

Jan M Pawlowski

List of Publications by Year in descending order

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128
papers

7,509
citations

41344

49
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56724

83
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128
all docs

128
docs citations

128
times ranked

1349
citing authors

#	ARTICLE	IF	CITATIONS
1	Reconstructing the graviton. SciPost Physics, 2022, 12, .	4.9	41
2	Spiking neuromorphic chip learns entangled quantum states. SciPost Physics, 2022, 12, .	4.9	5
3	Reconstructing QCD spectral functions with Gaussian processes. Physical Review D, 2022, 105, .	4.7	29
4	Monte Carlo sampling of complex actions in extended state spaces. Physical Review E, 2022, 105, 045315.	2.1	1
5	Studying mass generation for gluons. SciPost Physics Proceedings, 2022, , .	0.4	0
6	Phase structure of ($\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \text{Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 Td (dis}$)	4.7	3
7	Quantum Gravity: A Fluctuating Point of View. Frontiers in Physics, 2021, 8, .	2.1	38
8	Exploring the Tan contact term in Yang-Mills theory. Physical Review D, 2021, 103, .	4.7	0
9	Dimensional crossover in ultracold Fermi gases from functional renormalization. Physical Review A, 2021, 103, .	2.5	4
10	Simulating Yang-Mills theories with a complex coupling. Physical Review D, 2021, 103, .	4.7	9
11	Fully coupled functional equations for the quark sector of QCD. Physical Review D, 2021, 103, .	4.7	34
12	Gravitational instantons and anomalous chiral symmetry breaking. Physical Review D, 2021, 103, .	4.7	7
13	Universal gravitational-wave signatures from heavy new physics in the electroweak sector. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 006.	5.4	13
14	The nonperturbative functional renormalization group and its applications. Physics Reports, 2021, 910, 1-114.	25.6	265
15	Shocks and quark-meson scatterings at large density. Physical Review D, 2021, 104, .	4.7	14
16	Flowing with the temporal renormalization group. Physical Review D, 2021, 104, .	4.7	9
17	Functional renormalization group and 2PI effective action formalism. Annals of Physics, 2021, 431, 168549.	2.8	10
18	Chiral phase structure and critical end point in QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 820, 136584.	4.1	33

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19	Spectral representation of the shear viscosity for local scalar QFTs at finite temperature. Physical Review D, 2021, 104, .	4.7	5
20	Yang-Mills propagators in linear covariant gauges from Nielsen identities. Physical Review D, 2021, 104, .	4.7	12
21	Ghost spectral function from the spectral Dyson-Schwinger equation. Physical Review D, 2021, 104, .	4.7	21
22	Hyper-order baryon number fluctuations at finite temperature and density. Physical Review D, 2021, 104, .	4.7	32
23	Mass generation in Landau-gauge Yang-Mills theory. Physical Review D, 2021, 104, .	4.7	21
24	DoFun 3.0: Functional equations in mathematica. Computer Physics Communications, 2020, 248, 107058.	7.5	20
25	Thermalization and dynamical spectral properties in the quark-meson model. Physical Review D, 2020, 102, .	4.7	5
26	Critical Reflections on Asymptotically Safe Gravity. Frontiers in Physics, 2020, 8, .	2.1	124
27	Spectral reconstruction with deep neural networks. Physical Review D, 2020, 102, .	4.7	26
28	Dynamics of critical fluctuations: Theory & phenomenology & heavy-ion collisions. Nuclear Physics A, 2020, 1003, 122016.	1.5	54
29	Spectral functions in the $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"} \langle \text{mml:msup} \langle \text{mml:mi} \rangle \cdot \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 4 \langle \text{mml:mn} \rangle \langle \text{mml:msup} \rangle \langle \text{mml:math} \rangle$ -theory from the spectral Dyson-Schwinger equations. Physical Review D, 2020, 102, .	4.7	23
30	Discrete Langevin machine: Bridging the gap between thermodynamic and neuromorphic systems. Physical Review E, 2020, 101, 063304.	2.1	3
31	Gauge-invariant condensation in the nonequilibrium quark-gluon plasma. Physical Review D, 2020, 102, .	4.7	8
32	QCD phase structure from functional methods. Physical Review D, 2020, 102, .	4.7	67
33	Chiral susceptibility in ($\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	4.7	31
34	QCD phase structure at finite temperature and density. Physical Review D, 2020, 101, .	4.7	141
35	Partial bosonization for the two-dimensional Hubbard model. Physical Review B, 2020, 101, .	3.2	9
36	Strangeness neutrality and QCD thermodynamics. , 2020, 2, .		21

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37	Higgs scalar potential in asymptotically safe quantum gravity. <i>Physical Review D</i> , 2019, 99, .	4.7	59
38	Time-evolution of fluctuations as signal of the phase transition dynamics in a QCD-assisted transport approach. <i>Nuclear Physics A</i> , 2019, 982, 871-874.	1.5	14
39	How perturbative is quantum gravity?. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2019, 792, 310-314.	4.1	55
40	Bound state properties from the functional renormalization group. <i>Physical Review D</i> , 2019, 99, .	4.7	24
41	Strangeness neutrality and baryon-strangeness correlations. <i>Physical Review D</i> , 2019, 100, .	4.7	15
42	Renormalization group consistency and low-energy effective theories. <i>SciPost Physics</i> , 2019, 6, .	4.9	29
43	Finite-temperature gluon spectral functions from $N_f=2+1+1$ lattice. <i>European Physical Journal C</i> , 2018, 78, 127.	3.9	16
44	Curvature dependence of quantum gravity. <i>Physical Review D</i> , 2018, 97, .	4.7	62
45	Nonperturbative quark, gluon, and meson correlators of unquenched QCD. <i>Physical Review D</i> , 2018, 97, .	4.7	132
46	Nonperturbative finite-temperature Yang-Mills theory. <i>Physical Review D</i> , 2018, 97, .	4.7	37
47	Quantum-improved Schwarzschild-(A)dS and Kerr-(A)dS spacetimes. <i>Physical Review D</i> , 2018, 98, .	4.7	41
48	Finite temperature spectral functions in the $O(N)$ model. <i>Physical Review D</i> , 2018, 97, .	4.7	31
49	Bayesian analysis of quark spectral properties from the Dyson-Schwinger equation. <i>Physical Review D</i> , 2018, 98, .	4.7	25
50	Asymptotic safety of gravity with matter. <i>Physical Review D</i> , 2018, 97, .	4.7	83
51	Thermal dynamics on the lattice with exponentially improved accuracy. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2018, 778, 221-226.	4.1	7
52	Effective universality in quantum gravity. <i>Physical Review D</i> , 2018, 97, .		63
53	Reweighting Lefschetz Thimbles. <i>Physical Review D</i> , 2018, 97, .		14
54	Reconstructing the gluon. <i>Physical Review D</i> , 2018, 97, .		62

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55	Correlation functions of three-dimensional Yang-Mills theory from the FRG. , 2018, 5, .		41
56	Scaling solutions for dilaton quantum gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 769, 105-110.	4.1	46
57	Physics and the choice of regulators in functional renormalisation group flows. Annals of Physics, 2017, 384, 165-197.	2.8	42
58	Cooling stochastic quantization with colored noise. Physical Review D, 2017, 96, .	4.7	5
59	Baryon number fluctuations at finite temperature and density. Physical Review D, 2016, 94, .	4.7	55
60	Functional flows in QED and the modified Ward–Takahashi identity. Journal of Physics A: Mathematical and Theoretical, 2016, 49, 405401.	2.1	9
61	From quarks and gluons to hadrons: Chiral symmetry breaking in dynamical QCD. Physical Review D, 2016, 94, .	4.7	99
62	Landau gauge Yang-Mills correlation functions. Physical Review D, 2016, 94, .	4.7	161
63	Correlating the skewness and kurtosis of baryon number distributions. Physical Review D, 2016, 93, .	4.7	27
64	Quantum-gravity effects on a Higgs-Yukawa model. Physical Review D, 2016, 94, .	4.7	85
65	Anomalous scaling at nonthermal fixed points of Burgers' and Gross-Pitaevskii turbulence. Physical Review A, 2015, 92, .	2.5	23
66	Magnetic catalysis and inverse magnetic catalysis in QCD. Physical Review D, 2015, 91, .	4.7	124
67	Functional renormalization group in a finite volume. Physical Review D, 2015, 92, .	4.7	16
68	Real time correlation functions and the functional renormalization group. Physical Review D, 2015, 92, .	4.7	69
69	Relevance of matter and glue dynamics for baryon number fluctuations. Physical Review D, 2015, 92, .	4.7	42
70	Transport Coefficients in Yang-Mills Theory and QCD. Physical Review Letters, 2015, 115, 112002.	7.8	91
71	Sarma phase in relativistic and non-relativistic systems. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 742, 86-93.	4.1	16
72	Chiral symmetry breaking in continuum QCD. Physical Review D, 2015, 91, .	4.7	164

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73	Towards quantitative precision in the chiral crossover: Masses and fluctuation scales. Physical Review D, 2015, 91, .	4.7	45
74	Phase structure of QCD for heavy quarks. Physical Review D, 2015, 91, .	4.7	28
75	Higher order quark-mesonic scattering processes and the phase structure of QCD. Physical Review D, 2014, 90, .	4.7	71
76	Equation of state and phase diagram of strongly interacting matter. Nuclear Physics A, 2014, 931, 113-124.	1.5	43
77	Gluon spectral functions and transport coefficients in Yang-Mills theory. Physical Review D, 2014, 90, .	4.7	70
78	Critical temperature and superfluid gap of the unitary Fermi gas from functional renormalization. Physical Review A, 2014, 89, .	2.5	24
79	Fixed points and infrared completion of quantum gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 728, 114-117.	4.1	111
80	Thermodynamics of QCD at vanishing density. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 731, 248-256.	4.1	90
81	Polyakov loop potential at finite density. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2014, 732, 273-277.	4.1	76
82	Stability of complex Langevin dynamics in effective models. Journal of High Energy Physics, 2013, 2013, 1.	4.7	45
83	Thirring model at finite density in $0+1$ dimensions with stochastic quantization: Crosscheck with an exact solution. Physical Review D, 2013, 87, .	4.7	19
84	Thirring model at finite density in $2+1$ dimensions with stochastic quantization. Physical Review D, 2013, 87, .	4.7	12
85	Dilaton quantum gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 727, 298-302.	4.1	61
86	Error estimates and specification parameters for functional renormalization. Annals of Physics, 2013, 334, 83-99.	2.8	10
87	Tan contact and universal high momentum behavior of the fermion propagator in the BCS-BEC crossover. Physical Review A, 2013, 87, .	2.5	14
88	Blocking-inspired supersymmetric actions: A status report. Physical Review D, 2013, 87, .	4.7	4
89	Confinement from correlation functions. Physical Review D, 2013, 88, .	4.7	96
90	Improved Polyakov-loop potential for effective models from functional calculations. Physical Review D, 2013, 87, .	4.7	88

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91	Phase structure and thermodynamics of QCD. Physical Review D, 2013, 88, .	4.7	101
92	Magnetic catalysis in hot and dense quark matter and quantum fluctuations. Physical Review D, 2012, 86, .	4.7	78
93	Gluon propagator close to criticality. Physical Review D, 2012, 85, .	4.7	61
94	Ultracold atoms and the Functional Renormalization Group. Nuclear Physics, Section B, Proceedings Supplements, 2012, 228, 63-135.	0.4	56
95	Asymptotic freedom of Yang-Mills theory with gravity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 709, 234-241.	4.1	103
96	Gluon condensation and scaling exponents for the propagators in Yang-Mills theory. Physical Review D, 2011, 83, .	4.7	22
97	The phase structure of the Polyakov-quark-meson model beyond mean field. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 696, 58-67.	4.1	222
98	Exact renormalization group and $\hat{\Gamma}_1$ -derivable approximations. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2011, 696, 523-528.	4.1	31
99	Phase Structure of Two-Flavor QCD at Finite Chemical Potential. Physical Review Letters, 2011, 106, 022002.	7.8	164
100	Hamiltonian flow in Coulomb gauge Yang-Mills theory. Physical Review D, 2011, 83, .	4.7	26
101	The QCD phase diagram: Results and challenges. , 2011, , .		66
102	Far-from-equilibrium quantum many-body dynamics. European Physical Journal C, 2010, 70, 423-443.	3.9	39
103	On the nature of the phase transition in $SU(N)$, $Sp(2)$ and $E(7)$ Yang-Mills theory. European Physical Journal C, 2010, 70, 689-702.	3.9	80
104	Quark confinement from colour confinement. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 684, 262-267.	4.1	232
105	Lattice Landau gauge with stochastic quantisation. Nuclear Physics B, 2010, 830, 291-314.	2.5	15
106	Uniqueness of infrared asymptotics in Landau gauge Yang-Mills theory. II.. Physical Review D, 2009, 80, .	4.7	85
107	Generalizing the Ginsparg-Wilson relation: Lattice supersymmetry from blocking transformations. Physical Review D, 2009, 79, .	4.7	8
108	On the infrared behavior of Landau gauge Yang-Mills theory. Annals of Physics, 2009, 324, 2408-2437.	2.8	381

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109	On the Yang-Mills two-loop effective action with worldline methods. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 677, 100-108.	4.1	6
110	Towards far-from-equilibrium quantum field dynamics: A functional renormalisation-group approach. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 670, 135-140.	4.1	63
111	Uniqueness of infrared asymptotics in Landau gauge Yang-Mills theory. Physical Review D, 2007, 75, .	4.7	112
112	Large volume behaviour of Yang-Mills propagators. Annals of Physics, 2007, 322, 2916-2944.	2.8	48
113	Do instantons like a colorful background?. European Physical Journal C, 2007, 49, 997-1010.	3.9	6
114	Aspects of the functional renormalisation group. Annals of Physics, 2007, 322, 2831-2915.	2.8	680
115	Non-perturbative thermal flows and resummations. Journal of High Energy Physics, 2006, 2006, 026-026.	4.7	61
116	Doubly periodic instanton zero modes. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 626, 139-146.	4.1	3
117	Infrared Behavior and Fixed Points in Landau-Gauge QCD. Physical Review Letters, 2004, 93, 152002.	7.8	209
118	Completeness and consistency of renormalization group flows. Physical Review D, 2002, 66, .	4.7	98
119	Perturbation theory and renormalization group equations. Physical Review D, 2002, 65, .	4.7	51
120	Renormalisation group flows for gauge theories in axial gauges. Journal of High Energy Physics, 2002, 2002, 049-049.	4.7	57
121	Wilsonian flows and background fields. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 546, 279-286.	4.1	86
122	Constituents of doubly periodic instantons. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 540, 153-158.	4.1	13
123	Predictive power of renormalisation group flows: a comparison. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2001, 516, 197-207.	4.1	54
124	ON WILSONIAN FLOWS IN GAUGE THEORIES. International Journal of Modern Physics A, 2001, 16, 2105-2110.	1.5	33
125	Gauge invariance and background field formalism in the exact renormalisation group. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2000, 495, 256-262.	4.1	87
126	On gauge invariance and ward identities for the Wilsonian renormalisation group. Nuclear Physics, Section B, Proceedings Supplements, 1999, 74, 325-328.	0.4	14

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127	Flow equations for Yang-Mills theories in general axial gauges. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1998, 435, 181-188.	4.1	89
128	Monopoles, Polyakov Loops, and Gauge Fixing on the Torus. Annals of Physics, 1998, 269, 26-50.	2.8	40