David J Jeffrey

List of Publications by Year in descending order

62 papers	10,910 citations	257101 24 h-index	149479 56 g-index
64 all docs	64 docs citations	64 times ranked	7582 citing authors

#	Article	IF	Citations
1	On the LambertW function. Advances in Computational Mathematics, 1996, 5, 329-359.	0.8	4,751
2	Kinetic theories for granular flow: inelastic particles in Couette flow and slightly inelastic particles in a general flowfield. Journal of Fluid Mechanics, 1984, 140, 223-256.	1.4	2,583
3	Calculation of the resistance and mobility functions for two unequal rigid spheres in low-Reynolds-number flow. Journal of Fluid Mechanics, 1984, 139, 261-290.	1.4	698
4	Conduction through a random suspension of spheres. Proceedings of the Royal Society of London Series A, Mathematical and Physical Sciences, 1973, 335, 355-367.	1.5	561
5	The rheological properties of suspensions of rigid particles. AICHE Journal, 1976, 22, 417-432.	1.8	470
6	The stress tensor in a granular flow at high shear rates. Journal of Fluid Mechanics, 1981, 110, 255-272.	1.4	432
7	Some applications of the Lambert <I>W</I>Â function to physics. Canadian Journal of Physics, 2000, 78, 823-831.	0.4	172
8	The calculation of the low Reynolds number resistance functions for two unequal spheres. Physics of Fluids A, Fluid Dynamics, 1992, 4, 16-29.	1.6	126
9	Comparison of homotopy analysis method and homotopy perturbation method through an evolution equation. Communications in Nonlinear Science and Numerical Simulation, 2009, 14, 4057-4064.	1.7	103
10	Lowâ€Reynoldsâ€number flow between converging spheres. Mathematika, 1982, 29, 58-66.	0.3	81
11	Streamline patterns and eddies in low-Reynolds-number flow. Journal of Fluid Mechanics, 1980, 96, 315-334.	1.4	79
12	Algorithm 917. ACM Transactions on Mathematical Software, 2012, 38, 1-17.	1.6	73
13	Particle migration in suspensions by thermocapillary or electrophoretic motion. Journal of Fluid Mechanics, 1990, 212, 95.	1.4	72
14	The forces and couples acting on two nearly touching spheres in low-Reynolds-number flow. Zeitschrift Fur Angewandte Mathematik Und Physik, 1984, 35, 634-641.	0.7	62
15	The pressure moments for two rigid spheres in lowâ€Reynoldsâ€number flow. Physics of Fluids A, Fluid Dynamics, 1993, 5, 2317-2325.	1.6	61
16	Mobility functions for two unequal viscous drops in Stokes flow. I. Axisymmetric motions. Physics of Fluids, 1988, 31, 2445-2455.	1.4	52
17	The Lambert W function and quantum statistics. Journal of Mathematical Physics, 2009, 50, 102103.	0.5	50
18	Group expansions for the bulk properties of a statistically homogeneous, random suspension. Proceedings of the Royal Society of London Series A, Mathematical and Physical Sciences, 1974, 338, 503-516.	1.5	41

#	Article	IF	Citations
19	Heat transfer to a slowly moving fluid from a dilute fixed bed of heated spheres. Journal of Fluid Mechanics, 1980, 101, 403-421.	1.4	38
20	Mobility functions for two unequal viscous drops in Stokes flow. II. Asymmetric motions. Physics of Fluids A, Fluid Dynamics, 1989, 1, 61-76.	1.6	36
21	The unwinding number. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 1996, 30, 28-35.	0.3	35
22	â€œAccording to Abramowitz and Stegunâ€•or arccoth needn't be uncouth. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 2000, 34, 58-65.	0.3	33
23	An efficient analytical approach for solving fourth order boundary value problems. Computer Physics Communications, 2009, 180, 2034-2040.	3.0	28
24	Well â€¦ it isn't quite that simple. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 1992, 26, 2-6.	0.3	26
25	Reasoning about the Elementary Functions of Complex Analysis. Annals of Mathematics and Artificial Intelligence, 2002, 36, 303-318.	0.9	19
26	Aggregation of break-up of clay flocs in turbulent flow. Advances in Colloid and Interface Science, 1982, 17, 213-218.	7.0	16
27	Algebraic properties of the LambertWfunction from a result of Rosenlicht and of Liouville. Integral Transforms and Special Functions, 2008, 19, 709-712.	0.8	16
28	Approximate solutions to a parameterized sixth order boundary value problem. Computers and Mathematics With Applications, 2010, 59, 247-253.	1.4	16
29	Stieltjes and other integral representations for functions of LambertW. Integral Transforms and Special Functions, 2012, 23, 581-593.	0.8	16
30	Quasi-Stationary Approximations for the Size Distribution of Aerosols. Journals of the Atmospheric Sciences, 1981, 38, 2440-2443.	0.6	14
31	Approximate polynomial decomposition. , 1999, , .		14
32	Numerical evaluation of airy functions with complex arguments. Journal of Computational Physics, 1992, 99, 106-114.	1.9	13
33	Graphing elementary Riemann surfaces. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 1998, 32, 11-17.	0.3	11
34	Fraction-free matrix factors: new forms for LU and QR factors. Frontiers of Computer Science, 2008, 2, 67-80.	0.6	11
35	Bernstein, Pick, Poisson and related integral expressions for LambertW. Integral Transforms and Special Functions, 2012, 23, 817-829.	0.8	9
36	Two Perturbation Calculations in Fluid Mechanics using Large-expression Management. Journal of Symbolic Computation, 1997, 23, 427-443.	0.5	8

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37	Polynomial transformations of Tschirnhaus, Bring and Jerrard. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 2003, 37, 90-94.	0.3	8
38	Automatic computation of the travelling wave solutions to nonlinear PDEs. Computer Physics Communications, 2008, 178, 700-712.	3.0	7
39	D-dimensional Bose gases and the Lambert W function. Journal of Mathematical Physics, 2010, 51, 123303.	0.5	7
40	An analytical approach for solving nonlinear boundary value problems in finite domains. Numerical Algorithms, 2011, 56, 93-106.	1.1	7
41	Automatic computation of the complete root classification for a parametric polynomial. Journal of Symbolic Computation, 2009, 44, 1487-1501.	0.5	6
42	Higherâ€order corrections to the axisymmetric interactions of nearly touching spheres. Physics of Fluids A, Fluid Dynamics, 1989, 1, 1740-1742.	1.6	5
43	Rectifying Transformations for the Integration of Rational Trigonometric Functions. Journal of Symbolic Computation, 1997, 24, 563-573.	0.5	5
44	A conjecture concerning a completely monotonic function. Computers and Mathematics With Applications, 2010, 60, 1360-1363.	1.4	5
45	The lubrication analysis for two spheres in a twoâ€dimensional pureâ€straining motion. Physics of Fluids A, Fluid Dynamics, 1991, 3, 1819-1821.	1.6	4
46	Comprehensive LU Factors of Polynomial Matrices. Lecture Notes in Computer Science, 2020, , 80-88.	1.0	4
47	Solution of a hydrodynamic lubrication problem with Maple. Journal of Symbolic Computation, 1990, 9, 503-513.	0.5	3
48	Exploring Rounding Errors in Matlab Using Extended Precision. Procedia Computer Science, 2014, 29, 1423-1432.	1.2	3
49	Branch Structure and Implementation of Lambert W. Mathematics in Computer Science, 2017, 11, 341-350.	0.2	3
50	A note on Laplaceâ€™s equation inside a cylinder. Applied Mathematics Letters, 2005, 18, 55-59.	1.5	2
51	New travelling wave solutions to modified CH and DP equations. Computer Physics Communications, 2009, 180, 1429-1433.	3.0	2
52	Multivalued Elementary Functions in Computer-Algebra Systems. Lecture Notes in Computer Science, 2014, , 157-167.	1.0	2
53	Implicit Reduced Involutive Forms and Their Application to Engineering Multibody Systems. Lecture Notes in Computer Science, 2005, , 31-43.	1.0	1
54	Rapidly Convergent Integrals and Function Evaluation. Lecture Notes in Computer Science, 2017, , 270-274.	1.0	1

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55	Common Factors in Fraction-Free Matrix Decompositions. Mathematics in Computer Science, 2021, 15, 589-608.	0.2	1
56	A Symbolic-Numeric Approach to an Electric Field Problem. , 2007, , 349-359.		1
57	Analytic Approximations to Nonlinear Boundary Value Problems Modeling Beam-Type Nano-Electromechanical Systems. Zeitschrift Fur Naturforschung - Section A Journal of Physical Sciences, 2017, 72, 201-206.	0.7	0
58	Comprehensive anti-derivatives and parametric continuity. ACM Communications in Computer Algebra, 2018, 52, 32-33.	0.2	0
59	Integrals of functions containing parameters. Mathematical Gazette, 2020, 104, 412-426.	0.0	0
60	An unwinding number pair for continuous expressions of integrals. Journal of Symbolic Computation, 2021, 105, 97-117.	0.5	0
61	Symbolic Computation Sequences and Numerical Analytic Geometry Applied to Multibody Dynamical Systems. , 2007, , 335-347.		0
62	Rule-Based Simplification in Vector-Product Spaces. Lecture Notes in Computer Science, 2007, , 116-127.	1.0	0