D J J Farnell

List of Publications by Year
in descending order

123 papers	2,786 citations	159585 30 h-index	206112 48 g-index
140 all docs	140 docs citations	140 times ranked	1974 citing authors

#	Article	IF	Citations
1	Numerical and approximate analytical results for the frustrated spin- 1/2 quantum spin chain. Journal of Physics Condensed Matter, 1995, 7, 8605-8618.	1.8	164
2	An Efficient Implementation of High-Order Coupled-Cluster Techniques Applied to Quantum Magnets. Journal of Statistical Physics, 1998, 90, 327-361.	1.2	114
3	Heisenberg antiferromagnet on the kagome lattice with arbitrary spin: A higher-order coupled cluster treatment. Physical Review B, 2011, 84, .	3.2	86
4	Enhancement of blood vessels in digital fundus photographs via the application of multiscale line operators. Journal of the Franklin Institute, 2008, 345, 748-765.	3.4	85
5	Phase transitions in the spin-halfJ1âˆ'J2model. Physical Review B, 1998, 58, 6394-6402.	3.2	81
6	Phase diagram of a frustrated Heisenberg antiferromagnet on the honeycomb lattice: The<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>1</mml:mn></mml:msub></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"	3.2	81
7	Efficacy of ultrasonic activation techniques in removing intracanal smear layer and debris from mature permanent teeth: a systematic review and metaâ€analysis. International Endodontic Journal, 2018, 51, 605-621.	5.0	81
8	Quantum phase transitions of a square-lattice Heisenberg antiferromagnet with two kinds of nearest-neighbor bonds: A high-order coupled-cluster treatment. Physical Review B, 2000, 61, 14607-14615.	3.2	79
9	Coupled cluster treatment of the Shastry-Sutherland antiferromagnet. Physical Review B, 2005, 72, .	3.2	76
10	Magnetic order in a spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mstyle scriptlevel="1"><mml:mfrac bevelled="false"><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:mstyle></mml:mrow></mml:math>interpolating square-triangle Heisenberg antiferromagnet. Physical Review B, 2009, 79, .	3.2	69
11	High-order coupled cluster method study of frustrated and unfrustrated quantum magnets in external magnetic fields. Journal of Physics Condensed Matter, 2009, 21, 406002.	1.8	65
12	Frustrated spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mstyle scriptlevel="1"><mml:mfrac bevelled="false"><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:mstyle></mml:mrow></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi>J</mml:mi><mml:mn>1</mml:mn></mml:msub><mml:mtext>â'</mml:mtext><mml	3.2	65
13	ferromagnet on the. Physical Review B, 2010, 81, . The impact of radiotherapy late effects on quality of life in gynaecological cancer patients. British Journal of Cancer, 2009, 100, 1558-1565.	6.4	64
14	High-order coupled cluster method calculations for the ground- and excited-state properties of the spin-halfXXZmodel. Journal of Physics Condensed Matter, 2000, 12, 6887-6902.	1.8	62
15	Frustrated Heisenberg antiferromagnet on the honeycomb lattice: A candidate for deconfined quantum criticality. Physical Review B, 2011, 84, .	3.2	59
16	Coupled states of flapping flags. Journal of Fluids and Structures, 2004, 19, 29-36.	3.4	57
17	Quantum<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:mo>=</mml:mo><mml:mfrac><mml:mn	3.2	49
18	on Archimedean lattices: The route from semiclassical magnetic order to nonmagnetic quantum states. Physical Review B, 2014, 89, . Coupled cluster treatment of an interpolating triangle-kagomÃ©antiferromagnet. Physical Review B, 2001, 63, .	3.2	48

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19	The frustrated Heisenberg antiferromagnet on the honeycomb lattice:J₁â€“J₂model. Journal of Physics Condensed Matter, 2012, 24, 236002.	1.8	47
20	The spin-1/2 square-lattice J1-J2 model: the spin-gap issue. European Physical Journal B, 2015, 88, 1.	1.5	47
21	Detecting Reduced Bone Mineral Density From Dental Radiographs Using Statistical Shape Models. IEEE Transactions on Information Technology in Biomedicine, 2007, 11, 601-610.	3.2	43
22	Coupled Cluster Method Calculations of Quantum Magnets with Spins of General Spin Quantum Number. Journal of Statistical Physics, 2002, 108, 401-428.	1.2	39
23	Prospective analysis of patient-reported late toxicity following pelvic radiotherapy for gynaecological cancer. Radiotherapy and Oncology, 2012, 103, 327-332.	0.6	39
24	The coupled cluster method applied to quantum magnetism. Lecture Notes in Physics, 2004, , 307-348.	0.7	38
25	Frustrated Heisenberg antiferromagnet on the checkerboard lattice:<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>1</mml:mn></mml:msub></mml:math>-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:math>model. Physical Review B, 2012, 85, .	3.2	35
26	Direct calculation of the spin stiffness of the spin-12Heisenberg antiferromagnet on square, triangular, and cubic lattices using the coupled-cluster method. Physical Review B, 2006, 73, .	3.2	33
27	Risk factors associated with poorer experiences of end-of-life care and challenges in early bereavement: Results of a national online survey of people bereaved during the COVID-19 pandemic. Palliative Medicine, 2022, 36, 717-729.	3.1	33
28	Numerical simulations of a filament in a flowing soap film. International Journal for Numerical Methods in Fluids, 2004, 44, 313-330.	1.6	32
29	The effect of ovariectomy on mandibular cortical thickness in the rat. Journal of Dentistry, 2005, 33, 123-129.	4.1	32
30	Magnetic phases of the mixed-spinJ1â^'J2Heisenberg model on a square lattice. Physical Review B, 2002, 66, .	3.2	31
31	Magnetic order on a frustrated spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mstyle scriptlevel="1"><mml:mfrac bevelled="false"><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:mstyle></mml:mrow></mml:math>Heisenberg antiferromagnet on the Union Jack lattice. Physical Review B, 2010, 82, .	3.2	29
32	A Systematic Review of Information Literacy Programs in Higher Education: Effects of Face-to-Face, Online, and Blended Formats on Student Skills and Views. Evidence Based Library and Information Practice, 2017, 12, 20-55.	0.2	29
33	High-order coupled-cluster method for general spin-lattice problems: An illustration via the anisotropic Heisenberg model. Physical Review B, 2001, 64, .	3.2	28
34	Ground-state phases of the frustrated spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:math><mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mn>1</mml:mn></mml:msub></mml:math>â€“<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>J</mml:mi><mml:mi><</mml:mi></mml:math>	3.2	27
35	Ground-state ordering of theJ1â^'J2model on the simple cubic and body-centered cubic lattices. Physical Review B, 2016, 93, .	3.2	27
36	Development of a patient-reported questionnaire for collecting toxicity data following prostate brachytherapy. Radiotherapy and Oncology, 2010, 97, 136-142.	0.6	26

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37	Spin-half Heisenberg antiferromagnet on two archimedian lattices: From the bounce lattice to the maple-leaf lattice and beyond. Physical Review B, 2011, 84, .	3.2	26
38	Spin-<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mfrac><mml:mn>1</mml:mn><mml:mn>2</mml:mn></mml:mfrac></mml:math>Heisenberg antiferromagnet on an anisotropic kagome lattice. Physical Review B, 2012, 86, .	3.2	26
39	Support needs and barriers to accessing support: Baseline results of a mixed-methods national survey of people bereaved during the COVID-19 pandemic. Palliative Medicine, 2021, 35, 1985-1997.	3.1	26
40	Developing a CTCAEs patient questionnaire for late toxicity after head and neck radiotherapy. European Journal of Cancer, 2009, 45, 1992-1998.	2.8	25
41	A coupled-cluster treatment of spin- 1/2 systems with nearest- and next-nearest-neighbour interactions. Journal of Physics Condensed Matter, 1994, 6, 5521-5532.	1.8	24
42	High-Order Coupled Cluster Method (CCM) Calculations for Quantum Magnets with Valence-Bond Ground States. Journal of Statistical Physics, 2009, 135, 175-198.	1.2	24
43	Ground-state properties of the triangular-lattice Heisenberg antiferromagnet with arbitrary spin quantum number s. Journal of Magnetism and Magnetic Materials, 2016, 397, 333-341.	2.3	24
44	High-order coupled cluster calculations via parallel processing: An illustration forCaV4O9. Physical Review B, 2005, 72, .	3.2	21
45	The influence of irrigant activation, concentration and contact time on sodium hypochlorite penetration into root dentine: an ex vivo experiment. International Endodontic Journal, 2020, 53, 986-997.	5.0	21
46	Magnetic order in a spin-12interpolating kagome/square Heisenberg antiferromagnet. Physical Review B, 2010, 82, .	3.2	19
47	Interplay between lattice topology, frustration, and spin quantum number in quantum antiferromagnets on Archimedean lattices. Physical Review B, 2018, 98, .	3.2	19
48	â€˜It was brutal. It still isâ€™: a qualitative analysis of the challenges of bereavement during the COVID-19 pandemic reported in two national surveys. Palliative Care and Social Practice, 2022, 16, 263235242210924.	1.1	19
49	No more amalgams: Use of amalgam and amalgam alternative materials in primary dental care. British Dental Journal, 2018, 225, 171-176.	0.6	18
50	Personal protective equipment during the COVID-19 crisis: a snapshot and recommendations from the frontline of a university teaching hospital. Bone & Joint Open, 2020, 1, 131-136.	2.6	17
51	Malignant Transformation Rate of Oral Submucous Fibrosis: A Systematic Review and Meta-Analysis. Journal of Clinical Medicine, 2022, 11, 1793.	2.4	17
52	The Three-item ALERT-B Questionnaire Provides a Validated Screening Tool to Detect Chronic Gastrointestinal Symptoms after Pelvic Radiotherapy in Cancer Survivors. Clinical Oncology, 2016, 28, e139-e147.	1.4	16
53	The impact of a reduction in fluoride concentration in the Malaysian water supply on the prevalence of fluorosis and dental caries. Community Dentistry and Oral Epidemiology, 2018, 46, 492-499.	1.9	16
54	ODD AND EVEN BEHAVIOR WITH LSUBm APPROXIMATION LEVEL IN HIGH-ORDER COUPLED CLUSTER METHOD (CCM) CALCULATIONS. International Journal of Modern Physics B, 2008, 22, 3369-3379.	2.0	15

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55	Effectiveness of an audience response system on orthodontic knowledge retention of undergraduate dental students â€“ a randomised control trial. Journal of Orthodontics, 2015, 42, 307-314.	1.0	15
56	Management of orthodontic emergencies in primary care â€“ self-reported confidence of general dental practitioners. British Dental Journal, 2016, 221, 21-24.	0.6	15
57	Multilevel principal component analysis (mPCA) in shape analysis: A feasibility study in medical and dental imaging. Computer Methods and Programs in Biomedicine, 2016, 129, 149-159.	4.7	15
58	Coupled-cluster treatment of theXY-model. Journal of Physics Condensed Matter, 1997, 9, 7601-7608.	1.8	14
59	Ab initiosimulation of the nodal surfaces of Heisenberg antiferromagnets. Physical Review B, 1999, 59, 1000-1007.	3.2	14
60	Efficacy of data capture for patient-reported toxicity following radiotherapy for prostate or cervical cancer. European Journal of Cancer, 2010, 46, 534-540.	2.8	13
61	Antibiotic prescribing for endodontic therapies: a comparative survey between general dental practitioners and final year Bachelor of Dental Surgery students in Cardiff, <scp>UK</scp>. International Endodontic Journal, 2018, 51, 717-728.	5.0	13
62	Professional consensus on orthodontic risks: What orthodontists should tell their patients. American Journal of Orthodontics and Dentofacial Orthopedics, 2021, 159, 41-52.	1.7	13
63	Density matrix renormalization group calculations for two-dimensional lattices: Application to the spin-half and spin-one square-lattice Heisenberg models. Physical Review B, 2003, 68, .	3.2	12
64	The coupled-cluster method applied to theXXZmodel using a planar model state. Journal of Physics Condensed Matter, 1996, 8, 11153-11165.	1.8	10
65	Influence of the spin quantum number s on the zero-temperature phase transition in the square-lattice Jâ€“ model. Journal of Physics Condensed Matter, 2005, 17, 341-350.	1.8	9
66	The Magnetization Process of the Spin-One Triangular-Lattice Heisenberg Antiferromagnet. Journal of the Physical Society of Japan, 2013, 82, 015002.	1.6	9
67	Immunohistochemical Expression Patterns of Inflammatory Cells Involved in Chronic Hyperplastic Candidosis. Pathogens, 2019, 8, 232.	2.8	9
68	Factors associated with dental fluorosis among Malaysian children exposed to different fluoride concentrations in the public water supply. Journal of Public Health Dentistry, 2021, 81, 270-279.	1.2	9
69	Monte Carlo simulation of latanoprost induced iris darkening. Computer Methods and Programs in Biomedicine, 2007, 87, 93-103.	4.7	8
70	Improving the well-being of men by Evaluating and Addressing the Gastrointestinal Late Effects (EAGLE) of radical treatment for prostate cancer: study protocol for a mixed-method implementation project. BMJ Open, 2016, 6, e011773.	1.9	8
71	The spin-half XXZ antiferromagnet on the square lattice revisited: A high-order coupled cluster treatment. Journal of Magnetism and Magnetic Materials, 2017, 428, 178-188.	2.3	8
72	An investigation in to the impact of acquisition location on error type and rate when undertaking panoramic radiography. Radiography, 2017, 23, 305-309.	2.1	8

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73	Whatâ€™s in a Smile? Initial Analyses of Dynamic Changes in Facial Shape and Appearance. Journal of Imaging, 2019, 5, 2.	3.0	8
74	Sign rules for anisotropic quantum spin systems. Physical Review B, 2000, 61, 6775-6779.	3.2	7
75	Numerical model of self-propulsion in a fluid. Journal of the Royal Society Interface, 2005, 2, 79-88.	3.4	7
76	Multilevel principal components analysis of three-dimensional facial growth in adolescents. Computer Methods and Programs in Biomedicine, 2020, 188, 105272.	4.7	6
77	Dental and maxillofacial radiology: confidence, knowledge and skills in the newly graduated dentist. British Dental Journal, 2020, 228, 546-550.	0.6	6
78	An exploration of adolescent facial shape changes with age via multilevel partial least squares regression. Computer Methods and Programs in Biomedicine, 2021, 200, 105935.	4.7	6
79	A Comparative Study of ProTaper Universal and ProTaper Next Used by Undergraduate Students to Prepare Root Canals. Journal of Endodontics, 2017, 43, 1364-1369.	3.1	5
80	Surgical therapy for periâ€implantitis management: a systematic review and metaâ€analysis. Oral Surgery, 2018, 11, 200-212.	0.2	5
81	Non-coplanar Model States in Quantum Magnetism Applications of the High-Order Coupled Cluster Method. Journal of Statistical Physics, 2019, 176, 180-213.	1.2	5
82	Effect of magnesium sulphate added to lidocaine on inferior alveolar nerve block success in patients with symptoms of irreversible pulpitis: a prospective, randomized clinical trial. International Endodontic Journal, 2020, 53, 145-153.	5.0	5
83	Multilevel Analysis of the Influence of Maternal Smoking and Alcohol Consumption on the Facial Shape of English Adolescents. Journal of Imaging, 2020, 6, 34.	3.0	4
84	The ALERT-B questionnaire: A screening tool for the detection of gastroenterological late effects after radiotherapy for prostate cancer. Clinical and Translational Radiation Oncology, 2020, 21, 98-103.	1.7	4
85	Influence of remaining axial walls on of root filled teeth restored with a single crown and adhesively bonded fibre post: A systematic review and meta-analysis. Journal of Dentistry, 2021, 114, 103813.	4.1	4
86	Initial Results of Multilevel Principal Components Analysis of Facial Shape. Communications in Computer and Information Science, 2017, , 674-685.	0.5	4
87	AB INITIO TREATMENTS OF THE ISING MODEL IN A TRANSVERSE FIELD. International Journal of Modern Physics B, 2000, 14, 1517-1536.	2.0	3
88	QUANTUM PHASE TRANSITIONS IN SPIN SYSTEMS. , 2001, , .		3
89	COUPLED CLUSTER TREATMENTS OF QUANTUM MAGNETS: TWO EXAMPLES. International Journal of Modern Physics B, 2003, 17, 5347-5365.	2.0	3
90	Macular translocation surgery: computer simulation of visual perception. Graefe's Archive for Clinical and Experimental Ophthalmology, 2008, 246, 831-836.	1.9	3

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91	MAGNETIC ORDERING OF ANTIFERROMAGNETS ON A SPATIALLY ANISOTROPIC TRIANGULAR LATTICE. International Journal of Modern Physics B, 2010, 24, 5011-5026.	2.0	3
92	The impact of stopping or reducing the level of fluoride in public water supplies on dental fluorosis: a systematic review. Reviews on Environmental Health, 2020, 35, 419-426.	2.4	3
93	DETECTING OSTEOPOROSIS FROM DENTAL RADIOGRAPHS USING ACTIVE SHAPE MODELS. , 2007, , .		2
94	Ultrasound-guided fine-needle aspiration cytology of lesions in the head and neck performed without local anaesthesia â€“ An analysis of pain perception. Ultrasound, 2018, 26, 222-228.	0.7	2
95	Personal protective equipment during the COVID-19 crisis: a snapshot and recommendations from the frontline of a university teaching hospital. Bone & Joint Open, 2020, 1, 131-136.	2.6	2
96	Initial Investigations of the Cranial Size and Shape of Adult Eurasian Otters (Lutra lutra) in Great Britain. Journal of Imaging, 2020, 6, 106.	3.0	2
97	The use of nonâ€surgical interventions in patients with periâ€implantitis; a systematic review and metaâ€analysis. Oral Surgery, 2021, 14, 178-190.	0.2	2
98	Quantum Magnetism. Lecture Notes in Physics, 2010, , 135-152.	0.7	2
99	An ab initio coupled cluster theory of quantum spin lattices and their quantum critical behaviour. Molecular Physics, 1998, 94, 73-85.	1.7	1
100	AB INITIO CALCULATIONS FOR THE SQUARE-LATTICE ANISOTROPIC HEISENBERG MODEL. International Journal of Modern Physics B, 1999, 13, 709-719.	2.0	1
101	MARSHALL-PEIERLS SIGN RULES, THE QUANTUM MONTE CARLO METHOD, AND FRUSTRATION. International Journal of Modern Physics B, 2001, 15, 1736-1739.	2.0	1
102	Spin Models. Lecture Notes in Physics, 2010, , 7-19.	0.7	1
103	Measurement error in statistical models of shape. Computer Methods and Programs in Biomedicine, 2011, 104, e29-e44.	4.7	1
104	A radiographic analysis of anatomical variation at the mandibular sites of intraoral bone harvesting. Oral Surgery, 2018, 11, 105-111.	0.2	1
105	Emergence of magnetic order in kagomÃ© antiferromagnets. Frontiers of Physics, 2019, 14, 1.	5.0	1
106	The effects of age and sex on mandibular bone graft donor sites. Oral Surgery, 2021, 14, 52-58.	0.2	1
107	Higher Number of EBI3 Cells in Mucosal Chronic Hyperplastic Candidiasis May Serve to Regulate IL-17-Producing Cells. Journal of Fungi (Basel, Switzerland), 2021, 7, 533.	3.5	1
108	Multilevel Models of Age-Related Changes in Facial Shape in Adolescents. Communications in Computer and Information Science, 2020, , 101-113.	0.5	1

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109	COUPLED CLUSTER TREATMENTS OF QUANTUM MAGNETS: TWO EXAMPLES. , 2002, , .		1
110	AB INITIO CALCULATIONS OF THE SPIN-HALF XY MODEL. , 2001, , .		1
111	MARSHALL-PEIERLS SIGN RULES, THE QUANTUM MONTE CARLO METHOD, AND FRUSTRATION. , 2000, , .		1
112	Whatâ€™s in a Smile? Initial Results of Multilevel Principal Components Analysis of Facial Shape and Image Texture. Communications in Computer and Information Science, 2018, , 177-188.	0.5	1
113	An Exploration of Pathologies of Multilevel Principal Components Analysis in Statistical Models of Shape. Journal of Imaging, 2022, 8, 63.	3.0	1
114	HIGH-ORDER COUPLED CLUSTER RESULTS FOR QUANTUM ANTIFERROMAGNETS AND THEIR PHASE TRANSITIONS. International Journal of Modern Physics B, 2001, 15, 1385-1388.	2.0	0
115	Perception of tilt following counterâ€rotation surgery. Clinical and Experimental Ophthalmology, 2010, 38, 284-291.	2.6	0
116	MAGNETIC ORDERING OF ANTIFERROMAGNETS ON A SPATIALLY ANISOTROPIC TRIANGULAR LATTICE. , 2011, , .		0
117	Response to â€˜Stratification as a solutionâ€™. International Endodontic Journal, 2019, 52, 554-554.	5.0	0
118	HIGH-ORDER COUPLED CLUSTER RESULTS FOR QUANTUM ANTIFERROMAGNETS AND THEIR PHASE TRANSITIONS. , 2000, , .		0
119	Numerical Finite-Size Calculations. Lecture Notes in Physics, 2010, , 89-97.	0.7	0
120	The Coupled Cluster Method. Lecture Notes in Physics, 2010, , 109-134.	0.7	0
121	The Antiferromagnetic Ground State. Lecture Notes in Physics, 2010, , 39-47.	0.7	0
122	25â€…â€˜There is nowhere to place the angerâ€™: accounts of bereavement experiences during the COVID-19 pandemic. , 2022, , .		0
123	15â€…Parentsâ€™ accounts of the grief experiences and support needs of children and young people bereaved during the COVID-19 pandemic: results from a UK-wide online survey. , 2022, , .		0