadron multiplicities at NICA. <i>European Physical Journal A</i> , 2016, 52, 1.	2.5	1
33	Numerical magneto-hydrodynamics for relativistic nuclear collisions. <i>European Physical Journal C</i> , 2016, 76, 1.	3.9	128
34	Heavy baryonic resonances, multistrange hadrons, and equilibration at energies available at the GSI Schwerionensynchrotron, SIS18. <i>Physical Review C</i> , 2016, 93, .	2.9	15
35	Quantum corrections to the stress-energy tensor in thermodynamic equilibrium with acceleration. <i>Physical Review D</i> , 2015, 92, .	4.7	49
36	A study of vorticity formation in high energy nuclear collisions. <i>European Physical Journal C</i> , 2015, 75, 1.	3.9	169

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37	Local thermodynamical equilibrium and the η frame for a quantum relativistic fluid. European Physical Journal C, 2015, 75, 1.	3.9	95
38	Freeze-out dynamics in heavy-ion collisions: Recent advances. Pramana - Journal of Physics, 2015, 84, 747-755.	1.8	0
39	A study of vorticity formation in high energy nuclear collisions. , 2015, 75, 1.		2
40	Thermodynamics and the quantum stress-energy and spin tensor. International Journal of Geometric Methods in Modern Physics, 2014, 11, 1450020.	2.0	1
41	Heavy ion collision evolution modeling with ECHO-QGP. Nuclear Physics A, 2014, 931, 970-974.	1.5	3
42	Centrality dependence of hadronization and chemical freeze-out conditions in heavy ion collisions at \sqrt{s} . Physical Review C, 2014, 90, .	2.9	65
43	Turbulence, Vorticity and Lambda Polarization. Journal of Physics: Conference Series, 2014, 509, 012054.	0.4	7
44	Relativistic distribution function for particles with spin at local thermodynamical equilibrium. Journal of Physics: Conference Series, 2014, 509, 012055.	0.4	1
45	Particle Production in Nuclear Collisions: Hadronization and QCD. Journal of Physics: Conference Series, 2014, 556, 012021.	0.4	0
46	Hadron Formation in Relativistic Nuclear Collisions and the QCD Phase Diagram. Physical Review Letters, 2013, 111, 082302.	7.8	137
47	Nonequilibrium thermodynamical inequivalence of quantum stress-energy and spin tensors. Physical Review D, 2013, 87, .	4.7	31
48	Relativistic viscous hydrodynamics for heavy-ion collisions with ECHO-QGP. European Physical Journal C, 2013, 73, 1.	3.9	90
49	λ polarization in peripheral heavy ion collisions. Physical Review C, 2013, 88, .	2.9	169
50	Relativistic distribution function for particles with spin at local thermodynamical equilibrium. Annals of Physics, 2013, 338, 32-49.	2.8	261
51	Hadronization and hadronic freeze-out in relativistic nuclear collisions. Physical Review C, 2012, 85, .	2.9	50
52	A Monte-Carlo generator for statistical hadronization in high energy e^+e^- collisions. European Physical Journal C, 2012, 72, 1.	3.9	8
53	Covariant Statistical Mechanics and the Stress-Energy Tensor. Physical Review Letters, 2012, 108, 244502.	7.8	77
54	Strangeness and onset of deconfinement. Physics of Atomic Nuclei, 2012, 75, 646-649.	0.4	1

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55	Predictions of hadron abundances in pp collisions at the LHC. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 025002.	3.6	26
56	Thermodynamical inequivalence of quantum stress-energy and spin tensors. Physical Review D, 2011, 84, .	4.7	36
57	Hydrodynamics of fluids with spin. Physics of Particles and Nuclei Letters, 2011, 8, 801-804.	0.4	7
58	Statistical hadronization with exclusive channels in $e+e^-$ annihilation. European Physical Journal C, 2011, 71, 1.	3.9	24
59	Validity of the hadronic freeze-out curve. Journal of Physics G: Nuclear and Particle Physics, 2011, 38, 124075.	3.6	3
60	A comparative analysis of statistical hadron production. European Physical Journal C, 2010, 66, 377-386.	3.9	92
61	The ideal relativistic rotating gas as a perfect fluid with spin. Annals of Physics, 2010, 325, 1566-1594.	2.8	74
62	The QCD Confinement Transition: Hadron Formation. Landolt-Börnstein - Group I Elementary Particles, Nuclei and Atoms, 2010, , 208-239.	0.2	9
63	Thermal production of strange particles. Journal of Physics G: Nuclear and Particle Physics, 2009, 36, 064019.	3.6	4
64	Centrality dependence of strangeness production in heavy-ion collisions as a geometrical effect of core-corona superposition. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 673, 19-23.	4.1	55
65	The ideal relativistic spinning gas: Polarization and spectra. Annals of Physics, 2008, 323, 2452-2473.	2.8	84
66	The thermal production of strange and non-strange hadrons in $e+e^-$ collisions. European Physical Journal C, 2008, 56, 493-510.	3.9	85
67	Angular momentum conservation in heavy ion collisions at very high energy. Physical Review C, 2008, 77, .	2.9	281
68	Strangeness production from SPS to LHC. Journal of Physics G: Nuclear and Particle Physics, 2008, 35, 104013.	3.6	72
69	Chemical freeze-out in ultrarelativistic heavy ion collisions at $\sqrt{s} = 2.9$ and 13.6 GeV. Physical Review C, 2008, 78, .	3.6	79
70	Chemical equilibrium in heavy ion collisions: rapidity dependence. Journal of Physics G: Nuclear and Particle Physics, 2007, 34, S959-S963.	3.6	32
71	Study of inclusive strange-baryon production and search for pentaquarks in two-photon collisions at LEP. European Physical Journal C, 2007, 49, 395-410.	3.9	6
72	The microcanonical ensemble of the ideal relativistic quantum gas. European Physical Journal C, 2007, 51, 899-912.	3.9	11

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73	The microcanonical ensemble of the ideal relativistic quantum gas with angular momentum conservation. <i>European Physical Journal C</i> , 2007, 52, 597-615.	3.9	36
74	Threshold effects in relativistic gases. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2006, 32, 1003-1020.	3.6	9
75	Energy and system size dependence of chemical freeze-out in relativistic nuclear collisions. <i>Physical Review C</i> , 2006, 73, .	2.9	338
76	What is the meaning of the statistical hadronization model?. <i>Journal of Physics: Conference Series</i> , 2005, 5, 175-188.	0.4	27
77	Fluctuations in the statistical ensembles. <i>Journal of Physics: Conference Series</i> , 2005, 27, 164-173.	0.4	1
78	Study on Chemical Equilibrium in Nucleus–Nucleus Collisions at Relativistic Energies. <i>Acta Physica Hungarica A Heavy Ion Physics</i> , 2005, 24, 23-29.	0.4	2
79	Statistical model and microcanonical ensemble. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2005, 31, S1091-S1094.	3.6	4
80	Multiplicity fluctuations in a hadron gas with exact conservation laws. <i>Physical Review C</i> , 2005, 72, .	2.9	29
81	Particle number fluctuations in statistical model with exact charge conservation laws. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2005, 31, S1095-S1099.	3.6	24
82	Chemical equilibrium study in nucleus-nucleus collisions at relativistic energies. <i>Physical Review C</i> , 2004, 69, .	2.9	234
83	Statistical hadronization and hadronic microcanonical ensemble I. <i>European Physical Journal C</i> , 2004, 35, 243-258.	3.9	40
84	Statistical hadronization and hadronic micro-canonical ensemble II. <i>European Physical Journal C</i> , 2004, 38, 225-246.	3.9	48
85	Strange quark production in an effective statistical model. <i>Nuclear Physics A</i> , 2003, 715, 557c-560c.	1.5	2
86	Strange quark production in a statistical effective model. <i>Physical Review C</i> , 2003, 67, .	2.9	7
87	Chemical factors in canonical statistical models for relativistic heavy ion collisions. <i>Physical Review C</i> , 2002, 65, .	2.9	25
88	Overpopulation of Ω^- in pp Collisions: A Way to Distinguish Statistical Hadronization from String Dynamics. <i>Physical Review Letters</i> , 2002, 88, 202501.	7.8	29
89	The canonical effect in statistical models for relativistic heavy ion collisions. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2002, 28, 2041-2045.	3.6	3
90	Hadrosynthesis at SPS and RHIC and the statistical model. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2002, 28, 1553-1560.	3.6	27

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91	Statistical hadronization model and transverse momentum spectra of hadrons in high energy collisions. European Physical Journal C, 2002, 23, 551-583.	3.9	116
92	Statistical hadronisation phenomenology. Nuclear Physics A, 2002, 702, 336-340.	1.5	45
93	Features of particle multiplicities and strangeness production in central heavy ion collisions between 1.7A and 158A GeV/c. Physical Review C, 2001, 64, .	2.9	318
94	Extreme energy $\tilde{\nu}$, propagation through the Earth. Astroparticle Physics, 2001, 15, 323-328.	4.3	34
95	Transverse momentum spectra of identified particles in high energy collisions with statistical hadronisation model. Nuclear Physics, Section B, Proceedings Supplements, 2001, 92, 137-148.	0.4	13
96	Strangeness counting in high energy collisions. Journal of Physics G: Nuclear and Particle Physics, 1999, 25, 287-294.	3.6	9
97	On chemical equilibrium in nuclear collisions. European Physical Journal C, 1998, 5, 143-153.	3.9	130
98	Canonical strangeness enhancement. Nuclear Physics A, 1998, 638, 399c-402c.	1.5	24
99	Thermal fits of hadron abundances from pp to AA collisions. Nuclear Physics A, 1998, 638, 403c-406c.	1.5	11
100	On chemical equilibrium in nuclear collisions. European Physical Journal C, 1998, 5, 143.	3.9	45
101	Thermal hadron production in high-energy collisions. Journal of Physics G: Nuclear and Particle Physics, 1997, 23, 1933-1940.	3.6	47
102	Thermal hadron production in pp and $\mathit{p}\mathit{p}$ collisions. Zeitschrift für Physik C-Particles and Fields, 1997, 76, 269-286.	1.5	250
103	A thermodynamical approach to hadron production in e^+e^- collisions. Zeitschrift für Physik C-Particles and Fields, 1996, 69, 485-492.	1.5	233
104	Multiplicity distributions in a thermodynamical model of hadron production in e^+e^- collisions. Zeitschrift für Physik C-Particles and Fields, 1996, 72, 491-496.	1.5	24