

# John W Clark

## List of Publications by Year in descending order

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126  
papers

2,922  
citations

172386  
29  
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189801  
50  
g-index

126  
all docs

126  
docs citations

126  
times ranked

733  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the controllability of quantum-mechanical systems. <i>Journal of Mathematical Physics</i> , 1983, 24, 2608-2618.	0.5	342
2	Variational theory of nuclear matter. <i>Progress in Particle and Nuclear Physics</i> , 1979, 2, 89-199.	5.6	232
3	Method of Correlated Basis Functions. <i>Physical Review</i> , 1966, 141, 833-857.	2.7	154
4	Cluster Expansions in Many-Fermion Theory. I. "Factor-Cluster" Formalisms. <i>Journal of Mathematical Physics</i> , 1968, 9, 131-148.	0.5	113
5	Superfluidity in nuclear systems and neutron stars. <i>European Physical Journal A</i> , 2019, 55, 1.	1.0	110
6	Simplified Treatment for Strong Short-Range Repulsions in N-Particle Systems. I. General Theory. <i>Physical Review</i> , 1959, 113, 388-399.	2.7	102
7	Topology of the Fermi surface beyond the quantum critical point. <i>Physical Review B</i> , 2008, 78, .	1.1	95
8	Anomalous low-temperature behavior of strongly correlated Fermi systems. <i>Physical Review B</i> , 2005, 71, .	1.1	80
9	Density matrix of quantum fluids. <i>Physical Review B</i> , 1976, 14, 2875-2887.	1.1	69
10	Ground-state energetics of helium and deuterium fermion fluids. <i>Physical Review B</i> , 1981, 24, 6383-6403.	1.1	65
11	Brain without mind: Computer simulation of neural networks with modifiable neuronal interactions. <i>Physics Reports</i> , 1985, 123, 215-273.	10.3	55
12	Tensor Correlations in Nuclear Matter. <i>Physical Review C</i> , 1971, 3, 1504-1513.	1.1	53
13	Effect of attractive nuclear forces on the onset of ferromagnetism in neutron star matter. <i>Lettere Al Nuovo Cimento Rivista Internazionale Della Societ� Italiana Di Fisica</i> , 1969, 2, 185-188.	0.4	46
14	Universalities of Triplet Pairing in Neutron Matter. <i>Physical Review Letters</i> , 1998, 81, 3828-3831.	2.9	45
15	Modelling of quantum mechanical control systems. <i>Mathematical Modelling</i> , 1980, 1, 109-121.	0.2	44
16	Density matrix and momentum distribution of helium liquids and nuclear matter. <i>Physical Review B</i> , 1977, 16, 222-230.	1.1	43
17	Magnetic Susceptibility of Neutron Matter. <i>Physical Review Letters</i> , 1969, 23, 1463-1466.	2.9	42
18	Properties of elementary excitations in spin-polarized liquid He <sup>3</sup> . <i>Physical Review B</i> , 1983, 28, 5088-5099.	1.1	38

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19	Magnetic field dependence of the residual resistivity of the heavy-fermion metal CeCoIn <sub>5</sub> . Physical Review B, 2012, 86, .	1.1	38
20	Theory of $\hat{\mu}$ matter. Annals of Physics, 1966, 40, 127-152.	1.0	37
21	Cluster Expansions in Many-Fermion Theory. II. Rearrangements of Primitive Decomposition Equations. Journal of Mathematical Physics, 1968, 9, 149-154.	0.5	34
22	Neural Representation of Probabilistic Information. Neural Computation, 2003, 15, 1843-1864.	1.3	34
23	Pair condensation and bound states in fermionic systems. Physical Review C, 2006, 73, .	1.1	33
24	Nuclear Heavy-ion-Heavy-ion Collisions and the Intermediate-State Model. Physical Review Letters, 1969, 22, 951-955.	2.9	31
25	Phase Transitions in Nucleonic Matter and Neutron-Star Cooling. Physical Review Letters, 2004, 93, 151101.	2.9	31
26	Two-body density matrix of a Bose fluid. Physical Review B, 1989, 40, 4355-4368.	1.1	30
27	CONTROL OF QUANTUM SYSTEMS. International Journal of Modern Physics B, 2003, 17, 5397-5411.	1.0	30
28	Vacuum ground and excited states of the U(1) lattice gauge Hamiltonian. Physical Review D, 1991, 43, 1978-1990.	1.6	29
29	Bose-Einstein Condensation and the $\hat{\mu}$ Transition in Liquid Helium. Journal of Low Temperature Physics, 2002, 129, 143-170.	0.6	29
30	Merging of Single-Particle Levels and Non-Fermi-Liquid Behavior of Finite Fermi Systems. Physical Review Letters, 2007, 98, 216404.	2.9	29
31	Adaptation of the Landau-Migdal quasiparticle pattern to strongly correlated Fermi systems. Physics of Atomic Nuclei, 2011, 74, 1237-1266.	0.1	29
32	The Crystallization of Neutronic Matter. Nature: Physical Science, 1972, 236, 37-39.	0.8	27
33	Merging of Landau Levels in a Strongly Interacting Two-Dimensional Electron System in Silicon. Physical Review Letters, 2014, 112, 186402.	2.9	24
34	Cluster-expansion procedures for the correlated charge form factor. Il Nuovo Cimento A, 1970, 70, 313-322.	0.2	22
35	Rearrangement of the Fermi Surface of Dense Neutron Matter and the Direct Urca Cooling of Neutron Stars. Astrophysical Journal, 2000, 533, L127-L130.	1.6	22
36	Second wind of the Dulong-Petit law at a quantum critical point. JETP Letters, 2010, 92, 532-536.	0.4	22

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37	Density matrix and spin-dependent correlations of normal liquid He-3. Physical Review B, 1979, 19, 3539-3551.	1.1	20
38	Variational Monte Carlo Calculations for Spin-Aligned Deuterium. Physical Review Letters, 1982, 48, 1675-1677.	2.9	20
39	Surface modes of liquid He-4. Physical Review B, 1994, 49, 15836-15848.	1.1	20
40	Embedding of the Brueckner Approximation in the Extended Jastrow Scheme. Physical Review C, 1973, 7, 1792-1803.	1.1	19
41	Ground-state phases of polarized deuterium species. Physical Review B, 1987, 36, 5527-5539.	1.1	19
42	Phase diagram of dilute nuclear matter: Unconventional pairing and the BCS-BEC crossover. Physical Review C, 2012, 86, .	1.1	19
43	Occurrence of flat bands in strongly correlated Fermi systems and high-T <sub>c</sub> superconductivity of electron-doped compounds. JETP Letters, 2015, 101, 413-418.	0.4	19
44	Theoretical and experimental developments in quantum spin liquid in geometrically frustrated magnets: a review. Journal of Materials Science, 2020, 55, 2257-2290.	1.7	18
45	APPLICATION OF SUPPORT VECTOR MACHINES TO GLOBAL PREDICTION OF NUCLEAR PROPERTIES. International Journal of Modern Physics B, 2006, 20, 5015-5029.	1.0	17
46	New State of Matter: Heavy Fermion Systems, Quantum Spin Liquids, Quasicrystals, Cold Gases, and High-Temperature Superconductors. Journal of Low Temperature Physics, 2017, 189, 410-450.	0.6	17
47	Ground-state properties of spin-aligned deuterium. Physical Review B, 1985, 32, 2945-2951.	1.1	16
48	Relative entropy and learning rules. Physical Review A, 1991, 43, 1061-1070.	1.0	16
49	Resonant states of the He-4 liquid-vapor interface. Journal of Low Temperature Physics, 1994, 96, 153-175.	0.6	16
50	Tensor Correlations in Nuclear Matter: Three-Body Effects. Physical Review C, 1972, 5, 695-706.	1.1	15
51	$^1S_0$ Pairing in Neutron Matter. Journal of Low Temperature Physics, 2017, 189, 470-494.	0.6	15
52	THE ROLE OF REPULSIVE CORES IN THE PHOTONUCLEAR EFFECT. Canadian Journal of Physics, 1961, 39, 385-392.	0.4	14
53	Theoretical momentum distributions for liquid He-3. Physical Review B, 1978, 17, 1147-1151.	1.1	14
54	Final-state interactions in the response of nuclear matter. Physical Review C, 2003, 67, .	1.1	14

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55	Damping effects and the metal-insulator transition in a two-dimensional electron gas. JETP Letters, 2005, 81, 315-320.	0.4	14
56	Fission and the ion-ion interaction. Annals of Physics, 1971, 62, 464-491.	1.0	13
57	Subsidiary Conditions on Nuclear Many-Body Theories. Physical Review C, 1972, 5, 1553-1561.	1.1	13
58	Transverse Ising model at zero temperature. Physical Review B, 1998, 57, 56-59.	1.1	13
59	Microscopic study of $^1S_0$ superfluidity in dilute neutron matter. European Physical Journal A, 2017, 53, 1.	1.0	13
60	Three-Nucleon Forces and Triplet Pairing in Neutron Matter. Journal of Low Temperature Physics, 2017, 189, 361-382.	0.6	13
61	Topological basis for understanding the behavior of the heavy-fermion metal $^2\hat{a}^{\sim}$ YbAlB <sub>4</sub> under application of magnetic field and pressure. Physical Review B, 2016, 93, .	1.1	12
62	Nuclear Superconductivity in Compact Stars: BCS Theory and Beyond. Series on Advances in Quantum Many-body Theory, 2006, , 135-174.	0.2	12
63	Variational Monte Carlo study of spin-dependent correlations in liquid He <sub>3</sub> . Physical Review B, 1984, 30, 1342-1348.	1.1	11
64	Two-body density matrix of a normal Fermi fluid. Physical Review B, 1990, 41, 8811-8823.	1.1	11
65	Self-organization of neural networks. Physics Letters, Section A: General, Atomic and Solid State Physics, 1984, 102, 207-211.	0.9	10
66	Clustered quark matter. Physical Review C, 1986, 33, 703-708.	1.1	10
67	A modified backpropagation algorithm for training neural networks on data with error bars. Computer Physics Communications, 1995, 88, 1-22.	3.0	10
68	Nature of the quantum critical point as disclosed by extraordinary behavior of magnetotransport and the lorentz number in the heavy-fermion metal YbRh <sub>2</sub> Si <sub>2</sub> . JETP Letters, 2012, 96, 397-404.	0.4	10
69	Impact of electron-electron interactions on the superfluid density of dirty superconductors. Physical Review B, 2019, 99, .	1.1	10
70	Higher-order probabilistic perceptrons as Bayesian inference engines. Physical Review E, 1999, 59, 6161-6174.	0.8	9
71	Topological disorder triggered by interaction-induced flattening of electron spectra in solids. Physical Review B, 2020, 102, .	1.1	9
72	Effective spin-orbit potential in correlated heavy nuclei. Annals of Physics, 1960, 11, 483-500.	1.0	8

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73	Role of the Dispersion Effect in the Method of Correlated Basis Functions. Physical Review C, 1972, 5, 1233-1237.	1.1	8
74	Toward a Microscopic Theory of the $\lambda$ Transition in Liquid $^4\text{He}$ . Journal of Low Temperature Physics, 1999, 114, 317-348.	0.6	8
75	Abnormal occupation in boson matter. Physical Review C, 1982, 25, 560-570.	1.1	7
76	Variational Monte Carlo study of heavy-atom impurities in liquid $^4\text{He}$ . Physical Review B, 1985, 32, 2952-2959.	1.1	7
77	Fermi hypernetted-chain evaluation of a generalized momentum distribution for model nuclear matter. Physical Review C, 1995, 51, 1849-1858.	1.1	7
78	Impact of spin-isospin fluctuations on single-particle degrees of freedom in dense neutron matter. Physics of Atomic Nuclei, 2001, 64, 619-626.	0.1	7
79	Toward a topological scenario for high-temperature superconductivity of copper oxides. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 3281-3286.	0.9	7
80	Mechanisms driving alteration of the Landau state in the vicinity of a second-order phase transition. Journal of Physics Condensed Matter, 2004, 16, 6431-6444.	0.7	6
81	Thermodynamic properties of Fermi systems with flat single-particle spectra. Europhysics Letters, 2005, 72, 256-262.	0.7	6
82	Elliptical orbits in the Bloch sphere. Journal of Optics B: Quantum and Semiclassical Optics, 2005, 7, S277-S282.	1.4	6
83	Structure of the ground state of a nonsuperfluid dense quark-gluon plasma. Physics of Atomic Nuclei, 2009, 72, 1382-1389.	0.1	6
84	Evidence against solidification of a model neutron system. Physical Review D, 1975, 11, 3365-3369.	1.6	5
85	Elementary excitations of spin-aligned deuterium. Physical Review B, 1990, 41, 757-760.	1.1	5
86	Experiments in artificial psychology: conditioning of asynchronous neutral network models. Mathematical Biosciences, 1990, 99, 77-104.	0.9	5
87	Conventional BCS, unconventional BCS, and non-BCS hidden dineutron phases in neutron matter. Physics of Atomic Nuclei, 2014, 77, 1145-1156.	0.1	5
88	Role of a fermion condensate in the structure of high-temperature pairing in cuprates. JETP Letters, 2017, 105, 267-272.	0.4	5
89	Thermodynamic, Dynamic, and Transport Properties of Quantum Spin Liquid in Herbertsmithite from an Experimental and Theoretical Point of View. Condensed Matter, 2019, 4, 75.	0.8	5
90	Universal T/B Scaling Behavior of Heavy Fermion Compounds (Brief Review). JETP Letters, 2020, 112, 657-665.	0.4	5

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91	THE BRAIN'S VIEW OF THE NATURAL WORLD IN MOTION: COMPUTING STRUCTURE FROM FUNCTION USING DIRECTIONAL FOURIER TRANSFORMATIONS. International Journal of Modern Physics B, 2007, 21, 2493-2504.	1.0	3
92	Merging of single-particle levels in finite Fermi systems. JETP Letters, 2007, 84, 588-592.	0.4	3
93	TOPOLOGICAL PHASE TRANSITIONS IN STRONGLY CORRELATED FERMI SYSTEMS. International Journal of Modern Physics B, 2009, 23, 4059-4073.	1.0	3
94	Motion processing with wide-field neurons in the retino-tecto-rotundal pathway. Journal of Computational Neuroscience, 2010, 28, 47-64.	0.6	3
95	Aspects of Entanglement in Quantum Many-Body Systems. Foundations of Physics, 2010, 40, 1200-1220.	0.6	3
96	Spontaneous breaking of fourfold rotational symmetry in two-dimensional electron systems as a topological phase transition. Physical Review B, 2010, 82, .	1.1	3
97	THE TRANSVERSE ISING MODEL BY CBF. International Journal of Modern Physics B, 1999, 13, 741-747.	1.0	2
98	Edwin Thompson Jaynes. Physics Today, 2000, 53, 71-72.	0.3	2
99	ANTHONY LEGGETT: FEENBERG MEDALIST 1999 CONDENSED MATTER AS A TEST-BED FOR FUNDAMENTAL QUANTUM MECHANICS. International Journal of Modern Physics B, 2001, 15, 1305-1311.	1.0	2
100	Computing relative motion with complex cells. Visual Neuroscience, 2005, 22, 225-236.	0.5	2
101	Pairing with Correlated Wave Functions: BCS in CBF. , 2013, , 360-375.		2
102	Designing neural networks that process mean values of random variables. Physics Letters, Section A: General, Atomic and Solid State Physics, 2014, 378, 2163-2167.	0.9	2
103	Scaling behavior of the thermopower of the archetypal heavy-fermion metal YbRh2Si2. Frontiers of Physics, 2016, 11, 1.	2.4	2
104	Topological Scenario for High-Temperature Superconductivity in Cuprates. JETP Letters, 2018, 108, 260-269.	0.4	2
105	CONTROL OF QUANTUM SYSTEMS. , 2002, , .		2
106	RAYMOND BISHOP AND HERMANN KÄœMMEL: FEENBERG MEDALISTS 2005 THE COUPLED CLUSTER METHOD. International Journal of Modern Physics B, 2006, 20, 4973-4981.	1.0	1
107	NON-FERMI-LIQUID BEHAVIOR FROM THE FERMI-LIQUID APPROACH. International Journal of Modern Physics B, 2007, 21, 2077-2090.	1.0	1
108	CHARLES CAMPBELL AT SIXTY-FIVE: A TRIBUTE TO INNOVATION AND ENDURING DEDICATION. International Journal of Modern Physics B, 2008, 22, 4291-4295.	1.0	1

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109	Contextual interactions in a generalized energy model of complex cells. <i>Spatial Vision</i> , 2009, 22, 301-324.	1.4	1
110	Superfluidity and Pairing Phenomena from Cold Atomic Gases to Neutron Stars. <i>Journal of Low Temperature Physics</i> , 2017, 189, 231-233.	0.6	1
111	Metamorphoses of Electron Systems Hosting a Fermion Condensate. <i>JETP Letters</i> , 2020, 111, 96-103.	0.4	1
112	STATISTICAL MODELING OF NUCLEAR SYSTEMATICS. , 2001, , .		1
113	THE LEGACY OF EUGENE FEENBERG AT THE CENTENARY OF HIS BIRTH. , 2008, , .		1
114	Non-BCS pairing in anisotropic strongly correlated electron systems in solids. <i>JETP Letters</i> , 2002, 76, 302-306.	0.4	0
115	RAYMOND BISHOP AND HERMANN KÄœMMEL: FEENBERG MEDALISTS 2005 THE COUPLED CLUSTER METHOD. , 2006, , .		0
116	Nodes of the Gap Function and Anomalies in Thermodynamic Properties of the B-Phase of Superfluid <sup>3</sup> He. <i>Journal of Low Temperature Physics</i> , 2007, 147, 645-665.	0.6	0
117	CLASSICAL BEHAVIOR OF TWO-DIMENSIONAL LIQUID <sup>3</sup> He NEAR A QUANTUM CRITICAL POINT. <i>International Journal of Modern Physics B</i> , 2013, 27, 1347005.	1.0	0
118	MEMORIAL TRIBUTE TO MANFRED L. RISTIG (1935â€“2011). <i>International Journal of Modern Physics B</i> , 2013, 27, 1347003.	1.0	0
119	Fermion Condensation: Theory and Experiment. <i>Physics of Atomic Nuclei</i> , 2020, 83, 101-117.	0.1	0
120	ANTHONY LEGGETT: FEENBERG MEDALIST 1999 CONDENSED MATTER AS A TEST-BED FOR FUNDAMENTAL QUANTUM MECHANICS. , 2000, , .		0
121	APPLICATION OF SUPPORT VECTOR MACHINES TO GLOBAL PREDICTION OF NUCLEAR PROPERTIES. , 2006, , .		0
122	THE BRAIN'S VIEW OF THE NATURAL WORLD IN MOTION: COMPUTING STRUCTURE FROM FUNCTION USING DIRECTIONAL FOURIER TRANSFORMATIONS. , 2007, , .		0
123	MANY-BODY METHODS FOR NUCLEAR SYSTEMS AT SUBNUCLEAR DENSITIES. , 2008, , .		0
124	CHARLES CAMPBELL AT SIXTY-FIVE: A TRIBUTE TO INNOVATION AND ENDURING DEDICATION. , 2008, , .		0
125	TOPOLOGICAL PHASE TRANSITIONS IN STRONGLY CORRELATED FERMI SYSTEMS. , 2009, , .		0
126	DISSECTING AND TESTING COLLECTIVE AND TOPOLOGICAL SCENARIOS FOR THE QUANTUM CRITICAL POINT. , 2011, , .		0