

Frank Wilczek

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/5501418/frank-wilczek-publications-by-year.pdf>

Version: 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

182
papers

29,068
citations

66
h-index

170
g-index

229
ext. papers

31,797
ext. citations

11.4
avg, IF

7.39
L-index

#	Paper	IF	Citations
182	Entanglement Enabled Intensity Interferometry of different wavelengths of light. <i>Annals of Physics</i> , 2021 , 424, 168346	2.5	1
181	Signatures of the quantization of gravity at gravitational wave detectors. <i>Physical Review D</i> , 2021 , 104,	4.9	8
180	Improved Spatial Resolution Achieved by Chromatic Intensity Interferometry. <i>Physical Review Letters</i> , 2021 , 127, 103601	7.4	1
179	Quantum Mechanics of Gravitational Waves. <i>Physical Review Letters</i> , 2021 , 127, 081602	7.4	6
178	Adiabatic construction of hierarchical quantum Hall states. <i>Physical Review B</i> , 2021 , 104,	3.3	2
177	Geometric Induction in Chiral Superconductors. <i>Physical Review Letters</i> , 2020 , 124, 197001	7.4	2
176	Freeman Dyson (1923-2020). <i>Science</i> , 2020 , 368, 715	33.3	
175	Quantum Overlapping Tomography. <i>Physical Review Letters</i> , 2020 , 124, 100401	7.4	21
174	Spectroscopy of Spinons in Coulomb Quantum Spin Liquids. <i>Physical Review Letters</i> , 2020 , 124, 097204	7.4	4
173	Finite thermal particle creation of Casimir light. <i>Modern Physics Letters A</i> , 2020 , 35, 2040006	1.3	10
172	Black and white holes at material junctions. <i>Physical Review Research</i> , 2020 , 2,	3.9	5
171	Chromatic interferometry with small frequency differences. <i>Optics Express</i> , 2020 , 28, 32294-32301	3.3	2
170	Quantum independent-set problem and non-Abelian adiabatic mixing. <i>Physical Review A</i> , 2020 , 101,	2.6	5
169	The noise of gravitons. <i>International Journal of Modern Physics D</i> , 2020 , 29, 2042001	2.2	19
168	Regularizations of time-crystal dynamics. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 18772-18776	11.5	10
167	Tunable Axion Plasma Haloscopes. <i>Physical Review Letters</i> , 2019 , 123, 141802	7.4	68
166	Quantum atmospheric for materials diagnosis. <i>Physical Review B</i> , 2019 , 99,	3.3	3

165	Chiral Casimir forces: Repulsive, enhanced, tunable. <i>Physical Review B</i> , 2019 , 99,	3.3	25
164	Axial Casimir force. <i>Physical Review B</i> , 2019 , 99,	3.3	6
163	Truncated dynamics, ring molecules, and mechanical time crystals. <i>Physical Review A</i> , 2019 , 99,	2.6	8
162	Color Erasure Detectors Enable Chromatic Interferometry. <i>Physical Review Letters</i> , 2019 , 123, 243601	7.4	6
161	Light, the universe and everything ¶2 Herculean tasks for quantum cowboys and black diamond skiers. <i>Journal of Modern Optics</i> , 2018 , 65, 1261-1308	1.1	5
160	Dilute and dense axion stars. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2018 , 777, 64-72	4.2	98
159	A Friendly Ghost Story 2018 , 33-34		
158	SO(3) family symmetry and axions. <i>Physical Review D</i> , 2018 , 98,	4.9	12
157	Superdensity operators for spacetime quantum mechanics. <i>Journal of High Energy Physics</i> , 2018 , 2018, 1	5.4	22
156	Inflation driven by unification energy. <i>Physical Review D</i> , 2017 , 95,	4.9	4
155	Experimental test of entangled histories. <i>Annals of Physics</i> , 2017 , 387, 334-347	2.5	5
154	A model of comprehensive unification. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2017 , 774, 667-670	4.2	16
153	Statistics of Fractionalized Excitations through Threshold Spectroscopy. <i>Physical Review Letters</i> , 2017 , 118, 227201	7.4	25
152	Unification of force and substance. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374,	3	6
151	Entangled histories. <i>Physica Scripta</i> , 2016 , T168, 014004	2.6	15
150	Particle physics: A weighty mass difference. <i>Nature</i> , 2015 , 520, 303-4	50.4	4
149	From B-modes to quantum gravity and unification of forces. <i>International Journal of Modern Physics D</i> , 2014 , 23, 1441001	2.2	7
148	Emergent Majorana mass and axion couplings in superfluids. <i>New Journal of Physics</i> , 2014 , 16, 082003	2.9	6

147	Multiversality. <i>Classical and Quantum Gravity</i> , 2013 , 30, 193001	3.3	6
146	Algebra of Majorana doubling. <i>Physical Review Letters</i> , 2013 , 111, 226402	7.4	17
145	Superfluidity and space-time translation symmetry breaking. <i>Physical Review Letters</i> , 2013 , 111, 250402	7.4	63
144	Wilczek reply.. <i>Physical Review Letters</i> , 2013 , 110, 118902	7.4	27
143	Physics: The enigmatic electron. <i>Nature</i> , 2013 , 498, 31-2	50.4	23
142	Ken Wilson: a scientific appreciation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 12855-6	11.5	1
141	Origins of mass. <i>Open Physics</i> , 2012 , 10,	1.3	15
140	Branched quantization. <i>Physical Review Letters</i> , 2012 , 109, 200402	7.4	21
139	Quantum time crystals. <i>Physical Review Letters</i> , 2012 , 109, 160401	7.4	370
138	Classical time crystals. <i>Physical Review Letters</i> , 2012 , 109, 160402	7.4	159
137	BCS AS FOUNDATION AND INSPIRATION: THE TRANSMUTATION OF SYMMETRY. <i>Modern Physics Letters A</i> , 2010 , 25, 3169-3189	1.3	4
136	BCS AS FOUNDATION AND INSPIRATION: THE TRANSMUTATION OF SYMMETRY 2010 , 535-558		2
135	Majorana returns. <i>Nature Physics</i> , 2009 , 5, 614-618	16.2	697
134	Running inflation in the Standard Model. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2009 , 678, 1-8	4.2	302
133	Anticipating a new Golden Age. <i>European Physical Journal C</i> , 2009 , 59, 185-196	4.2	2
132	Axion cosmology and the energy scale of inflation. <i>Physical Review D</i> , 2008 , 78,	4.9	144
131	ANTICIPATING A NEW GOLDEN AGE. <i>International Journal of Modern Physics A</i> , 2008 , 23, 1791-1811	1.2	8
130	Anticipating a New Golden Age 2008 , 233-257		1

129	Stability conditions and Fermi surface topologies in a superconductor. <i>Physical Review B</i> , 2006 , 74,	3.3	40
128	Hawking radiation from charged black holes via gauge and gravitational anomalies. <i>Physical Review Letters</i> , 2006 , 96, 151302	7.4	199
127	THE UNIVERSE IS A STRANGE PLACE. <i>International Journal of Modern Physics A</i> , 2006 , 21, 2011-2025	1.2	6
126	Dimensionless constants, cosmology, and other dark matters. <i>Physical Review D</i> , 2006 , 73,	4.9	233
125	THE ORIGIN OF MASS. <i>Modern Physics Letters A</i> , 2006 , 21, 701-712	1.3	15
124	Gravitational correction to running of gauge couplings. <i>Physical Review Letters</i> , 2006 , 96, 231601	7.4	103
123	Anomalies, Hawking radiations, and regularity in rotating black holes. <i>Physical Review D</i> , 2006 , 74,	4.9	189
122	HADRON SYSTEMATICS AND EMERGENT DIQUARKS 2006 ,		30
121	YANG-MILLS THEORY IN, BEYOND, AND BEHIND OBSERVED REALITY 2005 , 255-267		
120	In search of symmetry lost. <i>Nature</i> , 2005 , 433, 239-47	50.4	32
119	An explorer and surveyor. <i>Nature</i> , 2005 , 437, 1095	50.4	
118	DIQUARKS AS INSPIRATION AND AS OBJECTS 2005 , 77-93		13
117	Nobel Lecture: Asymptotic freedom: From paradox to paradigm*. <i>Reviews of Modern Physics</i> , 2005 , 77, 857-870	40.5	25
116	Asymptotic freedom: from paradox to paradigm. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2005 , 102, 8403-13	11.5	25
115	From not wrong to (maybe right). <i>Nature</i> , 2004 , 428, 261	50.4	2
114	From concept to reality to vision. <i>European Physical Journal C</i> , 2004 , 33, s1-s4	4.2	1
113	A perspective on pentaquarks. <i>European Physical Journal C</i> , 2004 , 33, s38-s42	4.2	13
112	The Universe is a Strange Place. <i>Nuclear Physics, Section B, Proceedings Supplements</i> , 2004 , 134, 3-12		4

111	Spin-dependent Hubbard model and a quantum phase transition in cold atoms. <i>Physical Review A</i> , 2004 , 70,	2.6	82
110	The Dirac Equation. <i>International Journal of Modern Physics A</i> , 2004 , 19, 45-74	1.2	2
109	QCD and Natural Philosophy. <i>Annales Henri Poincare</i> , 2003 , 4, 211-228	1.2	13
108	Diquarks and exotic spectroscopy. <i>Physical Review Letters</i> , 2003 , 91, 232003	7.4	583
107	Setting standards. <i>Nature</i> , 2002 , 415, 265	50.4	6
106	Observability of earth-skimming ultrahigh energy neutrinos. <i>Physical Review Letters</i> , 2002 , 88, 161102	7.4	120
105	Scaling Mount Planck III: Is That All There Is?. <i>Physics Today</i> , 2002 , 55, 10-11	0.9	9
104	SOME BASIC ASPECTS OF FRACTIONAL QUANTUM NUMBERS. <i>World Scientific Series in 20th Century Physics</i> , 2002 , 135-152	0	1
103	When words fail. <i>Nature</i> , 2001 , 410, 149-149	50.4	1
102	FUTURE SUMMARY. <i>International Journal of Modern Physics A</i> , 2001 , 16, 1653-1677	1.2	6
101	FUTURE SUMMARY. <i>International Journal of Modern Physics A</i> , 2001 , 16, 129-153	1.2	1
100	THE CONDENSED MATTER PHYSICS OF QCD 2001 , 2061-2151		66
99	Enforced electrical neutrality of the color-flavor locked phase. <i>Physical Review Letters</i> , 2001 , 86, 3492-5	7.4	229
98	Minimal color-flavor-locked nuclear interface. <i>Physical Review D</i> , 2001 , 64,	4.9	192
97	Josephson effect without superconductivity: realization in quantum Hall bilayers. <i>Physical Review Letters</i> , 2001 , 86, 1833-6	7.4	92
96	Particle physics. Backyard exotica. <i>Nature</i> , 2000 , 404, 452-3	50.4	1
95	Minimal potentials with very many minima. <i>Physical Review Letters</i> , 2000 , 84, 2285-9	7.4	3
94	Charged stripes from an alternating static magnetic field. <i>Physical Review B</i> , 2000 , 62, 4208-4210	3.3	2

93	The Quantum Theory of Fields, Vol. 3: Supersymmetry. <i>Physics Today</i> , 2000 , 53, 55-56	0.9	5
92	Hawking radiation As tunneling. <i>Physical Review Letters</i> , 2000 , 85, 5042-5	7.4	1339
91	Continuity of Quark and Hadron Matter. <i>Physical Review Letters</i> , 1999 , 82, 3956-3959	7.4	262
90	Color superconductivity and signs of its formation. <i>Nuclear Physics A</i> , 1998 , 638, 515c-518c	1.3	17
89	LECTURES ON BLACK HOLE QUANTUM MECHANICS. <i>International Journal of Modern Physics A</i> , 1998 , 13, 5279-5372	1.2	2
88	Riemann-Einstein Structure from Volume and Gauge Symmetry. <i>Physical Review Letters</i> , 1998 , 80, 4851-4854	7.4	66
87	THE FUTURE OF PARTICLE PHYSICS AS A NATURAL SCIENCE. <i>International Journal of Modern Physics A</i> , 1998 , 13, 863-886	1.2	6
86	Resolution of cosmological singularities in string theory. <i>Physical Review D</i> , 1997 , 55, 4591-4595	4.9	32
85	Cross-Confinement in Multi-Chern-Simons Theories. <i>Physical Review Letters</i> , 1997 , 78, 4679-4681	7.4	6
84	Populated Domain Walls. <i>Physical Review Letters</i> , 1997 , 78, 2465-2468	7.4	49
83	2n-quasihole states realize 2n-dimensional spinor braiding statistics in paired quantum Hall states. <i>Nuclear Physics B</i> , 1996 , 479, 529-553	2.8	377
82	PHYSICAL PROPERTIES OF METALS FROM A RENORMALIZATION GROUP STANDPOINT. <i>International Journal of Modern Physics B</i> , 1996 , 10, 847-862	1.1	3
81	Quantum Numbers of Textured Hall Effect Quasiparticles. <i>Physical Review Letters</i> , 1996 , 77, 4418-4421	7.4	13
80	Experimental Consequences of a Minimal Messenger Model for Supersymmetry Breaking. <i>Physical Review Letters</i> , 1996 , 77, 3070-3073	7.4	100
79	POSSIBLE ELECTRONIC STRUCTURE OF DOMAIN WALLS IN MOTT INSULATORS. <i>International Journal of Modern Physics B</i> , 1996 , 10, 2125-2136	1.1	16
78	Exclusion statistics: Low-temperature properties, fluctuations, duality, and applications. <i>Physical Review Letters</i> , 1994 , 73, 2740-2743	7.4	116
77	Remarks on hot QCD. <i>Nuclear Physics A</i> , 1994 , 566, 123-132	1.3	19
76	Beyond the Standard Model. <i>Annals of the New York Academy of Sciences</i> , 1993 , 688, 94-112	6.5	

75	Static and dynamic critical phenomena at a second order QCD phase transition. <i>Nuclear Physics B</i> , 1993 , 399, 395-425	2.8	405
74	Paired Hall states in double-layer electron systems. <i>Physical Review B</i> , 1992 , 46, 9586-9589	3.3	33
73	Disassembling anyons. <i>Physical Review Letters</i> , 1992 , 69, 132-135	7.4	45
72	Internal frame dragging and a global analog of the Aharonov-Bohm effect. <i>Physical Review Letters</i> , 1992 , 68, 2567-2571	7.4	24
71	Paired Hall states. <i>Nuclear Physics B</i> , 1992 , 374, 567-614	2.8	307
70	Exact solutions and the adiabatic heuristic for quantum Hall states. <i>Nuclear Physics B</i> , 1992 , 370, 577-600	2.8	31
69	Quantum hair and quantum gravity. <i>General Relativity and Gravitation</i> , 1992 , 24, 9-16	2.3	4
68	Growing hair on black holes. <i>Physical Review Letters</i> , 1991 , 67, 1975-1978	7.4	56
67	Inflationary axion cosmology. <i>Physical Review Letters</i> , 1991 , 66, 5-8	7.4	133
66	Paired Hall state at half filling. <i>Physical Review Letters</i> , 1991 , 66, 3205-3208	7.4	313
65	Interactions and excitations of non-Abelian vortices. <i>Physical Review Letters</i> , 1990 , 64, 1632-1635	7.4	79
64	Space-time approach to holonomy scattering. <i>Physical Review Letters</i> , 1990 , 65, 13-16	7.4	33
63	Positron line radiation as a signature of particle dark matter in the halo. <i>Physical Review D</i> , 1990 , 42, 1001-1007	1.10	110
62	Relic gravitational waves and extended inflation. <i>Physical Review Letters</i> , 1990 , 65, 3080-3083	7.4	138
61	HEURISTIC PRINCIPLE FOR QUANTIZED HALL STATES. <i>Modern Physics Letters B</i> , 1990 , 04, 1063-1069	1.6	51
60	Fractional Statistics and Anyon Superconductivity. <i>Series on Directions in Condensed Matter Physics</i> , 1990 ,		516
59	Consequences of time-reversal-symmetry violation in models of high-T _c superconductors. <i>Physical Review B</i> , 1989 , 40, 8726-8744	3.3	152
58	Discrete gauge symmetry in continuum theories. <i>Physical Review Letters</i> , 1989 , 62, 1221-1223	7.4	497

57	Efficiencies of self-propulsion at low Reynolds number. <i>Journal of Fluid Mechanics</i> , 1989 , 198, 587	3.7	79
56	Geometry of self-propulsion at low Reynolds number. <i>Journal of Fluid Mechanics</i> , 1989 , 198, 557	3.7	252
55	Chiral spin states and superconductivity. <i>Physical Review B</i> , 1989 , 39, 11413-11423	3.3	809
54	Gauge kinematics of deformable bodies. <i>American Journal of Physics</i> , 1989 , 57, 514-518	0.7	38
53	Aharonov-Bohm interaction of cosmic strings with matter. <i>Physical Review Letters</i> , 1989 , 62, 1071-1074	7.4	219
52	Possible new form of spontaneous T violation. <i>Physical Review Letters</i> , 1988 , 61, 2066-2068	7.4	68
51	Lattice fermions. <i>Physical Review Letters</i> , 1987 , 59, 2397-2400	7.4	49
50	Two applications of axion electrodynamics. <i>Physical Review Letters</i> , 1987 , 58, 1799-1802	7.4	511
49	Self-propulsion at low Reynolds number. <i>Physical Review Letters</i> , 1987 , 58, 2051-2054	7.4	142
48	Macroscopic T nonconservation: Prospects for a new experiment. <i>Physical Review Letters</i> , 1986 , 56, 1623-1626	7.4	16
47	Solar System constraints and signatures for dark-matter candidates. <i>Physical Review D</i> , 1986 , 33, 2079-2083	7.4	192
46	Realizations of magnetic-monopole gauge fields: Diatoms and spin precession. <i>Physical Review Letters</i> , 1986 , 56, 893-896	7.4	254
45	Calculations for cosmic axion detection. <i>Physical Review Letters</i> , 1985 , 55, 1797-1800	7.4	129
44	Solar-neutrino oscillations. <i>Physical Review Letters</i> , 1985 , 55, 122-125	7.4	33
43	Resonant scattering and charm showers in ultrahigh-energy neutrino interactions. <i>Physical Review Letters</i> , 1985 , 55, 1252-1253	7.4	14
42	Bolometric detection of neutrinos. <i>Physical Review Letters</i> , 1985 , 55, 25-28	7.4	169
41	Examples of vacuum polarization by solitons. <i>Physical Review D</i> , 1984 , 30, 2260-2263	4.9	26
40	Foundations and working pictures in microphysical cosmology. <i>Physics Reports</i> , 1984 , 104, 143-157	27.7	64

39	Fractional Statistics and the Quantum Hall Effect. <i>Physical Review Letters</i> , 1984 , 53, 722-723	7.4	779
38	Illustrations of vacuum polarization by solitons. <i>Physical Review D</i> , 1984 , 30, 2194-2200	4.9	62
37	Remarks on the chiral phase transition in chromodynamics. <i>Physical Review D</i> , 1984 , 29, 338-341	4.9	827
36	Appearance of Gauge Structure in Simple Dynamical Systems. <i>Physical Review Letters</i> , 1984 , 52, 2111-2114	7.4	1243
35	New macroscopic forces?. <i>Physical Review D</i> , 1984 , 30, 130-138	4.9	283
34	Particle-antiparticle annihilation in diffusive motion. <i>Journal of Chemical Physics</i> , 1983 , 78, 2642-2647	3.9	673
33	Linking Numbers, Spin, and Statistics of Solitons. <i>Physical Review Letters</i> , 1983 , 51, 2250-2252	7.4	609
32	Cosmology of the invisible axion. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1983 , 120, 127-132	4.2	1565
31	Physical processes involving Majorana neutrinos. <i>Physical Review D</i> , 1982 , 25, 143-148	4.9	54
30	Monopole-flux-tube repulsion in strong coupling. <i>Physical Review D</i> , 1982 , 26, 3685-3688	4.9	
29	Boundedness from below of the SU(5) Higgs potential. <i>Physical Review D</i> , 1982 , 26, 3679-3684	4.9	
28	Families from spinors. <i>Physical Review D</i> , 1982 , 25, 553-565	4.9	162
27	Remarks on Dyons. <i>Physical Review Letters</i> , 1982 , 48, 1146-1149	7.4	158
26	Axions and Family Symmetry Breaking. <i>Physical Review Letters</i> , 1982 , 49, 1549-1552	7.4	335
25	Quantum Mechanics of Fractional-Spin Particles. <i>Physical Review Letters</i> , 1982 , 49, 957-959	7.4	1113
24	Magnetic Flux, Angular Momentum, and Statistics. <i>Physical Review Letters</i> , 1982 , 48, 1144-1146	7.4	888
23	Reheating an Inflationary Universe. <i>Physical Review Letters</i> , 1982 , 48, 1437-1440	7.4	383
22	Is our vacuum metastable?. <i>Nature</i> , 1982 , 298, 633-634	50.4	49

21	Supersymmetry and the scale of unification. <i>Physical Review D</i> , 1981 , 24, 1681-1683	4.9	581
20	Fractional Quantum Numbers on Solitons. <i>Physical Review Letters</i> , 1981 , 47, 986-989	7.4	631
19	Constraints on heavy neutrinos. <i>Nature</i> , 1981 , 289, 777-778	50.4	27
18	The Cosmic Asymmetry between Matter and Antimatter. <i>Scientific American</i> , 1980 , 243, 82-90	0.5	15
17	Light-quark masses and isospin violation. <i>Physical Review D</i> , 1979 , 19, 2188-2196	4.9	135
16	Matter-antimatter accounting, thermodynamics, and black-hole radiation. <i>Physical Review D</i> , 1979 , 19, 1036-1045	4.9	197
15	Operator Analysis of Nucleon Decay. <i>Physical Review Letters</i> , 1979 , 43, 1571-1573	7.4	404
14	SU(3) Predictions for Charmed-Meson Decays. <i>Physical Review Letters</i> , 1979 , 43, 816-817	7.4	48
13	Interference Effects in Charmed-Meson Decays. <i>Physical Review Letters</i> , 1979 , 43, 1059-1062	7.4	3
12	Effect of instantons on the heavy-quark potential. <i>Physical Review D</i> , 1978 , 18, 4684-4692	4.9	50
11	Possible new species of quarks and hadrons. <i>Physical Review D</i> , 1977 , 16, 860-868	4.9	29
10	Rare muon decays, heavy leptons, and CP violation. <i>Physical Review D</i> , 1977 , 16, 152-157	4.9	33
9	Orientation of the weak interaction with respect to the strong interaction. <i>Physical Review D</i> , 1977 , 15, 3701-3710	4.9	1
8	Rare Muon Decays, Natural Lepton Models, and Doubly Charged Leptons. <i>Physical Review Letters</i> , 1977 , 38, 531-533	7.4	66
7	$\frac{1}{2}$ -12 rule and right-handed currents: Heavy-quark expansion and limitation on Zweig's rule. <i>Physical Review D</i> , 1977 , 15, 2660-2667	4.9	15
6	Decays of Heavy Vector Mesons into Higgs Particles. <i>Physical Review Letters</i> , 1977 , 39, 1304-1306	7.4	442
5	Asymptotically free gauge theories. II. <i>Physical Review D</i> , 1974 , 9, 980-993	4.9	479
4	Ultraviolet Behavior of Non-Abelian Gauge Theories. <i>Physical Review Letters</i> , 1973 , 30, 1343-1346	7.4	2618

3	Asymptotically Free Gauge Theories. I. <i>Physical Review D</i> , 1973 , 8, 3633-3652	4.9	865
2	Enlightenment, knowledge, ignorance, temptation43-54		2
1	A model of anthropic reasoning: the dark to ordinary matter ratio151-162		4