Theodore E Simos

List of Publications by Year
in descending order

503 papers	16,150 citations	10984 71 h-index	33889 99 g-index
512 all docs	512 docs citations	512 times ranked	794 citing authors

#	Article	IF	Citations
1	A finite-difference method for the numerical solution of the SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 1997, 79, 189-205.	2.0	223
2	A four-step phase-fitted method for the numerical integration of second order initial-value problems. BIT Numerical Mathematics, 1991, 31, 160-168.	2.0	188
3	An exponentially-fitted Runge-Kutta method for the numerical integration of initial-value problems with periodic or oscillating solutions. Computer Physics Communications, 1998, 115, 1-8.	7.5	181
4	An optimized Rungeâ€"Kutta method for the solution of orbital problems. Journal of Computational and Applied Mathematics, 2005, 175, 1-9.	2.0	177
5	On finite difference methods for the solution of the SchrÃ¶dinger equation. Computers & Chemistry, 1999, 23, 513-554.	1.2	170
6	Rungeâ€"Kutta methods with minimal dispersion and dissipation for problems arising from computational acoustics. Journal of Computational and Applied Mathematics, 2005, 175, 173-181.	2.0	157
7	Newtonâ€"Cotes formulae for long-time integration. Journal of Computational and Applied Mathematics, 2003, 158, 75-82.	2.0	156
8	New modified Rungeâ€"Kuttaâ€"NystrÃ¶m methods for the numerical integration of the SchrÃ¶dinger equation. Computers and Mathematics With Applications, 2010, 60, 1639-1647.	2.7	152
9	High order closed Newtonâ€"Cotes trigonometrically-fitted formulae for the numerical solution of the SchrÃ¶dinger equation. Applied Mathematics and Computation, 2009, 209, 137-151.	2.2	150
10	Trigonometrically fitted predictorâ€"corrector methods for IVPs with oscillating solutions. Journal of Computational and Applied Mathematics, 2003, 158, 135-144.	2.0	148
11	A fourth algebraic order trigonometrically fitted predictorâ€"corrector scheme for IVPs with oscillating solutions. Journal of Computational and Applied Mathematics, 2005, 175, 137-147.	2.0	147
12	Exponentially and Trigonometrically Fitted Methods forÂtheÂSolution of the SchrÃ¶dinger Equation. Acta Applicandae Mathematicae, 2010, 110, 1331-1352.	1.0	147
13	Symplectic integrators for the numerical solution of the SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 2003, 158, 83-92.	2.0	146
14	Closed Newtonâ€"Cotes trigonometrically-fitted formulae of high order for long-time integration of orbital problems. Applied Mathematics Letters, 2009, 22, 1616-1621.	2.7	146
15	Construction of an optimized explicit Rungeâ€"Kuttaâ€"NystrÃ¶m method for the numerical solution of oscillatory initial value problems. Computers and Mathematics With Applications, 2011, 61, 3381-3390.	2.7	145
16	Multiderivative methods of eighth algebraic order with minimal phase-lag for the numerical solution of the radial SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 2005, 175, 161-172.	2.0	143
17	A parametric symmetric linear four-step method for the efficient integration of the SchrÃ¶dinger equation and related oscillatory problems. Journal of Computational and Applied Mathematics, 2012, 236, 3880-3889.	2.0	141
18	An optimized two-step hybrid block method for solving general second order initial-value problems. Numerical Algorithms, 2016, 72, 1089-1102.	1.9	140

#	Article	IF	Citations
19	Optimization as a function of the phase-lag order of nonlinear explicit two-step P-stable method for linear periodic IVPs. Applied Numerical Mathematics, 2009, 59, 2467-2474.	2.1	139
20	A generator of hybrid symmetric four-step methods for the numerical solution of the SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 2003, 158, 93-106.	2.0	138
21	Dissipative trigonometrically-fitted methods for linear second-order IVPs with oscillating solution. Applied Mathematics Letters, 2004, 17, 601-607.	2.7	131
22	A family of trigonometrically fitted partitioned Rungeâ€"Kutta symplectic methods. Applied Mathematics and Computation, 2009, 209, 91-96.	2.2	131
23	A family of high-order multistep methods with vanished phase-lag and its derivatives for the numerical solution of the SchrÃ¶dinger equation. Computers and Mathematics With Applications, 2011, 62, 3756-3774.	2.7	131
24	On modified Rungeâ€"Kutta trees and methods. Computers and Mathematics With Applications, 2011, 62, 2101-2111.	2.7	129
25	A Modiï¬ed Runge-Kutta-NystrÃ¶m Method by using Phase Lag Properties for the Numerical Solution of Orbital Problems. Applied Mathematics and Information Sciences, 2013, 7, 433-437.	0.5	128
26	A new family of symmetric linear four-step methods for the efficient integration of the SchrÃ¶dinger equation and related oscillatory problems. Applied Mathematics and Computation, 2012, 218, 5370-5382.	2.2	126
27	An Optimized Symmetric 8-Step Semi-Embedded Predictor-Corrector Method for IVPs with Oscillating Solutions. Applied Mathematics and Information Sciences, 2013, 7, 73-80.	0.5	124
28	On the Explicit Four-Step Methods with Vanished Phase-Lag and its First Derivative. Applied Mathematics and Information Sciences, 2014, 8, 447-458.	0.5	121
29	Optimizing a Hybrid Two-Step Method for the Numerical Solution of the SchrÃ¶dinger Equation and Related Problems with Respect to Phase-Lag. Journal of Applied Mathematics, 2012, 2012, 1-17.	0.9	120
30	A New Optimized Symmetric Embedded Predictor- Corrector Method (EPCM) for Initial-Value Problems with Oscillatory Solutions. Applied Mathematics and Information Sciences, 2014, 8, 703-713.	0.5	120
31	Exponentially-fitted Runge-Kutta-NystrÃ¶m method for the numerical solution of initial-value problems with oscillating solutions. Applied Mathematics Letters, 2002, 15, 217-225.	2.7	115
32	Zero Dissipative, Explicit Numerov-Type Methods for Second Order IVPs with Oscillating Solutions. Numerical Algorithms, 2003, 34, 27-40.	1.9	113
33	New Stable Closed Newton-Cotes Trigonometrically Fitted Formulae for Long-Time Integration. Abstract and Applied Analysis, 2012, 2012, 1-15.	0.7	111
34	A new approach on the construction of trigonometrically fitted two step hybrid methods. Journal of Computational and Applied Mathematics, 2016, 303, 146-155.	2.0	111
35	Exponentially fitted Rungeâ€"Kutta methods for the numerical solution of the SchrÃ¶dinger equation and related problems. Computational Materials Science, 2000, 18, 315-332.	3.0	108
36	An eight-step semi-embedded predictorâ€"corrector method for orbital problems and related IVPs with oscillatory solutions for which the frequency is unknown. Journal of Computational and Applied Mathematics, 2015, 290, 1-15.	2.0	108

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37	A new Numerov-type method for the numerical solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2009, 46, 981-1007.	1.5	103
38	Title is missing!. Journal of Mathematical Chemistry, 2001, 30, 121-131.	1.5	101
39	Trigonometrically fitted Runge?Kutta methods for the numerical solution of the Schrï¿½dinger equation. Journal of Mathematical Chemistry, 2005, 37, 281-293.	1.5	100
40	Construction of Exponentially Fitted Symplectic Rungeâ€"Kuttaâ€"NystrÃ¶m Methods from Partitioned Rungeâ€"Kutta Methods. Mediterranean Journal of Mathematics, 2016, 13, 2271-2285.	0.8	99
41	Title is missing!. Journal of Mathematical Chemistry, 2002, 31, 211-232.	1.5	98
42	The Use of Phase Lag and Amplification Error Derivatives for the Construction of a Modified Runge-Kutta-NystrÃ¶m Method. Abstract and Applied Analysis, 2013, 2013, 1-11.	0.7	97
43	A Rungeâ€"Kutta type implicit high algebraic order two-step method with vanished phase-lag and its first, second, third and fourth derivatives for the numerical solution of coupled differential equations arising from the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2015, 53, 1239-1256.	1.5	97
44	An exponentially-fitted and trigonometrically-fitted method for the numerical solution of periodic initial-value problems. Computers and Mathematics With Applications, 2003, 45, 547-554.	2.7	94
45	A new two stage symmetric two-step method with vanished phase-lag and its first, second, third and fourth derivatives for the numerical solution of the radial SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2016, 54, 442-465.	1.5	94
46	Title is missing!. Journal of Mathematical Chemistry, 2002, 32, 257-270.	1.5	93
47	A new family of two stage symmetric two-step methods with vanished phase-lag and its derivatives for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2015, 53, 2191-2213.	1.5	92
48	Two optimized symmetric eight-step implicit methods for initial-value problems with oscillating solutions. Journal of Mathematical Chemistry, 2009, 46, 604-620.	1.5	89
49	A High-Order Two-Step Phase-Fitted Method for the Numerical Solution of the SchrÃ¶dinger Equation. Mediterranean Journal of Mathematics, 2016, 13, 5177-5194.	0.8	89
50	Optimized Rungeâ€"Kutta pairs for problems with oscillating solutions. Journal of Computational and Applied Mathematics, 2002, 147, 397-409.	2.0	87
51	Title is missing!. Journal of Mathematical Chemistry, 2002, 31, 135-144.	1.5	87
52	Symplectic Methods for the Numerical Solution of the Radial ShrÃ¶dinger Equation. Journal of Mathematical Chemistry, 2003, 34, 83-94.	1.5	87
53	A family of multiderivative methods for the numerical solution of the Schrï¿½dinger equation. Journal of Mathematical Chemistry, 2005, 37, 317-332.	1.5	86
54	A Family of Exponentially-fitted Rungeâ€"Kutta Methods with Exponential Order Up to Three for the Numerical Solution of the SchrÃ¶dinger Equation. Journal of Mathematical Chemistry, 2007, 41, 79-100.	1.5	86

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55	Exponentially fitted symplectic integrator. Physical Review E, 2003, 67, 016701.	2.1	85
56	Phase-fitted Rungeâ€"Kutta pairs of orders 8(7). Journal of Computational and Applied Mathematics, 2017, 321, 226-231.	2.0	84
57	A Rungeâ€"Kutta type four-step method with vanished phase-lag and its first and second derivatives for each level for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2014, 52, 917-947.	1.5	83
58	Evolutionary generation of highâ€order, explicit, twoâ€step methods for secondâ€order linear IVPs. Mathematical Methods in the Applied Sciences, 2017, 40, 6276-6284.	2.3	82
59	Review of multistep methods for the numerical solution of the radial SchrÃ¶dinger equation. International Journal of Quantum Chemistry, 2005, 103, 278-290.	2.0	80
60	Title is missing!. Journal of Mathematical Chemistry, 2002, 31, 371-404.	1.5	79
61	Title is missing!. Journal of Mathematical Chemistry, 2003, 34, 39-58.	1.5	79
62	Exponentially - Fitted Multiderivative Methods for the Numerical Solution of the SchrÃ¶dinger Equation. Journal of Mathematical Chemistry, 2004, 36, 13-27.	1.5	77
63	Exponentially fitted symplectic methods for the numerical integration of the Schrï¿½dinger equation. Journal of Mathematical Chemistry, 2005, 37, 263-270.	1.5	77
64	A low computational cost eight algebraic order hybrid method with vanished phase-lag and its first, second, third and fourth derivatives for the approximate solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2015, 53, 1295-1312.	1.5	77
65	A four-step method for the numerical solution of the SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 1990, 30, 251-255.	2.0	76
66	Title is missing!. Journal of Mathematical Chemistry, 2001, 29, 281-291.	1.5	76
67	Title is missing!. Journal of Mathematical Chemistry, 2001, 29, 293-305.	1.5	76
68	Modified twoâ€step hybrid methods for the numerical integration of oscillatory problems. Mathematical Methods in the Applied Sciences, 2017, 40, 5286-5294.	2.3	76
69	Bessel and Neumann-fitted methods for the numerical solution of the radial SchrÃ¶dinger equation. Computers & Chemistry, 1997, 21, 175-179.	1.2	75
70	An economical eighth-order method for the approximation of the solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2017, 55, 717-733.	1.5	75
71	Title is missing!. Journal of Mathematical Chemistry, 2000, 27, 343-356.	1.5	74
72	Sixth algebraic order trigonometrically fitted predictor?corrector methods for the numerical solution of the radial Schrï¿½dinger equation. Journal of Mathematical Chemistry, 2005, 37, 295-316.	1.5	74

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73	Trigonometrically fitted and exponentially fitted symplectic methods for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2006, 40, 257-267.	1.5	73
74	High order closed Newton-Cotes exponentially and trigonometrically fitted formulae as multilayer symplectic integrators and their application to the radial SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2012, 50, 1224-1261.	1.5	72
75	Symplectic Methods of Fifth Order for the Numerical Solution of the Radial ShrÃ¶dinger Equation. Journal of Mathematical Chemistry, 2004, 35, 55-63.	1.5	70
76	Numerical multistep methods for the efficient solution of quantum mechanics and related problems. Physics Reports, 2009, 482-483, 1-240.	25.6	70
77	A fourth algebraic order exponentially-fitted Runge-Kutta method for the numerical solution of the Schrodinger equation. IMA Journal of Numerical Analysis, 2001, 21, 919-931.	2.9	69
78	An optimized explicit Runge-Kutta method with increased phase-lag order for the numerical solution of the SchrÃ¶dinger equation and related problems. Journal of Mathematical Chemistry, 2010, 47, 315-330.	1.5	69
79	New high order multiderivative explicit four-step methods with vanished phase-lag and its derivatives for the approximate solution of the SchrÃ¶dinger equation. Part I: Construction and theoretical analysis. Journal of Mathematical Chemistry, 2013, 51, 194-226.	1.5	69
80	A dissipative exponentially-fitted method for the numerical solution of the SchrÃ¶dinger equation and related problems. Computer Physics Communications, 2003, 152, 274-294.	7.5	68
81	The numerical solution of the radial SchrÃ¶dinger equation via a trigonometrically fitted family of seventh algebraic order Predictorâ€"Corrector methods. Journal of Mathematical Chemistry, 2006, 40, 269-293.	1.5	68
82	Embedded methods for the numerical solution of the SchrÃ¶dinger equation. Computers and Mathematics With Applications, 1996, 31, 85-102.	2.7	67
83	A new family of 7 stages, eighthâ€order explicit Numerovâ€type methods. Mathematical Methods in the Applied Sciences, 2017, 40, 7867-7878.	2.3	67
84	A four-step exponentially fitted method for the numerical solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2006, 40, 305-318.	1.5	66
85	High-order closed Newtonâ€"Cotes trigonometrically-fitted formulae for long-time integration of orbital problems. Computer Physics Communications, 2008, 178, 199-207.	7.5	64
86	An explicit four-step method with vanished phase-lag and its first and second derivatives. Journal of Mathematical Chemistry, 2014, 52, 833-855.	1.5	64
87	A family of two-stage two-step methods for the numerical integration of the SchrÃ¶dinger equation and related IVPs with oscillating solution. Journal of Mathematical Chemistry, 2009, 45, 1102-1129.	1.5	63
88	Symplectic Partitioned Rungeâ€"Kutta methods with minimal phase-lag. Computer Physics Communications, 2010, 181, 1251-1254.	7.5	63
89	Some New Four-Step Exponential-Fitting Methods for the Numerical Solution of the Radical SchrÃ¶dinger Equation. IMA Journal of Numerical Analysis, 1991, 11, 347-356.	2.9	59
90	Explicit two-step methods with minimal phase-lag for the numerical integration of special second-order initial-value problems and their application to the one-dimensional SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 1992, 39, 89-94.	2.0	58

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91	Numerov-type methods with minimal phase-lag for the numerical integration of the one-dimensional SchrÃ¶dinger equation. Computing (Vienna/New York), 1990, 45, 175-181.	4.8	57
92	Trigonometric fitted, eighthâ€order explicit Numerovâ€type methods. Mathematical Methods in the Applied Sciences, 2018, 41, 1845-1854.	2.3	57
93	A new high algebraic order efficient finite difference method for the solution of the SchrÃ¶dinger equation. Filomat, 2017, 31, 4999-5012.	0.5	57
94	Symplectic methods for the numerical integration of the SchrÃ¶dinger equation. Computational Materials Science, 2007, 38, 526-532.	3.0	56
95	A hybrid type four-step method with vanished phase-lag and its first, second and third derivatives for each level for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2014, 52, 2334-2379.	1.5	55
96	A family of explicit linear six-step methods with vanished phase-lag and its first derivative. Journal of Mathematical Chemistry, 2014, 52, 2087-2118.	1.5	55
97	CLOSED NEWTONâ€“COTES TRIGONOMETRICALLY-FITTED FORMULAE FOR LONG-TIME INTEGRATION. International Journal of Modern Physics C, 2003, 14, 1061-1074.	1.7	54
98	On Ninth Order, Explicit Numerov-Type Methods with Constant Coefficients. Mediterranean Journal of Mathematics, 2018, 15, 1.	0.8	54
99	New Second-order Exponentially and Trigonometrically Fitted Symplectic Integrators for the Numerical Solution of the Time-independent SchrÃ¶dinger Equation. Journal of Mathematical Chemistry, 2007, 42, 535-545.	1.5	53
100	A family of four-step trigonometrically-fitted methods and its application to the schrÃ¶dinger equation. Journal of Mathematical Chemistry, 2008, 44, 447-466.	1.5	53
101	Closed Newtonâ€“Cotes trigonometrically-fitted formulae of high order for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2008, 44, 483-499.	1.5	53
102	Efficient low computational cost hybrid explicit four-step method with vanished phase-lag and its first, second, third and fourth derivatives for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2015, 53, 1808-1834.	1.5	53
103	A generator of high-order embedded P-stable methods for the numerical solution of the SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 1996, 72, 345-358.	2.0	52
104	A family of hybrid exponentially fitted predictor-corrector methods for the numerical integration of the radial SchrÃ¶dinger equation. Journal of Computational and Applied Mathematics, 1997, 87, 215-226.	2.0	52
105	A new explicit hybrid four-step method with vanished phase-lag and its derivatives. Journal of Mathematical Chemistry, 2014, 52, 1690-1716.	1.5	52
106	New closed Newtonâ€“Cotes type formulae as multilayer symplectic integrators. Journal of Chemical Physics, 2010, 133, 104108.	3.0	51
107	A two-step method with phase-lag of order infinity for the numerical integration of second order periodic initial-value problem. International Journal of Computer Mathematics, 1991, 39, 135-140.	1.8	50
108	Controlling the error growth in longâ€“term numerical integration of perturbed oscillations in one or several frequencies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2004, 460, 561-567.	2.1	50

#	ARTICLE	IF	CITATIONS
109	A Runge-Kutta Fehlberg method with phase-lag of order infinity for initial-value problems with oscillating solution. Computers and Mathematics With Applications, 1993, 25, 95-101.	2.7	49
110	AN ADAPTED SYMPLECTIC INTEGRATOR FOR HAMILTONIAN PROBLEMS. International Journal of Modern Physics C, 2001, 12, 225-234.	1.7	49
111	Computation of the eigenvalues of the SchrÃ¶dinger equation by symplectic and trigonometrically fitted symplectic partitioned Rungeâ€“Kutta methods. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 569-573.	2.1	49
112	A symmetric eight-step predictor-corrector method for the numerical solution of the radial SchrÃ¶dinger equation and related IVPs with oscillating solutions. Computer Physics Communications, 2011, 182, 1626-1637.	7.5	49
113	A NEW SYMMETRIC EIGHT-STEP PREDICTOR-CORRECTOR METHOD FOR THE NUMERICAL SOLUTION OF THE RADIAL SCHRÃ–DINGER EQUATION AND RELATED ORBITAL PROBLEMS. International Journal of Modern Physics C, 2011, 22, 133-153.	1.7	49
114	A new four stages symmetric two-step method with vanished phase-lag and its first derivative for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2016, 54, 1187-1211.	1.5	49
115	Trigonometric-Fitted Explicit Numerov-Type Method with Vanishing Phase-Lag and Its First and Second Derivatives. Mediterranean Journal of Mathematics, 2018, 15, 1.	0.8	49
116	Title is missing!. Journal of Mathematical Chemistry, 1998, 24, 23-37.	1.5	48
117	A Family of P-stable Eighth Algebraic Order Methods with Exponential Fitting Facilities. Journal of Mathematical Chemistry, 2001, 29, 177-189.	1.5	48
118	Closed Newton-Cotes Trigonometrically-Fitted Formulae for Numerical Integration of the SchrÃ¶dinger Equation. Computing Letters, 2007, 3, 45-57.	0.5	48
119	Families of third and fourth algebraic order trigonometrically fitted symplectic methods for the numerical integration of Hamiltonian systems. Computer Physics Communications, 2007, 177, 757-763.	7.5	48
120	A nonlinear explicit two-step fourth algebraic order method of order infinity for linear periodic initial value problems. Computer Physics Communications, 2010, 181, 1362-1368.	7.5	48
121	A NEW METHODOLOGY FOR THE CONSTRUCTION OF OPTIMIZED RUNGEâ€“KUTTAâ€“NYSTRÃ–M METHODS. International Journal of Modern Physics C, 2011, 22, 623-634.	1.7	48
122	A high algebraic order predictorâ€“corrector explicit method with vanished phase-lag and its first, second, third and fourth derivatives for the numerical solution of the SchrÃ¶dinger equation and related problems. Journal of Mathematical Chemistry, 2015, 53, 1495-1522.	1.5	48
123	Fitted modifications of classical Rungeâ€Kutta pairs of orders 5(4). Mathematical Methods in the Applied Sciences, 2018, 41, 4549-4559.	2.3	48
124	Title is missing!. Journal of Mathematical Chemistry, 1997, 21, 359-372.	1.5	47
125	Numerical solution of the two-dimensional time independent Schrï¿½dinger equation with Numerov-type methods. Journal of Mathematical Chemistry, 2005, 37, 271-279.	1.5	47
126	A high algebraic order multistage explicit four-step method with vanished phase-lag and its first, second, third, fourth and fifth derivatives for the numerical solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2015, 53, 1915-1942.	1.5	47

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127	A predictorâ€“corrector explicit four-step method with vanished phase-lag and its first, second and third derivatives for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2015, 53, 685-717.	1.5	47
128	A Rungeâ€"Kuttaâ€"NystrÃ¶m method for the numerical integration of special second-order periodic initial-value problems. Journal of Computational and Applied Mathematics, 1994, 51, 317-326.	2.0	46
129	Title is missing!. Journal of Mathematical Chemistry, 1999, 25, 65-84.	1.5	46
130	A P-stable exponentially fitted method for the numerical integration of the SchrÃ¶dinger equation. Applied Mathematics and Computation, 2000, 112, 99-112.	2.2	45
131	A two-step method with vanished phase-lag and its first two derivatives for the numerical solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2011, 49, 2486-2518.	1.5	45
132	Embedded eighth order methods for the numerical solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 1999, 26, 327-341.	1.5	44
133	Mulitstep methods with vanished phase-lag and its first and second derivatives for the numerical integration of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2010, 48, 1092-1143.	1.5	44
134	A modified Rungeâ€“Kutta method with phase-lag of order infinity for the numerical solution of the SchrÃ¶dinger equation and related problems. Computers & Chemistry, 2001, 25, 275-281.	1.2	43
135	High algebraic order methods with vanished phase-lag and its first derivative for the numerical solution of the SchrÃ¶dinger equation. Journal of Mathematical Chemistry, 2010, 48, 925-958.	1.5	43
136	TWO NEW PHASE-FITTED SYMPLECTIC PARTITIONED RUNGEâ€“KUTTA METHODS. International Journal of Modern Physics C, 2011, 22, 1343-1355.	1.7	43
137	A new optimized symmetric 8-step semi-embedded predictorâ€“corrector method for the numerical solution of the radial SchrÃ¶dinger equation and related orbital problems. Journal of Mathematical Chemistry, 2013, 51, 1914-1937.	1.5	43
138	Runge-Kutta interpolants with minimal phase-lag. Computers and Mathematics With Applications, 1993, 26, 43-49.	2.7	42
139	A phase-fitted Rungeâ€“Kuttaâ€“NystrÃ¶m method for the numerical solution of initial value problems with oscillating solutions. Computer Physics Communications, 2009, 180, 1839-1846.	7.5	42
140	A three-stages multistep teeming in phase algorithm for computational problems in chemistry. Journal of Mathematical Chemistry, 2019, 57, 1598-1617.	1.5	42
141	Neural network solution of pantograph type differential equations. Mathematical Methods in the Applied Sciences, 2020, 43, 3369-3374.	2.3	42
142	An efficient and computational effective method for second order problems. Journal of Mathematical Chemistry, 2017, 55, 1649-1668.	1.5	41
143	SPECIAL OPTIMIZED RUNGEâ€“KUTTA METHODS FOR IVPs WITH OSCILLATING SOLUTIONS. International Journal of Modern Physics C, 2004, 15, 1-15.	1.7	40
144	An exponentially-fitted high order method for long-term integration of periodic initial-value problems. Computer Physics Communications, 2001, 140, 358-365.	7.5	39

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145	A NEW EIGHT-STEP SYMMETRIC EMBEDDED PREDICTOR-CORRECTOR METHOD (EPCM) FOR ORBITAL PROBLEMS AND RELATED IVPs WITH OSCILLATORY SOLUTIONS. Astronomical Journal, 2013, 145, 75.	4.7	39
146	Atomic structure computations. Chemical Modelling, 2007, , 38-142.	0.4	39
147	An explicit almost P-stable two-step method with phase-lag of order infinity for the numerical integration of second-order pacific initial-value problems. Applied Mathematics and Computation, 1992, 49, 261-268.	2.2	38
148	Explicit eighth order methods for the numerical integration of initial-value problems with periodic or oscillating solutions. Computer Physics Communications, 1999, 119, 32-44.	7.5	38
149	Neural Network Solution of Single-Delay Differential Equations. Mediterranean Journal of Mathematics, 2020, 17, 1.	0.8	38
150	An extended numerov-type method for the numerical solution of the SchrÃ¶dinger equation. Computers and Mathematics With Applications, 1997, 33, 67-78.	2.7	37
151	A NEW MODIFIED RUNGEâ€“KUTTAâ€“NYSTRÃ–M METHOD WITH PHASE-LAG OF ORDER INFINITY FOR THE NUMERICAL SOLUTION OF THE SCHRÃ–DINGER EQUATION AND RELATED PROBLEMS. International Journal of Modern Physics C, 2000, 11, 1195-1208.	1.7	37
152	A SYMMETRIC HIGH ORDER METHOD WITH MINIMAL PHASE-LAG FOR THE NUMERICAL SOLUTION OF THE SCHRÃ–DINGER EQUATION. International Journal of Modern Physics C, 2001, 12, 1035-1042.	1.7	37
153	ON THE CONSTRUCTION OF EFFICIENT METHODS FOR SECOND ORDER IVPS WITH OSCILLATING SOLUTION. International Journal of Modern Physics C, 2001, 12, 1453-1476.	1.7	37
154	New open modified Newton Cotes type formulae as multilayer symplectic integrators. Applied Mathematical Modelling, 2013, 37, 1983-1991.	4.2	36
155	Predictor-corrector phase-fitted methods forYâ€³=F(X,Y) and an application to the SchrÃ¶dinger equation. International Journal of Quantum Chemistry, 1995, 53, 473-483.	2.0	35
156	A two-step method for the numerical solution of the radial SchrÃ¶dinger equation. Computers and Mathematics With Applications, 1995, 29, 31-37.	2.7	35
157	Explicit high order methods for the numerical integration of periodic initial-value problems. Applied Mathematics and Computation, 1998, 95, 15-26.	2.2	35
158	ACCURATELY CLOSED NEWTONâ€“COTES TRIGONOMETRICALLY-FITTED FORMULAE FOR THE NUMERICAL SOLUTION OF THE SCHRÃ–DINGER EQUATION. International Journal of Modern Physics C, 2013, 24, 1350014.	1.7	35
159	A new high algebraic order four stages symmetric two-step method with vanished phase-lag and its first and second derivatives for the numerical solution of the SchrÃ¶dinger equation and related problems. Journal of Mathematical Chemistry, 2016, 54, 1417-1439.	1.5	35
160	A finite difference pair with improved phase and stability properties. Journal of Mathematical Chemistry, 2018, 56, 170-192.	1.5	35
161	Explicit, twoâ€stage, sixthâ€order, hybrid fourâ€step methods for solving. Mathematical Methods in the Applied Sciences, 2018, 41, 6997-7006.	2.3	35
162	Trigonometricâ€“fitted hybrid fourâ€“step methods of sixth order for solving. Mathematical Methods in the Applied Sciences, 2019, 42, 710-716.	2.3	35

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