Roman HÃ¶llwieser

List of Publications by Year
in descending order

64	874	687363 13	477307 29
papers	citations	h-index	g-index

66	66	66	828
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	QCD and strongly coupled gauge theories: challenges and perspectives. European Physical Journal C, 2014, 74, 2981.	3.9	397
2	Center vortices and the Dirac spectrum. Physical Review D, 2008, 78, .	4.7	39
3	Influence of the chameleon field potential on transition frequencies of gravitationally bound quantum states of ultracold neutrons. Physical Review D, 2013, 87, .	4.7	35
4	Double-winding Wilson loops and monopole confinement mechanisms. Physical Review D, 2015, 91, .	4.7	26
5	Center vortices and chiral symmetry breaking in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>S</mml:mi><mml:mi>U</mml:mi><mml:mo mathvariant="bold" stretchy="false">(</mml:mo><mml:mn>2</mml:mn><mml:mo mathvariant="bold") Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 56	4.7	25
6	Intersections of thick center vortices, Dirac eigenmodes and fractional topological charge in SU(2) lattice gauge theory. Journal of High Energy Physics, 2011, 2011, 1.	4.7	22
7	Chiral symmetry breaking on the lattice. Progress in Particle and Nuclear Physics, 2017, 97, 312-355.	14.4	22
8	Tests of the lattice index theorem. Physical Review D, 2008, 77, .	4.7	16
9	Colorful SU(2) center vortices in the continuum and on the lattice. Physical Review D, 2013, 87, .	4.7	16
10	Exact solution for chameleon field, self-coupled through the Ratra-Peebles potential with<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi><mml:mo>=</mml:mo><mml:mn>1</mml:mn></mml:math>and confined between two parallel plates. Physical Review D, 2016, 94, .	4.7	16
11	Precision analysis of electron energy spectrum and angular distribution of neutron <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mi>Î²</mml:mi><mml:mo>â^'</mml:mo></mml:msup></m decay with polarized neutron and electron. Physical Review C, 2017, 95, .	2.9	16
12	Neutron dark matter decays and correlation coefficients of neutron Î²â^'-decays. Nuclear Physics B, 2019, 938, 114-130.	2.5	16
13	Critical analysis of topological charge determination in the background of center vortices inSU(2)lattice gauge theory. Physical Review D, 2012, 86, .	4.7	15
14	ApproachingSU(2)gauge dynamics with smearedZ(2)vortices. Physical Review D, 2015, 92, .	4.7	13
15	Center vortices, area law and the catenary solution. International Journal of Modern Physics A, 2015, 30, 1550207.	1.5	12
16	Tests of the standard model in neutron beta decay with polarized electrons and unpolarized neutrons and protons. Physical Review D, 2019, 99, .	4.7	12
17	Colorful plane vortices and chiral symmetry breaking in SU(2) lattice gauge theory. Journal of High Energy Physics, 2015, 2015, 1.	4.7	11
18	Proton recoil energy and angular distribution of neutron radiativeÎ²â^'decay. Physical Review D, 2013, 88, .	4.7	10

#	Article	IF	Citations
19	Confining bond rearrangement in the random center vortex model. Physical Review D, 2016, 93, .	4.7	10
20	Tests of the standard model in neutron <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> decay with a polarized neutron and electron and an unpolarized proton. Physical Review C, 2018, 98, .	2.9	10
21	Corrections of order <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e23" altimg="si8.svg"><mml:mrow><mml:mi>O</mml:mi><mml:mrow><mml:mo>(</mml:mo><mml:msubsup><mml:mrow><mml:mi>E</mml:mi></mml:mrow> Results in Physics, 2021, 21, 103806.	4.1	10
22	Deficit of reactor antineutrinos at distances smaller than 100 m and inverseÎ²decay. Physical Review C, 2013, 88, .	2.9	9
23	Relative weights approach to SU(3) gauge theories with dynamical fermions at finite density. Physical Review D, 2016, 94, .	4.7	9
24	Model of random center vortex lines in continuous 2+1 -dimensional spacetime. Physical Review D, 2016, 94, .	4.7	9
25	Non-perturbative renormalization by decoupling. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 807, 135571.	4.1	9
26	Precision theoretical analysis of neutron radiative beta decay to order O(Î±2/Ï€2). Physical Review D, 2017, 95, .	4.7	7
27	Radiative corrections of order O(Î±Ee/mN) to Sirlinâ€™s radiative corrections of order O(Î±/Ï€) to the neutron lifetime. Physical Review D, 2019, 99, .	4.7	7
28	Random center vortex lines in continuous 3D space-time. AIP Conference Proceedings, 2016, , .	0.4	6
29	Precision analysis of pseudoscalar interactions in neutron beta decays. Nuclear Physics B, 2020, 951, 114891.	2.5	6
30	Precision theoretical analysis of neutron radiative beta decay. Physical Review D, 2017, 95, .	4.7	5
31	Scale setting for $$N_mathrm{f}=3+1$$ QCD. European Physical Journal C, 2020, 80, 1.	3.9	5
32	Finite-density transition line for QCD with 695ÂMeV dynamical fermions. Physical Review D, 2018, 97, .	4.7	4
33	Chiral Symmetry Breaking from Center Vortices. , 2014, , .		4
34	Center Vortices, Topological Charge and Chiral Symmetry Breaking. Acta Physica Polonica B, Proceedings Supplement, 2017, 10, 1001.	0.1	4
35	Vortices and Chiral Symmetry Breaking. Acta Physica Polonica B, Proceedings Supplement, 2014, 7, 457.	0.1	4
36	How center vortices break chiral symmetry. AIP Conference Proceedings, 2016, , .	0.4	3

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37	Polyakov line actions from SU(3) lattice gauge theory with dynamical fermions via relative weights. EPJ Web of Conferences, 2017, 137, 03007.	0.3	3
38	Gauge properties of hadronic structure of nucleon in neutron radiative beta decay to order O(Î±/Ï€) in standard V âˆ' A effective theory with QED and linear sigma model of strong low-energy interactions. International Journal of Modern Physics A, 2018, 33, 1850199.	1.5	3
39	Structure of the correlation coefficients <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>S</mml:mi><mml:mo>(</mml:mo><mml:msub><mml:mi and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>U</mml:mi><mml:mo>(</mml:mo><mml:msub><mml:mi of the neutron <mml:math xmlns:mml="http://www.w3.org/1998/. Physical Review C, 2021, 104, .	2.9	3
40	Theoretical description of the neutron beta decay in the standard model at the level of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mn>10</mml:mn><mml:mrow><mml:mo>âˆ'</mml:mo><mml:mn>5</mml:mn></mml:mrow></mm Physical Review D, 2021, 104, .	4.7	3
41	[illegible]hlung of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math>decay of atomic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">S</mml:mi><mml:mprescripts /><mml:mn>16</mml:mn><mml:mn>35</mml:mn></mml:mmultiscripts></mml:math>. Physical Review C, 2014, 90, .	2.9	2
42	Comment on â€œFractional topological charges and the lowest Dirac modesâ€• International Journal of Modern Physics A, 2019, 34, 1975001.	1.5	2
43	Gauge and infrared properties of hadronic structure of nucleon in neutron beta decay to order O(Î±/Ï€) in standard V âˆ' A effective theory with QED and linear sigma model of strong low-energy interactions. International Journal of Modern Physics A, 2019, 34, 1950010.	1.5	2
44	Transition of a spherical vortex to a Dirac monopole with fractional topological charge. Modern Physics Letters A, 2020, 35, 2050118.	1.2	2
45	Influence of Fermions on Vortices in SU(2)-QCD. Universe, 2021, 7, 130.	2.5	2
46	On the correlation coefficient T(E) of the neutron beta decay, caused by the correlation structure invariant under discrete P, C and T symmetries. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 816, 136263.	4.1	2
47	Radiative corrections of order <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>O</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>Î±</mml:mi><mml:msub><mml:mi>E</mml:mi><mml:mi>e</mml:mi></mml:msub><mml:mo) xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>O</mml:mi><m. Physical	4.7	2
48	DISTRIBUTION OF MAGNETIC MONOPOLES WITHIN CUBES IN COMPACT QED. International Journal of Modern Physics A, 2010, 25, 1853-1862.	1.5	1
49	Publisher's Note: Internal bremsstrahlung of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math>decay of atomic<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">S</mml:mi><mml:mprescripts /><mml:mn>16</mml:mn><mml:mrow><mml:mn>35</mml:mn></mml:mrow></mml:mmultiscripts></mml:math> [Phys. Rev. C90, 064608 (2014)]. Physical Review C, 2014, 90, .	2.9	1
50	Î²-decay rates of bareAg10847+and H-likeAg10846+ions. Physical Review C, 2014, 90, .	2.9	1
51	Plane Center Vortices and Fractional Topological Charge. International Journal of Theoretical Physics, 2020, 59, 2397-2403.	1.2	1
52	Constrained hybrid Monte Carlo algorithms for gaugeâ€“Higgs models. Computer Physics Communications, 2020, 254, 107192.	7.5	1
53	Center Vortices and Topological Charge. , 2013, , .		1
54	Center Vortex Versus Abelian Models of the QCD Vacuum. Acta Physica Polonica B, Proceedings Supplement, 2015, 8, 509.	0.1	1

#	Article	IF	Citations
55	Violations of the Lattice Index Theorem for Spherical Center Vortices. , 2011, , .		0
56	Center Vortices and Chiral Symmetry Breaking. Nuclear Physics, Section B, Proceedings Supplements, 2013, 245, 9-16.	0.4	0
57	Preliminary QCD phase transition line for 695 MeV dynamical staggered fermions from effective Polyakov line actions. EPJ Web of Conferences, 2018, 175, 07022.	0.3	0
58	The QCD phase diagram from effective Polyakov line actions. AIP Conference Proceedings, 2018, , .	0.4	0
59	Charmonium Spectrum from (N_{mathrm {f}}=3+1) Lattice QCD. Acta Physica Polonica B, Proceedings Supplement, 2021, 14, 209.	0.1	0
60	Energy of a pointlike neutron in an external electromagnetic field. Physical Review D, 2021, 104, .	4.7	0
61	Lattice Index Theorem and Fractional Topological Charge. , 2011, , .		0
62	Correlations between Center Vortices and low-lying Dirac eigenmodes. , 2012, , .		0
63	The QCD Phase Diagram from the Lattice. Acta Physica Polonica B, Proceedings Supplement, 2018, 11, 545.	0.1	0
64	Electrodisintegration of Deuteron into Dark Matter and Proton Close to Threshold. Symmetry, 2021, 13, 2169.	2.2	0