Herbert Weigel

List of Publications by Year in Descending Order

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

160	2,886	30	47
papers	citations	h-index	g-index
178	3,174	3.5	5.11
ext. papers	ext. citations	avg, IF	L-index

#	Paper	IF	Citations
160	Chiral Soliton Models and Nucleon Structure Functions. *Symmetry*, **2021**, 13, 108	2.7	0
159	Quantum corrections to solitons in the ?8 model. *Physical Review D*, **2020**, 102,	4.9	3
158	Quantum instabilities of solitons **2019**,		3
157	Nucleon structure functions from the NJL-model chiral soliton. *European Physical Journal A*, **2019**, 55, 1	2.5	1
156	Collective Coordinate Methods and Their Applicability to (phi ^4) Models. *Advances in Dynamics, Patterns, Cognition*, **2019**, 51-74	0.7	2
155	Spectral methods for coupled channels with a mass gap. *Physical Review D*, **2018**, 97,	4.9	2
154	Vacuum polarization energy of the Shifman Voloshin soliton. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2018**, 783, 434-439	4.2	2
153	Weak Isospin Symmetry and the Vacuum Polarization Energy of Cosmic Strings. *Proceedings (mdpi)*, **2018**, 2, 34	0.3	
152	Exotic Baryons in Chiral Soliton Models. *Universe*, **2018**, 4, 142	2.5	
151	Vacuum polarization energy for general backgrounds in one space dimension. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2017**, 766, 65-70	4.2	13
150	Emerging Translational Variance: Vacuum Polarization Energy of the ?6 Kink. *Advances in High Energy Physics*, **2017**, 2017, 1-10	1	8
149	Quantum stabilization of a hedgehog type of cosmic string. *Nuclear Physics B*, **2017**, 923, 350-377	2.8	1
148	Cosmic Strings Stabilized by Quantum Fluctuations. *Russian Physics Journal*, **2017**, 59, 1768-1774	0.7	2
147	Collective coordinates in one-dimensional soliton models revisited. *Physical Review D*, **2016**, 94,	4.9	51
146	Isospin invariance and the vacuum polarization energy of cosmic strings. *Physical Review D*, **2016**, 94,	4.9	3
145	Quantum stabilization of cosmic strings. *Modern Physics Letters A*, **2015**, 30, 1530022	1.3	3
144	Heavy baryons with strangeness in a soliton model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2015**, 750, 230-236	4.2	7

143	Heavy baryons with strangeness in soliton models. *International Journal of Modern Physics Conference Series*, **2015**, 39, 1560088	0.7	
142	Kink–Antikink Scattering in ?4 and ?6 Models. *Journal of Physics: Conference Series*, **2014**, 482, 012045	0.3	41
141	Quantum stabilization of a closed Nielsen-Olesen string. *Physical Review D*, **2013**, 87,	4.9	4
140	Attractive electromagnetic Casimir stress on a spherical dielectric shell. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2013**, 726, 846-849	4.2	3
139	Vacuum nature of the QCD condensates. *Physical Review D*, **2012**, 85,	4.9	13
138	COSMIC STRINGS STABILIZED BY FERMION FLUCTUATIONS. *International Journal of Modern Physics A*, **2012**, 27, 1260016	1.2	2
137	COSMIC STRINGS STABILIZED BY FERMION FLUCTUATIONS. *International Journal of Modern Physics Conference Series*, **2012**, 14, 215-229	0.7	1
136	Fermion energies in the background of a cosmic string. *Physical Review D*, **2011**, 84,	4.9	8
135	Stable charged cosmic strings. *Physical Review Letters*, **2011**, 106, 101601	7.4	14
134	WAVE-PACKET SCATTERING OFF THE KINK-SOLUTION. *International Journal of Modern Physics A*, **2011**, 26, 3625-3640	1.2	5
133	Vacuum energies of non-abelian string-configurations in dimensions. *Nuclear Physics B*, **2010**, 831, 306-328	2.8	9
132	Gauge invariance and vacuum energies of non-Abelian string-configurations. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2010**, 690, 514-518	4.2	9
131	Quantum Field Theory and the Spectral Method. *Lecture Notes in Physics*, **2009**, 33-61	0.8	13
130	Spectral Methods in Quantum Field Theory. *Lecture Notes in Physics*, **2009**,	0.8	5
129	Review of Scattering Theory. *Lecture Notes in Physics*, **2009**, 15-32	0.8	2
128	Applications in One Space Dimension. *Lecture Notes in Physics*, **2009**, 63-89	0.8	
127	Hedgehog Configurations in d = 3+1. *Lecture Notes in Physics*, **2009**, 103-128	0.8	
126	Boundary Conditions and Casimir Forces. *Lecture Notes in Physics*, **2009**, 129-142	0.8	

125	Quantum Corrections to Q-Balls. *Lecture Notes in Physics*, **2009**, 171-177	0.8	
124	Spectral Analysis of Charges. *Lecture Notes in Physics*, **2009**, 91-101	0.8	
123	String-Type Configurations. *Lecture Notes in Physics*, **2009**, 143-169	0.8	
122	Quantum stabilization ofZ-strings, a status report onD= 3 + 1 dimensions. *Journal of Physics A: Mathematical and Theoretical*, **2008**, 41, 164049	2	8
121	On the decay of soliton excitations. *Journal of Physics A: Mathematical and Theoretical*, **2008**, 41, 164040	2	
120	Two-photon contributions to the Rosenbluth cross-section in the Skyrme model. *European Physical Journal A*, **2008**, 38, 295-306	2.5	
119	Multi-baryon Systems in the Skyrme Model **2008**, 207-230		
118	Quark Flavor Interaction **2008**, 5-26		
117	Self-consistent Soliton **2008**, 27-42		
116	The Skyrme Model **2008**, 43-64		
115	Soliton Quantization in Flavor SU(2) **2008**, 65-83		
114	Soliton Quantization in Flavor SU(3) **2008**, 85-112		
113	MesonBaryon Scattering in Chiral Soliton Models **2008**, 147-180		
112	Exotic Baryons **2008**, 181-206		
111	Baryon Properties **2008**, 113-145		2
110	Axial current matrix elements and pentaquark decay widths in chiral soliton models. *Physical Review D*, **2007**, 75,	4.9	7
109	Collective resonances in the soliton model approach to meson-baryon scattering. *European Physical Journal A*, **2007**, 31, 495-498	2.5	3
108	On the Width of Collective Excitations in Chiral Soliton Models. *Progress of Theoretical Physics Supplement*, **2007**, 168, 78-85		

107	Collective resonances in the soliton model approach to meson-baryon scattering **2007**, 123-126		
106	Energies of quantum QED flux tubes. *Journal of Physics A*, **2006**, 39, 6799-6806		4
105	Quantum energies of strings in a (2+1)-dimensional gauge theory. *Nuclear Physics B*, **2006**, 758, 112-143	2.8	12
104	Quantum QED flux tubes in and dimensions. *Nuclear Physics B*, **2005**, 707, 233-277	2.8	20
103	Bound-state versus collective-coordinate approaches in chiral soliton models and the width of the pentaquark. *European Physical Journal A*, **2005**, 26, 361-382	2.5	25
102	Exotic baryons and monopole excitations in a chiral soliton model. *European Physical Journal A*, **2004**, 21, 133-143	2.5	16
101	Magnetic moments of baryons with a single heavy quark. *Nuclear Physics A*, **2004**, 735, 163-184	1.3	17
100	The Dirichlet Casimir problem. *Nuclear Physics B*, **2004**, 677, 379-404	2.8	117
99	Flavor symmetry breaking and strangeness in the nucleon. *European Physical Journal A*, **2003**, 18, 559-562	2.5	
98	Chiral quark model **2003**, 61, 921-930		6
97	Casimir energies in light of quantum field theory. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2003**, 572, 196-201	4.2	76
96	Heavy fermion quantum effects in SU(2)L gauge theory. *Nuclear Physics B*, **2003**, 665, 623-648	2.8	7
95	Flavor symmetry breaking and strangeness in the nucleon **2003**, 559-562		
94	Soliton models for the nucleon and predictions for the nucleon spin structure. *European Physical Journal D*, **2002**, 52, C65-C78		
93	Mesons in a Poincar covariant Bethe-Salpeter approach. *Physical Review D*, **2002**, 65,	4.9	113
92	CASIMIR EFFECTS IN RENORMALIZABLE QUANTUM FIELD THEORIES. *International Journal of Modern Physics A*, **2002**, 17, 846-869	1.2	60
91	Searching for quantum solitons in a (3+1)-dimensional chiral Yukawa model. *Nuclear Physics B*, **2002**, 630, 241-268	2.8	20
90	Calculating vacuum energies in renormalizable quantum field theories:. *Nuclear Physics B*, **2002**, 645, 49-84	2.8	155

89	Hadron structure functions within a chiral quark model. *Nuclear Physics A*, **2001**, 680, 48-51	1.3	6
88	Hyperon beta-decay and axial charges of the lambda in view of strongly distorted baryon wave-functions. *Nuclear Physics A*, **2001**, 690, 595-609	1.3	6
87	Finite Energy Sum Rules in Potential Scattering. *Annals of Physics*, **2001**, 293, 240-257	2.5	22
86	Quantum energies of interfaces. *Physical Review Letters*, **2001**, 87, 131601	7.4	39
85	Production processes as a tool to study parametrizations of quark confinement. *Physical Review D*, **2001**, 64,	4.9	15
84	Fractional and integer charges from Levinson's theorem. *Nuclear Physics B*, **2001**, 595, 536-550	2.8	24
83	A heavy fermion can create a soliton: a 1+1 dimensional example. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **2000**, 475, 335-341	4.2	16
82	Nucleon structure functions in a chiral soliton model. *Nuclear Physics A*, **2000**, 670, 92-95	1.3	2
81	Soliton formation in the Nambu□ona-Lasinio model. *Nuclear Physics A*, **2000**, 671, 547-563	1.3	2
80	An Effective Field Theory Model to Describe Nuclear Matter in Heavy-Ion Collisions **2000**, 30, 577-597		1
79	Hadron structure functions in a chiral quark model. *European Physical Journal D*, **2000**, 50, 137-144		1
78	Radial excitations of low-lying baryons and the structure of the Z+ penta□uark. *AIP Conference Proceedings*, **2000**,	0	2
77	Heavy fermion stabilization of solitons in 1+1 dimensions. *Nuclear Physics B*, **2000**, 585, 443-470	2.8	34
76	Nucleon structure functions from a chiral soliton. *Nuclear Physics, Section B, Proceedings Supplements*, **1999**, 74, 125-128		
75	The parity-violating pion□ucleon coupling constant from a realistic three flavor Skyrme model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1999**, 447, 1-7	4.2	45
74	Nucleon structures functionsin the three-flavor NJL soliton model. *Nuclear Physics A*, **1999**, 651, 174-208	1.3	8
73	Hyperons as collective excitations of chiral solitons. *Nuclear Physics, Section B, Proceedings Supplements*, **1999**, 75, 57-59		1
72	Hadron structure functions in a chiral quark model: Regularization, scaling and sum rules. *Nuclear Physics B*, **1999**, 560, 383-427	2.8	48

71	Radial excitations of low-lying baryons and the Z + penta-quark. *European Physical Journal A*, **1998**, 2, 391-402	2.5	75
70	Strangeness contribution to the polarized nucleon structure function g1(x). *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1998**, 439, 398-406	4.2	7
69	Chiral odd structure functions from a chiral soliton. *Physical Review D*, **1998**, 58,	4.9	24
68	Comment on "Unpolarized and polarized quark distributions in the large-NC limit". *Physical Review D*, **1998**, 58,	4.9	2
67	NUCLEON STRUCTURE FUNCTIONS FROM A CHIRAL SOLITON IN THE INFINITE MOMENTUM FRAME. *International Journal of Modern Physics A*, **1998**, 13, 5519-5534	1.2	12
66	Polarized nucleon structure functions within a chiral soliton model. *Physical Review D*, **1997**, 55, 6910-6923	4.9	46
65	Generalization of the bound state model. *Physical Review D*, **1997**, 56, 4098-4114	4.9	14
64	Baryons as hybrids of solitons and three-quark bound states. *Physical Review C*, **1997**, 55, 2030-2042	2.7	16
63	Strangeness in the nucleon and the ratio of proton-to-neutron neutrino-induced quasi-elastic yield. *Zeitschrift Für Physik A*, **1997**, 358, 445-450		5
62	Nucleon structure functions from a chiral soliton. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1997**, 399, 287-296	4.2	37
61	Hidden structure in a Lagrangian for hyperfine splitting of the heavy baryons. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1997**, 390, 329-334	4.2	6
60	Strangeness dependence in radiative hyperon decay amplitudes. *Nuclear Physics A*, **1997**, 615, 291-304	1.3	21
59	Hyperfine splitting of low-lying heavy baryons. *Nuclear Physics A*, **1997**, 625, 789-816	1.3	7
58	Topologically non-trivial chiral transformations. *Zeitschrift Für Physik A*, **1996**, 354, 181-195		
57	Baryons as chiral solitons in the Nambu-Jona-Lasinio model. *Physics Reports*, **1996**, 265, 139-252	27.7	172
56	Radiative decays of hyperons in the Skyrme model: transitions ratios. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1996**, 366, 26-31	4.2	30
55	Scaling behavior in soliton models. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1996**, 384, 5-12	4.2	5
54	SU(3) symmetry breaking and octet baryon polarizabilities. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1996**, 389, 433-439	4.2	2

53	UNPOLARIZED NUCLEON STRUCTURE FUNCTIONS IN THE NAMBU-JONA-LASINIO CHIRAL SOLITON MODEL. *Modern Physics Letters A*, **1996**, 11, 3021-3034	1.3	33
52	Heavy quark solitons in the Nambu-Jona-Lasinio model. *Physical Review D*, **1996**, 54, 5812-5819	4.9	3
51	BARYONS AS THREE-FLAVOR SOLITONS. *International Journal of Modern Physics A*, **1996**, 11, 2419-2544	1.2	62
50	On the strange vector form factors of the nucleon in the NJL soliton model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1995**, 353, 20-26	4.2	46
49	Diquarks in a chiral soliton field. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1995**, 362, 1-6	4.2	3
48	Estimate of quantum corrections to the mass of the chiral soliton in the Nambu-Jona-Lasinio model. *Nuclear Physics A*, **1995**, 582, 484-516	1.3	16
47	On the analytic properties of chiral solitons in the presence of the η-meson. *Nuclear Physics A*, **1995**, 585, 513-553	1.3	9
46	Monopole excitations of baryons in the Nambu-Jona-Lasinio soliton model. *Nuclear Physics A*, **1995**, 593, 488-502	1.3	2
45	Resolving ordering ambiguities in the collective quantization by particle conjugation constraints. *Physical Review D*, **1995**, 51, 6296-6307	4.9	6
44	PARTICLE CONJUGATION AND THE 1/Nc CORRECTIONS TO gA. *Modern Physics Letters A*, **1995**, 10, 885-891	1.3	5
43	THE SKYRMION LIMIT OF THE NAMBU-JONA-LASINIO SOLITON. *Modern Physics Letters A*, **1995**, 10, 67-78	1.3	2
42	Heavy-quark solitons: towards realistic masses. *Nuclear Physics A*, **1995**, 590, 655-679	1.3	25
41	Strange s-wave excitation of the Nambu-Jona-Lasinio soliton. *Physical Review D*, **1994**, 49, 5958-5969	4.9	4
40	The chiral soliton of the Nambu-Jona-Lasinio model with vector and axial-vector mesons. *Nuclear Physics A*, **1994**, 570, 445-471	1.3	14
39	Hyperons in the bound-state approach to the Nambu-Jona-Lasinio chiral soliton. *Nuclear Physics A*, **1994**, 576, 477-524	1.3	15
38	Self-consistent solution to a fermion determinant with space dependent fields. *Computer Physics Communications*, **1994**, 82, 30-41	4.2	14
37	Self-consistent solution to a complex fermion determinant with space dependent fields. *Computer Physics Communications*, **1994**, 82, 42-56	4.2	2
36	The Bethe-Salpeter equation for mesons as quark-anti-quark bound states in a soliton background. *Computer Physics Communications*, **1994**, 82, 57-73	4.2	2

35	Highlights of the NJL Chiral Soliton **1994**, 89-107		
34	THE NAMBU-JONA-LASINIO SOLITON WITH GENERALIZED SCALAR INTERACTIONS. *Modern Physics Letters A*, **1993**, 08, 79-88	1.3	10
33	Effective hadron dynamics: From meson masses to the proton spin puzzle. *Physical Review D*, **1993**, 48, 339-355	4.9	103
32	Strange and non-strange meson fluctuations off the Nambu□Jona-Lasinio soliton. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1993**, 313, 377-388	4.2	14
31	The Nambu-Jona-Lasinio chiral soliton with constrained baryon number. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1993**, 315, 6-11	4.2	10
30	1Nc corrections to gA in the light of PCAC. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1993**, 319, 1-6	4.2	17
29	The isoscalar vector meson □n the Nambu-Jona-Lasinio soliton. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1993**, 298, 132-140	4.2	14
28	THE EFFECTIVE LAGRANGIAN APPROACH TO THE "PROTON-SPIN PUZZLE" AND THE ISSUE OF "TWO COMPONENTS". *Modern Physics Letters A*, **1992**, 07, 1-11	1.3	10
27	Supporting the Skyrmion from the Nambu-Jona-Lasinio model with vector and axial-vector mesons. *Physical Review Letters*, **1992**, 69, 1874-1876	7.4	31
26	Approach to color transparency in the soliton picture of the nucleon. *Physical Review D*, **1992**, 45, 1470-1475	4.9	5
25	Strange baryons as chiral solitons of the Nambu-Jona-Lasinio model. *Nuclear Physics B*, **1992**, 387, 638-674	2.8	42
24	SU(3) symmetry breaking for masses, magnetic moments and sizes of baryons. *Nuclear Physics A*, **1992**, 540, 461-477	1.3	28
23	Static properties of baryons from an SU(3) pseudoscalar vector meson lagrangian. *Nuclear Physics A* , **1992**, 541, 453-491	1.3	74
22	The strange chiral soliton of the Nambu-Jona-Lasinio model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1992**, 284, 296-302	4.2	14
21	Breathing mode quantization in an extended SU (3) Skyrme model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1991**, 261, 235-239	4.2	17
20	The SU (3) Skyrme model with vector mesons in the collective approach. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1991**, 268, 155-160	4.2	12
19	Slowly rotating skyrmions in broken SU(3). *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1991**, 267, 438-442	4.2	32
18	Chiral symmetry and the neutron-proton mass difference in the medium. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1991**, 267, 167-172	4.2	5

17	Breathing mode in the SU(3) Skyrme model. *Physical Review D*, **1991**, 44, 2916-2927	4.9	13
16	Electromagnetic, axial-vector, and strange currents in the Skyrme model: Effects of symmetry breaking. *Physical Review D*, **1991**, 43, 869-884	4.9	66
15	Kaon excitation in the SU(3) Skyrme model. *Physical Review D*, **1990**, 42, 3177-3190	4.9	20
14	Symmetry breaking and hyperon decays in the Skyrme model. *Physical Review D*, **1990**, 41, 2836-2843	4.9	22
13	Two-component approach to the "proton spin" puzzle in generalized Skyrme models. *Physical Review Letters*, **1990**, 65, 2955-2958	7.4	15
12	Singlet axial-vector current and the "proton-spin" question. *Physical Review D*, **1990**, 42, 2998-3009	4.9	34
11	EFFECTIVE LAGRANGIAN FOR THE TWO-COMPONENT APPROACH TO THE "PROTON SPIN" PUZZLE. *Modern Physics Letters A*, **1990**, 05, 2543-2553	1.3	7
10	Neutron-proton mass-splitting puzzle in Skyrme and chiral quark models. *Physical Review D*, **1989**, 40, 855-865	4.9	40
9	Realistic pseudoscalar-vector Lagrangian. Static and dynamical baryon properties. *Physical Review D* , **1989**, 39, 1956-1972	4.9	34
8	Higher order perturbation theory for the SU(3) skyrme model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1989**, 224, 171-176	4.2	30
7	Axial current matrix elements of the nucleon based on an exact diagonalization of the SU(3) skyrme model hamiltonian. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1989**, 228, 420-424	4.2	28
6	The skyrme soliton in pion, vector- and scalar-meson fields: ℕ-scattering and photoproduction. *Physics Reports*, **1989**, 173, 173-255	27.7	109
5	Baryon resonances as soliton excitations from an effective meson Lagrangian. *Progress in Particle and Nuclear Physics*, **1988**, 20, 105-111	10.6	
4	The influence of different anomalous terms in effective meson lagrangians on baryon resonances. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1988**, 215, 24-28	4.2	7
3	Vector mesons versus higher order terms in the Skyrme model approach to baryon resonances. *Nuclear Physics A*, **1987**, 465, 733-742	1.3	21
2	Baryon resonances as soliton excitations from purely mesonic lagrangians. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1987**, 197, 11-14	4.2	6
1	Exotic baryon number B=2 states in the SU(2) skyrme model. *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, **1986**, 168, 321-325	4.2	40