

Lawrence Horwitz

List of Publications by Year in descending order

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96
papers

1,459
citations

304743

22
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345221

36
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98
all docs

98
docs citations

98
times ranked

221
citing authors

#	ARTICLE	IF	CITATIONS
1	The decay-scattering system. Rocky Mountain Journal of Mathematics, 1971, 1, 225.	0.4	104
2	Gibbs ensembles in relativistic classical and quantum mechanics. Annals of Physics, 1981, 137, 306-340.	2.8	90
3	The Inverse Decay Problem. Journal of Mathematical Physics, 1971, 12, 2537-2543.	1.1	71
4	Constraint relativistic quantum dynamics. Physical Review D, 1981, 24, 1528-1542.	4.7	70
5	The quantum relativistic two-body bound state. I. The spectrum. Journal of Mathematical Physics, 1989, 30, 66-80.	1.1	68
6	A manifestly covariant relativistic Boltzmann equation for the evolution of a system of events. Physica A: Statistical Mechanics and Its Applications, 1989, 161, 300-338.	2.6	67
7	Off-shell electromagnetism in manifestly covariant relativistic quantum mechanics. Foundations of Physics, 1989, 19, 1125-1149.	1.3	64
8	The quantum relativistic two-body bound state. II. The induced representation of $SL(2,C)$. Journal of Mathematical Physics, 1989, 30, 380-392.	1.1	56
9	Scattering theory in relativistic quantum mechanics. Physical Review D, 1982, 26, 819-838.	4.7	54
10	On Feynman's approach to the foundations of gauge theory. Journal of Mathematical Physics, 1995, 36, 3263-3288.	1.1	49
11	Canonical quantization of four- and five-dimensional $U(1)$ gauge theories. Physical Review A, 1993, 48, 4068-4074.	2.5	41
12	Geometry of Hamiltonian Chaos. Physical Review Letters, 2007, 98, 234301.	7.8	39
13	Relativistic Quantum Mechanics. Fundamental Theories of Physics, 2015, , .	0.3	36
14	Nonrelativistic limit of relativistic quantum mechanics. Physical Review D, 1981, 24, 2127-2131.	4.7	33
15	Relativistic potential scattering and phase shift analysis. Journal of Mathematical Physics, 1989, 30, 213-218.	1.1	30
16	The Landau-Peierls relation and a causal bound in covariant relativistic quantum theory. Foundations of Physics, 1985, 15, 701-715.	1.3	29
17	The Lorentz force and energy-momentum for off-shell electromagnetism. Foundations of Physics Letters, 1991, 4, 61-71.	0.6	28
18	Chaoticlike Behavior in a Quantum System without Classical Counterpart. Physical Review Letters, 1995, 75, 1070-1073.	7.8	27

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19	On the significance of a recent experiment demonstrating quantum interference in time. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 355, 1-6.	2.1	27
20	Relativistic diffraction. Lettere Al Nuovo Cimento Rivista Internazionale Della Societ� Italiana Di Fisica, 1976, 17, 501-507.	0.4	25
21	On relativistic quantum theory for particles with spin1/2. Journal of Physics A, 1982, 15, L659-L662.	1.6	24
22	Representation of quantum mechanical resonances in the Lax�Phillips Hilbert space. Journal of Mathematical Physics, 2000, 41, 8050-8071.	1.1	23
23	An elementary canonical classical and quantum dynamics for general relativity. European Physical Journal Plus, 2019, 134, 1.	2.6	20
24	Detecting order and chaos in three-dimensional Hamiltonian systems by geometrical methods. Physical Review E, 2007, 76, 046220.	2.1	18
25	Uniqueness of the scalar product in the tensor product of quaternion Hilbert modules. Journal of Mathematical Physics, 1992, 33, 3098-3104.	1.1	17
26	The unstable system in relativistic quantum mechanics. Foundations of Physics, 1995, 25, 39-65.	1.3	17
27	Applications of geometrical criteria for transition to Hamiltonian chaos. Physical Review E, 2008, 78, 036209.	2.1	17
28	Relativistic Brownian Motion and Gravity as an Eikonal Approximation to a Quantum Evolution Equation. Foundations of Physics, 2005, 35, 1181-1203.	1.3	16
29	The Covariant Stark Effect. Foundations of Physics, 2001, 31, 967-991.	1.3	14
30	Kaluza�Klein theory as a dynamics in a dual geometry. Journal of Mathematical Physics, 2009, 50, 102704.	1.1	13
31	Hamiltonian Map to Conformal Modification of Spacetime Metric: Kaluza-Klein and TeVeS. Foundations of Physics, 2011, 41, 141-157.	1.3	13
32	Classical radiation reaction off-shell corrections to the covariant Lorentz force. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 280, 265-270.	2.1	12
33	Title is missing!. Foundations of Physics, 2000, 30, 653-694.	1.3	11
34	Radiation-reaction in classical off-shell electrodynamics. I. The above mass-shell case. Journal of Mathematical Physics, 2012, 53, 032902.	1.1	11
35	Chiral two-component spinors and the factorization of Kramers's equation. Foundations of Physics, 1984, 14, 953-961.	1.3	10
36	Second Quantization of the Stueckelberg Relativistic Quantum Theory and Associated Gauge Fields. Foundations of Physics, 1998, 28, 1509-1519.	1.3	10

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37	On the orthogonality of K0-meson nonleptonic weak-decay residues. <i>Il Nuovo Cimento A</i> , 1974, 21, 625-638.	0.2	9
38	A partial inner product space of analytic functions for resonances. <i>Journal of Mathematical Physics</i> , 1983, 24, 848-859.	1.1	9
39	Green functions for wave propagation on a five-dimensional manifold and the associated gauge fields generated by a uniformly moving point source. <i>Journal of Mathematical Physics</i> , 2006, 47, 122902.	1.1	9
40	Raychaudhuri Equation, Geometrical Flows and Geometrical Entropy. <i>Symmetry</i> , 2021, 13, 957.	2.2	9
41	Quantum Interference in Time. <i>Foundations of Physics</i> , 2007, 37, 734-746.	1.3	8
42	Fourier transform, quantum mechanics and quantum field theory on the manifold of general relativity. <i>European Physical Journal Plus</i> , 2020, 135, 1.	2.6	8
43	Hypercomplex quantum mechanics. <i>Foundations of Physics</i> , 1996, 26, 851-862.	1.3	7
44	Gravitational repulsion within a black hole using the Stueckelberg quantum formalism. <i>Journal of Mathematical Physics</i> , 2011, 52, 012303.	1.1	7
45	Study of a self-adjoint operator indicating the direction of time within standard quantum mechanics. <i>Comptes Rendus Mathematique</i> , 2011, 349, 1117-1122.	0.3	7
46	Quantum field theory of classically unstable Hamiltonian dynamics. <i>Journal of Mathematical Physics</i> , 2015, 56, 072701.	1.1	7
47	On the unitarity sum rule for the Ko decays and CPT violation. <i>Il Nuovo Cimento A</i> , 1968, 57, 863-869.	0.2	6
48	Classical mechanics of special relativity in a Riemannian space-time. <i>Journal of Mathematical Physics</i> , 1991, 32, 1788-1795.	1.1	6
49	Self-force of a classical charged particle. <i>Physical Review A</i> , 1992, 45, 4346-4354.	2.5	5
50	Self-force of a charge in a real current. <i>Foundations of Physics Letters</i> , 2002, 15, 551-559.	0.6	5
51	Relativistic entanglement. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2018, 382, 1701-1708.	2.1	5
52	Energy dependence of total cross-sections in the CHKN model. <i>Il Nuovo Cimento A</i> , 1969, 59, 237-247.	0.2	4
53	Schwinger algebra for quaternionic quantum mechanics. <i>Foundations of Physics</i> , 1997, 27, 1011-1034.	1.3	4
54	Lax's Phillips scattering theory of a relativistic quantum field theoretical Lee's Friedrichs model and Lee's Oehme's Yang's Wu phenomenology. <i>Journal of Mathematical Physics</i> , 2002, 43, 2394.	1.1	4

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55	Energy gaps in a spacetime crystal. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 2009, 374, 40-43.	2.1	4
56	Radiation fields of a uniformly accelerating point source in the framework of Stueckelberg's manifestly covariant relativistic dynamics. <i>Journal of Mathematical Physics</i> , 2010, 51, 052903.	1.1	4
57	On the Green-functions of the classical off-shell electrodynamics under the manifestly covariant relativistic dynamics of Stueckelberg. <i>Journal of Mathematical Physics</i> , 2011, 52, 082901.	1.1	4
58	Spin, angular momentum and spin-statistics for a relativistic quantum many-body system. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2013, 46, 035305.	2.1	4
59	An underlying geometrical manifold for Hamiltonian mechanics. <i>Frontiers of Physics</i> , 2017, 12, 1.	5.0	4
60	Charges as null plane integrals over tensor densities. <i>Letters in Mathematical Physics</i> , 1976, 1, 147-154.	1.1	3
61	Radiation Reaction of the Classical Off-Shell Relativistic Charged Particle. <i>Foundations of Physics</i> , 2001, 31, 951-966.	1.3	3
62	Space Zeno Effect. <i>International Journal of Theoretical Physics</i> , 2001, 40, 1697-1713.	1.2	3
63	Eikonal Approximation to 5D Wave Equations and the 4D Space-Time Metric. <i>Foundations of Physics</i> , 2003, 33, 1323-1338.	1.3	3
64	Energy Mechanism of Charges Analyzed in Real Current Environment. <i>Foundations of Physics Letters</i> , 2003, 16, 225-244.	0.6	3
65	Eikonal approximation to 5D wave equations as geodesic motion in a curved 4D spacetime. <i>General Relativity and Gravitation</i> , 2005, 37, 491-506.	2.0	3
66	Simulation of the Radiation Reaction Orbits of a Classical Relativistic Charged Particle with Generalized Off-Shell Lorentz Force. <i>Discrete Dynamics in Nature and Society</i> , 2010, 2010, 1-36.	0.9	3
67	Preface IARD 2008 Proceedings. <i>Foundations of Physics</i> , 2011, 41, 1-3.	1.3	3
68	Transition Decomposition of Quantum Mechanical Evolution. <i>International Journal of Theoretical Physics</i> , 2011, 50, 2179-2190.	1.2	3
69	On the geometric formulation of Hamiltonian dynamics. <i>Chaos</i> , 2013, 23, 013120.	2.5	3
70	Induced representations of tensors and spinors of any rank in the Stueckelberg-Horwitz-Piron theory. <i>Journal of Mathematical Physics</i> , 2015, 56, 092301.	1.1	3
71	Entropy Measures as Geometrical Tools in the Study of Cosmology. <i>Entropy</i> , 2018, 20, 6.	2.2	3
72	The Relativistic Boltzmann Equation and Two Times. <i>Entropy</i> , 2020, 22, 804.	2.2	3

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73	Dynamical effects of a one-dimensional multibarrier potential of finite range. European Physical Journal B, 2002, 25, 505-518.	1.5	2
74	SUBTLE IS THE LORD: ON THE DIFFERENCE BETWEEN NEWTONIAN (LYAPUNOV) STABILITY ANALYSIS AND GEOMETRICAL STABILITY ANALYSIS OF GRAVITATIONAL ORBITS. International Journal of Modern Physics D, 2011, 20, 2787-2793.	2.1	2
75	Uncertainty relation for chaos. International Journal of Geometric Methods in Modern Physics, 2015, 12, 1550093.	2.0	2
76	Second quantization of a covariant relativistic spacetime string in Stueckelberg-Horwitz-Piron theory. Frontiers of Physics, 2017, 12, 1.	5.0	2
77	Spin and entanglement in general relativity. European Physical Journal Plus, 2021, 136, 1.	2.6	2
78	Relativistic Mechanics of Continuous Media. Foundations of Physics, 2001, 31, 909-934.	1.3	1
79	Could the classical relativistic electron be a strange attractor?. Discrete Dynamics in Nature and Society, 2004, 2004, 179-204.	0.9	1
80	Time, Irreversibility, and Unstable Systems in Quantum Physics. Advances in Chemical Physics, 2007, , 245-297.	0.3	1
81	COVARIANT RELATIVISTIC DYNAMICS AND THE CONCEPT OF TIME. Modern Physics Letters A, 2011, 26, 1681-1696.	1.2	1
82	Neutrino oscillations in Stueckelberg semiclassical relativistic dynamics. Journal of Physics: Conference Series, 2013, 437, 012021.	0.4	1
83	Stueckelberg-Horwitz-Piron Canonical Quantum Theory in General Relativity and Bekenstein-Sanders Gauge Fields for TeVeS. , 2020, , .		1
84	Spin and entanglement in general relativity. Journal of Physics: Conference Series, 2021, 1956, 012009.	0.4	1
85	Representation of the resonances of a relativistic quantum field theoretical model in Lax-Phillips scattering theory. Chaos, Solitons and Fractals, 2001, 12, 2747-2756.	5.1	0
86	Title is missing!. Foundations of Physics, 2001, 31, 849-854.	1.3	0
87	Relativistic Notion of Mass and a Resolution of a Conflict Between Schopenhauer and Hegel. Foundations of Physics, 2002, 32, 963-979.	1.3	0
88	The Conformal Metric Associated with the U(1) Gauge of the Stueckelberg-Schrödinger Equation. Foundations of Physics, 2003, 33, 1177-1187.	1.3	0
89	Semigroup evolution in the Wigner-Weisskopf pole approximation with Markovian spectral coupling. Physical Review A, 2011, 84, .	2.5	0
90	Reconstruction of the environmental correlation function from single-emitter photon statistics: A non-Markovian approach. Physical Review A, 2013, 87, .	2.5	0

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91	Lorentz Invariant Berry Phase for a Perturbed Relativistic Four Dimensional Harmonic Oscillator. Foundations of Physics, 2014, 44, 1156-1167.	1.3	0
92	Criterion for stability of a special relativistically covariant dynamical system. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 125202.	2.1	0
93	Geometry of quantum Riemannian Hamiltonian evolution. Journal of Mathematical Physics, 2019, 60, 072102.	1.1	0
94	Canonical Transformation of Potential Model Hamiltonian Mechanics to Geometrical Form I. Symmetry, 2020, 12, 1009.	2.2	0
95	Symmetry of the Relativistic Two-Body Bound State. Symmetry, 2020, 12, 313.	2.2	0
96	Entropy Bounds: New Insights. Symmetry, 2022, 14, 126.	2.2	0