Theodore E Simos

List of Publications by Citations

433 papers	13,931 citations	68 h-index	89 g-index
512 ext. papers	15,366 ext. citations	2.4 avg, IF	7.61 L-index

#	Paper	IF	Citations
433	A finite-difference method for the numerical solution of the Schrödinger equation. *Journal of Computational and Applied Mathematics*, **1997**, 79, 189-205	2.4	172
432	A four-step phase-fitted method for the numerical integration of second order initial-value problems. *BIT Numerical Mathematics*, **1991**, 31, 160-168	1.7	154
431	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	4.2	147
430	Exponentially and Trigonometrically Fitted Methods for the Solution of the Schrödinger Equation. *Acta Applicandae Mathematicae*, **2010**, 110, 1331-1352	1.1	137
429	On finite difference methods for the solution of the Schrödinger equation. *Computers & Chemistry*, **1999**, 23, 513-554		137
428	Closed Newton□Cotes trigonometrically-fitted formulae of high order for long-time integration of orbital problems. *Applied Mathematics Letters*, **2009**, 22, 1616-1621	3.5	132
427	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	2.5	130
426	An optimized Runge□Kutta method for the solution of orbital problems. *Journal of Computational and Applied Mathematics*, **2005**, 175, 1-9	2.4	129
425	Newton□Cotes formulae for long-time integration. *Journal of Computational and Applied Mathematics*, **2003**, 158, 75-82	2.4	125
424	High order closed Newton□Cotes trigonometrically-fitted formulae for the numerical solution of the Schrödinger equation. *Applied Mathematics and Computation*, **2009**, 209, 137-151	2.7	124
423	New modified Runge□Kutta□Nyström methods for the numerical integration of the Schrödinger equation. *Computers and Mathematics With Applications*, **2010**, 60, 1639-1647	2.7	120
422	Runge□Kutta methods with minimal dispersion and dissipation for problems arising from computational acoustics. *Journal of Computational and Applied Mathematics*, **2005**, 175, 173-181	2.4	119
421	Symplectic integrators for the numerical solution of the Schrödinger equation. *Journal of Computational and Applied Mathematics*, **2003**, 158, 83-92	2.4	117
420	Trigonometrically fitted predictor□corrector methods for IVPs with oscillating solutions. *Journal of Computational and Applied Mathematics*, **2003**, 158, 135-144	2.4	116
419	Construction of an optimized explicit Runge□Kutta□Nyström method for the numerical solution of oscillatory initial value problems. *Computers and Mathematics With Applications*, **2011**, 61, 3381-3390	2.7	114
418	A parametric symmetric linear four-step method for the efficient integration of the Schrödinger equation and related oscillatory problems. *Journal of Computational and Applied Mathematics*, **2012** , 236, 3880-3889	2.4	113
417	An optimized two-step hybrid block method for solving general second order initial-value problems. *Numerical Algorithms*, **2016**, 72, 1089-1102	2.1	112

416	Optimizing a Hybrid Two-Step Method for the Numerical Solution of the Schrödinger Equation and Related Problems with Respect to Phase-Lag. *Journal of Applied Mathematics*, **2012**, 2012, 1-17	1.1	111
415	Multiderivative methods of eighth algebraic order with minimal phase-lag for the numerical solution of the radial Schrödinger equation. *Journal of Computational and Applied Mathematics*, **2005**, 175, 161-172	2.4	111
414	A fourth algebraic order trigonometrically fitted predictor–corrector scheme for IVPs with oscillating solutions. *Journal of Computational and Applied Mathematics*, **2005**, 175, 137-147	2.4	111
413	New Stable Closed Newton-Cotes Trigonometrically Fitted Formulae for Long-Time Integration. *Abstract and Applied Analysis*, **2012**, 2012, 1-15	0.7	107
412	A Modified Runge-Kutta-Nyström Method by using Phase Lag Properties for the Numerical Solution of Orbital Problems. *Applied Mathematics and Information Sciences*, **2013**, 7, 433-437	2.4	107
411	On modified Runge–Kutta trees and methods. *Computers and Mathematics With Applications*, **2011**, 62, 2101-2111	2.7	106
410	A generator of hybrid symmetric four-step methods for the numerical solution of the Schrödinger equation. *Journal of Computational and Applied Mathematics*, **2003**, 158, 93-106	2.4	106
409	A family of high-order multistep methods with vanished phase-lag and its derivatives for the numerical solution of the Schrödinger equation. *Computers and Mathematics With Applications*, **2011**, 62, 3756-3774	2.7	104
408	Dissipative trigonometrically-fitted methods for linear second-order IVPs with oscillating solution. *Applied Mathematics Letters*, **2004**, 17, 601-607	3.5	104
407	Zero Dissipative, Explicit Numerov-Type Methods for Second Order IVPs with Oscillating Solutions. *Numerical Algorithms*, **2003**, 34, 27-40	2.1	104
406	A family of trigonometrically fitted partitioned Runge–Kutta symplectic methods. *Applied Mathematics and Computation*, **2009**, 209, 91-96	2.7	103
405	An Optimized Symmetric 8-Step Semi-Embedded Predictor-Corrector Method for IVPs with Oscillating Solutions. *Applied Mathematics and Information Sciences*, **2013**, 7, 73-80	2.4	103
404	Exponentially-fitted Runge-Kutta-Nyström method for the numerical solution of initial-value problems with oscillating solutions. *Applied Mathematics Letters*, **2002**, 15, 217-225	3.5	102
403	A new family of symmetric linear four-step methods for the efficient integration of the Schrödinger equation and related oscillatory problems. *Applied Mathematics and Computation*, **2012**, 218, 5370-5382	2.7	101
402	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	2.4	100
401	On the Explicit Four-Step Methods with Vanished Phase-Lag and its First Derivative. *Applied Mathematics and Information Sciences*, **2014**, 8, 447-458	2.4	99
400	A new Numerov-type method for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2009**, 46, 981-1007	2.1	97
399	Trigonometrically fitted Runge–Kutta methods for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2005**, 37, 281-293	2.1	96

398	A Modified Phase-Fitted Runge–Kutta Method for the Numerical Solution of the Schrödinger Equation. *Journal of Mathematical Chemistry*, **2001**, 30, 121-131	2.1	96
397	Exponentially fitted Runge–Kutta methods for the numerical solution of the Schrödinger equation and related problems. *Computational Materials Science*, **2000**, 18, 315-332	3.2	90
396	A new approach on the construction of trigonometrically fitted two step hybrid methods. *Journal of Computational and Applied Mathematics*, **2016**, 303, 146-155	2.4	90
395	Two optimized symmetric eight-step implicit methods for initial-value problems with oscillating solutions. *Journal of Mathematical Chemistry*, **2009**, 46, 604-620	2.1	87
394	Family of Twelve Steps Exponential Fitting Symmetric Multistep Methods for the Numerical Solution of the Schrödinger Equation. *Journal of Mathematical Chemistry*, **2002**, 32, 257-270	2.1	87
393	An eight-step semi-embedded predictor–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	2.4	86
392	Construction of Trigonometrically and Exponentially Fitted Runge–Kutta–Nyström Methods for the Numerical Solution of the Schrödinger Equation and Related Problems – a Method of 8th Algebraic Order. *Journal of Mathematical Chemistry*, **2002**, 31, 211-232	2.1	86
391	A Runge–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 Schrödinger equation. *Journal of Mathematical Chemistry*, **2015**, 53, 1239-1256	2.1	84
390	Optimized Runge–Kutta pairs for problems with oscillating solutions. *Journal of Computational and Applied Mathematics*, **2002**, 147, 397-409	2.4	82
389	Construction of Exponentially Fitted Symplectic Runge–Kutta–Nyström Methods from Partitioned Runge–Kutta Methods. *Mediterranean Journal of Mathematics*, **2016**, 13, 2271-2285	0.9	81
388	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 Schrödinger equation. *Journal of Mathematical Chemistry*, **2016**, 54, 442-465	2.1	81
387	A Family of Exponentially-fitted Runge–Kutta Methods with Exponential Order Up to Three for the Numerical Solution of the Schrödinger Equation. *Journal of Mathematical Chemistry*, **2007**, 41, 79-100	2.1	81
386	Symmetric Eighth Algebraic Order Methods with Minimal Phase-Lag for the Numerical Solution of the Schrödinger Equation. *Journal of Mathematical Chemistry*, **2002**, 31, 135-144	2.1	81
385	A new family of two stage symmetric two-step methods with vanished phase-lag and its derivatives for the numerical integration of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2015**, 53, 2191-2213	2.1	79
384	A family of multiderivative methods for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2005**, 37, 317-332	2.1	79
383	Symplectic Methods for the Numerical Solution of the Radial Shrödinger Equation. *Journal of Mathematical Chemistry*, **2003**, 34, 83-94	2.1	77
382	Review of multistep methods for the numerical solution of the radial Schrödinger equation. *International Journal of Quantum Chemistry*, **2005**, 103, 278-290	2.1	77
381	The Use of Phase Lag and Amplification Error Derivatives for the Construction of a Modified Runge-Kutta-Nyström Method. *Abstract and Applied Analysis*, **2013**, 2013, 1-11	0.7	76

380	Exponentially fitted symplectic methods for the numerical integration of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2005**, 37, 263-270	2.1	75
379	Exponentially - Fitted Multiderivative Methods for the Numerical Solution of the Schrödinger Equation. *Journal of Mathematical Chemistry*, **2004**, 36, 13-27	2.1	73
378	A Family of Trigonometrically-Fitted Symmetric Methods for the Efficient Solution of the Schrödinger Equation and Related Problems. *Journal of Mathematical Chemistry*, **2003**, 34, 39-58	2.1	73
377	A High-Order Two-Step Phase-Fitted Method for the Numerical Solution of the Schrödinger Equation. *Mediterranean Journal of Mathematics*, **2016**, 13, 5177-5194	0.9	73
376	New P-Stable Eighth Algebraic Order Exponentially-Fitted Methods for the Numerical Integration of the Schrödinger Equation. *Journal of Mathematical Chemistry*, **2002**, 31, 371-404	2.1	72
375	Sixth algebraic order trigonometrically fitted predictor–corrector methods for the numerical solution of the radial Schrödinger equation. *Journal of Mathematical Chemistry*, **2005**, 37, 295-316	2.1	72
374	High order closed Newton-Cotes exponentially and trigonometrically fitted formulae as multilayer symplectic integrators and their application to the radial Schrödinger equation. *Journal of Mathematical Chemistry*, **2012**, 50, 1224-1261	2.1	71
373	Trigonometrically fitted and exponentially fitted symplectic methods for the numerical integration of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2006**, 40, 257-267	2.1	71
372	A Generator and an Optimized Generator of High-Order Hybrid Explicit Methods for the Numerical Solution of the Schrödinger Equation. Part 1. Development of the Basic Method. *Journal of Mathematical Chemistry*, **2001**, 29, 281-291	2.1	71
371	A new explicit Bessel and Neumann fitted eighth algebraic order method for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2000**, 27, 343-356	2.1	70
370	A four-step method for the numerical solution of the Schrödinger equation. *Journal of Computational and Applied Mathematics*, **1990**, 30, 251-255	2.4	70
369	A Generator and an Optimized Generator of High-Order Hybrid Explicit Methods for the Numerical Solution of the Schrödinger Equation. Part 2. Development of the Generator, Optimization of the Generator and Numerical Results. *Journal of Mathematical Chemistry*, **2001**, 29, 293-305	2.1	69
368	New high order multiderivative explicit four-step methods with vanished phase-lag and its derivatives for the approximate solution of the Schrödinger equation. Part I: Construction and theoretical analysis. *Journal of Mathematical Chemistry*, **2013**, 51, 194-226	2.1	68
367	Symplectic Methods of Fifth Order for the Numerical Solution of the Radial Shrödinger Equation. *Journal of Mathematical Chemistry*, **2004**, 35, 55-63	2.1	68
366	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	68
365	Numerical multistep methods for the efficient solution of quantum mechanics and related problems. *Physics Reports*, **2009**, 482-483, 1-240	27.7	67
364	Evolutionary generation of high-order, explicit, two-step methods for second-order linear IVPs. *Mathematical Methods in the Applied Sciences*, **2017**, 40, 6276-6284	2.3	66
363	The numerical solution of the radial Schrödinger equation via a trigonometrically fitted family of seventh algebraic order Predictor–corrector methods. *Journal of Mathematical Chemistry*, **2006**, 40, 269-293	2.1	66

362	Phase-fitted Runge–Kutta pairs of orders 8(7). *Journal of Computational and Applied Mathematics*, **2017**, 321, 226-231	2.4	65
361	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 Schrödinger equation. *Journal of Mathematical Chemistry*, **2015**, 53, 1295-1312	2.1	65
360	Bessel and Neumann-fitted methods for the numerical solution of the radial Schrödinger equation. *Computers & Chemistry*, **1997**, 21, 175-179		65
359	A four-step exponentially fitted method for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2006**, 40, 305-318	2.1	65
358	An explicit four-step method with vanished phase-lag and its first and second derivatives. *Journal of Mathematical Chemistry*, **2014**, 52, 833-855	2.1	64
357	An optimized explicit Runge-Kutta method with increased phase-lag order for the numerical solution of the Schrödinger equation and related problems. *Journal of Mathematical Chemistry*, **2010**, 47, 315-330	2.1	64
356	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	1.8	64
355	Symplectic Partitioned Runge–Kutta methods with minimal phase-lag. *Computer Physics Communications*, **2010**, 181, 1251-1254	4.2	62
354	An economical eighth-order method for the approximation of the solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2017**, 55, 717-733	2.1	61
353	Modified two-step hybrid methods for the numerical integration of oscillatory problems. *Mathematical Methods in the Applied Sciences*, **2017**, 40, 5286-5294	2.3	61
352	A family of two-stage two-step methods for the numerical integration of the Schrödinger equation and related IVPs with oscillating solution. *Journal of Mathematical Chemistry*, **2009**, 45, 1102-1129	2.1	61
351	High-order closed Newton–Cotes trigonometrically-fitted formulae for long-time integration of orbital problems. *Computer Physics Communications*, **2008**, 178, 199-207	4.2	60
350	A Runge–Kutta type four-step method with vanished phase-lag and its first and second derivatives for each level for the numerical integration of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2014**, 52, 917-947	2.1	59
349	A dissipative exponentially-fitted method for the numerical solution of the Schrödinger equation and related problems. *Computer Physics Communications*, **2003**, 152, 274-294	4.2	57
348	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 Schrödinger equation. *Journal of Computational and Applied Mathematics*, **1992**, 39, 89-94	2.4	57
347	Exponentially fitted symplectic integrator. *Physical Review E*, **2003**, 67, 016701	2.4	56
346	Numerov-type methods with minimal phase-lag for the numerical integration of the one-dimensional Schrödinger equation. *Computing (Vienna/New York)*, **1990**, 45, 175-181	2.2	56
345	A family of explicit linear six-step methods with vanished phase-lag and its first derivative. *Journal of Mathematical Chemistry*, **2014**, 52, 2087-2118	2.1	55

344	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 Schrödinger equation. *Journal of Mathematical Chemistry*, **2014**, 52, 2334-2379	2.1	55
343	Symplectic methods for the numerical integration of the Schrödinger equation. *Computational Materials Science*, **2007**, 38, 526-532	3.2	54
342	CLOSED NEWTON–COTES TRIGONOMETRICALLY-FITTED FORMULAE FOR LONG-TIME INTEGRATION. *International Journal of Modern Physics C*, **2003**, 14, 1061-1074	1.1	54
341	Embedded methods for the numerical solution of the Schrödinger equation. *Computers and Mathematics With Applications*, **1996**, 31, 85-102	2.7	54
340	Some New Four-Step Exponential-Fitting Methods for the Numerical Solution of the Radical Schrödinger Equation. *IMA Journal of Numerical Analysis*, **1991**, 11, 347-356	1.8	54
339	A new family of 7 stages, eighth-order explicit Numerov-type methods. *Mathematical Methods in the Applied Sciences*, **2017**, 40, 7867-7878	2.3	53
338	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 Schrödinger equation. *Journal of Mathematical Chemistry*, **2015**, 53, 1808-1834	2.1	53
337	A new explicit hybrid four-step method with vanished phase-lag and its derivatives. *Journal of Mathematical Chemistry*, **2014**, 52, 1690-1716	2.1	52
336	Closed Newton–Cotes trigonometrically-fitted formulae of high order for the numerical integration of the Schrödinger equation. *Journal of Mathematical Chemistry*, **2008**, 44, 483-499	2.1	52
335	New Second-order Exponentially and Trigonometrically Fitted Symplectic Integrators for the Numerical Solution of the Time-independent Schrödinger Equation. *Journal of Mathematical Chemistry*, **2007**, 42, 535-545	2.1	51
334	A family of four-step trigonometrically-fitted methods and its application to the schrödinger equation. *Journal of Mathematical Chemistry*, **2008**, 44, 447-466	2.1	51
333	New closed Newton-Cotes type formulae as multilayer symplectic integrators. *Journal of Chemical Physics*, **2010**, 133, 104108	3.9	50
332	Computation of the eigenvalues of the Schrödinger equation by symplectic and trigonometrically fitted symplectic partitioned Runge–Kutta methods. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2008**, 372, 569-573	2.3	49
331	Controlling the error growth in long-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	2.4	49
330	A generator of high-order embedded P-stable methods for the numerical solution of the Schrödinger equation. *Journal of Computational and Applied Mathematics*, **1996**, 72, 345-358	2.4	49
329	A new high algebraic order efficient finite difference method for the solution of the Schrödinger equation. *Filomat*, **2017**, 31, 4999-5012	0.7	49
328	A high algebraic order predictor–corrector explicit method with vanished phase-lag and its first, second, third and fourth derivatives for the numerical solution of the Schrödinger equation and related problems. *Journal of Mathematical Chemistry*, **2015**, 53, 1495-1522	2.1	48
327	A symmetric eight-step predictor-corrector method for the numerical solution of the radial Schrödinger equation and related IVPs with oscillating solutions. *Computer Physics Communications*, **2011**, 182, 1626-1637	4.2	48

326	A NEW SYMMETRIC EIGHT-STEP PREDICTOR-CORRECTOR METHOD FOR THE NUMERICAL SOLUTION OF THE RADIAL SCHRDINGER EQUATION AND RELATED ORBITAL PROBLEMS. *International Journal of Modern Physics C*, **2011**, 22, 133-153	1.1	48
325	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	4.2	48
324	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	1.2	48
323	A new four stages symmetric two-step method with vanished phase-lag and its first derivative for the numerical integration of the Schrdinger equation. *Journal of Mathematical Chemistry*, **2016**, 54, 1187-1211	2.1	48
322	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 Schrdinger equation. *Journal of Mathematical Chemistry*, **2015**, 53, 1915-1942	2.1	47
321	A predictorcorrector explicit four-step method with vanished phase-lag and its first, second and third derivatives for the numerical integration of the Schrdinger equation. *Journal of Mathematical Chemistry*, **2015**, 53, 685-717	2.1	47
320	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	4.2	47
319	Closed Newton-Cotes Trigonometrically-Fitted Formulae for Numerical Integration of the Schrdinger Equation. *Computing Letters*, **2007**, 3, 45-57		47
318	Numerical solution of the two-dimensional time independent Schrdinger equation with Numerov-type methods. *Journal of Mathematical Chemistry*, **2005**, 37, 271-279	2.1	47
317	A family of hybrid exponentially fitted predictor-corrector methods for the numerical integration of the radial Schrdinger equation. *Journal of Computational and Applied Mathematics*, **1997**, 87, 215-226	2.4	45
316	Trigonometric fitted, eighth-order explicit Numerov-type methods. *Mathematical Methods in the Applied Sciences*, **2018**, 41, 1845-1854	2.3	45
315	A NEW METHODOLOGY FOR THE CONSTRUCTION OF OPTIMIZED RUNGEKUTTANYSTRM METHODS. *International Journal of Modern Physics C*, **2011**, 22, 623-634	1.1	44
314	A two-step method with vanished phase-lag and its first two derivatives for the numerical solution of the Schrdinger equation. *Journal of Mathematical Chemistry*, **2011**, 49, 2486-2518	2.1	43
313	A new optimized symmetric 8-step semi-embedded predictorcorrector method for the numerical solution of the radial Schrdinger equation and related orbital problems. *Journal of Mathematical Chemistry*, **2013**, 51, 1914-1937	2.1	42
312	TWO NEW PHASE-FITTED SYMPLECTIC PARTITIONED RUNGEKUTTA METHODS. *International Journal of Modern Physics C*, **2011**, 22, 1343-1355	1.1	42
311	A P-stable exponentially fitted method for the numerical integration of the Schrdinger equation. *Applied Mathematics and Computation*, **2000**, 112, 99-112	2.7	42
310	On Ninth Order, Explicit Numerov-Type Methods with Constant Coefficients. *Mediterranean Journal of Mathematics*, **2018**, 15, 1	0.9	41
309	Trigonometric-Fitted Explicit Numerov-Type Method with Vanishing Phase-Lag and Its First and Second Derivatives. *Mediterranean Journal of Mathematics*, **2018**, 15, 1	0.9	41

308	Some embedded modified Runge-Kutta methods for the numerical solution of some specific Schrödinger equations. *Journal of Mathematical Chemistry*, **1998**, 24, 23-37	2.1	40
307	A Family of P-stable Eighth Algebraic Order Methods with Exponential Fitting Facilities. *Journal of Mathematical Chemistry*, **2001**, 29, 177-189	2.1	40
306	A Runge–Kutta–Nyström method for the numerical integration of special second-order periodic initial-value problems. *Journal of Computational and Applied Mathematics*, **1994**, 51, 317-326	2.4	40
305	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	39
304	Fitted modifications of classical Runge-Kutta pairs of orders 5(4). *Mathematical Methods in the Applied Sciences*, **2018**, 41, 4549-4559	2.3	38
303	A NEW EIGHT-STEP SYMMETRIC EMBEDDED PREDICTOR-CORRECTOR METHOD (EPCM) FOR ORBITAL PROBLEMS AND RELATED IVPs WITH OSCILLATORY SOLUTIONS. *Astronomical Journal*, **2013**, 145, 75	4.9	38
302	Eighth order methods with minimal phase-lag for accurate computations for the elastic scattering phase-shift problem. *Journal of Mathematical Chemistry*, **1997**, 21, 359-372	2.1	37
301	A family of P-stable exponentially-fitted methods for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **1999**, 25, 65-84	2.1	37
300	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	2.7	37
299	SPECIAL OPTIMIZED RUNGE–KUTTA METHODS FOR IVPs WITH OSCILLATING SOLUTIONS. *International Journal of Modern Physics C*, **2004**, 15, 1-15	1.1	36
298	An exponentially-fitted high order method for long-term integration of periodic initial-value problems. *Computer Physics Communications*, **2001**, 140, 358-365	4.2	36
297	Runge-Kutta interpolants with minimal phase-lag. *Computers and Mathematics With Applications*, **1993**, 26, 43-49	2.7	36
296	New open modified Newton Cotes type formulae as multilayer symplectic integrators. *Applied Mathematical Modelling*, **2013**, 37, 1983-1991	4.5	35
295	An extended numerov-type method for the numerical solution of the Schrödinger equation. *Computers and Mathematics With Applications*, **1997**, 33, 67-78	2.7	35
294	ON THE CONSTRUCTION OF EFFICIENT METHODS FOR SECOND ORDER IVPS WITH OSCILLATING SOLUTION. *International Journal of Modern Physics C*, **2001**, 12, 1453-1476	1.1	35
293	Embedded eighth order methods for the numerical solution of the Schrödinger equation. *Journal of Mathematical Chemistry*, **1999**, 26, 327-341	2.1	35
292	Atomic structure computations. *Chemical Modelling*, **2007**, 38-142	2	35
291	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 Schrödinger equation and related problems. *Journal of Mathematical Chemistry*, **2016**, 54, 1417-1439	2.1	35

290	ACCURATELY CLOSED NEWTON□COTES TRIGONOMETRICALLY-FITTED FORMULAE FOR THE NUMERICAL SOLUTION OF THE SCHR□DINGER EQUATION. *International Journal of Modern Physics C*, **2013**, 24, 1350014	1.1	34
289	High algebraic order methods with vanished phase-lag and its first derivative for the numerical solution of the Schr□dinger equation. *Journal of Mathematical Chemistry*, **2010**, 48, 925-958	2.1	34
288	A SYMMETRIC HIGH ORDER METHOD WITH MINIMAL PHASE-LAG FOR THE NUMERICAL SOLUTION OF THE SCHR□DINGER EQUATION. *International Journal of Modern Physics C*, **2001**, 12, 1035-1042	1.1	34
287	A modified Runge-Kutta method for the numerical solution of ODE's with oscillation solutions. *Applied Mathematics Letters*, **1996**, 9, 61-66	3.5	34
286	A NEW MODIFIED RUNGE□KUTTA□NYSTR□M METHOD WITH PHASE-LAG OF ORDER INFINITY FOR THE NUMERICAL SOLUTION OF THE SCHR□DINGER EQUATION AND RELATED PROBLEMS. *International Journal of Modern Physics C*, **2000**, 11, 1195-1208	1.1	33
285	A two-step method for the numerical solution of the radial Schr□dinger equation. *Computers and Mathematics With Applications*, **1995**, 29, 31-37	2.7	33
284	A numerov-type method for the numerical solution of the radial Schr□dinger equation. *Applied Numerical Mathematics*, **1991**, 7, 201-206	2.5	33
283	Trigonometrical fitting conditions for two derivative Runge-Kutta methods. *Numerical Algorithms*, **2018**, 79, 787-800	2.1	32
282	A modified Runge-Kutta method with phase-lag of order infinity for the numerical solution of the Schr□dinger equation and related problems. *Computers & Chemistry*, **2001**, 25, 275-81		32
281	A three-stages multistep teeming in phase algorithm for computational problems in chemistry. *Journal of Mathematical Chemistry*, **2019**, 57, 1598-1617	2.1	31
280	A finite difference pair with improved phase and stability properties. *Journal of Mathematical Chemistry*, **2018**, 56, 170-192	2.1	31
279	A P-Stable Eighth-Order Method for the Numerical Integration of Periodic Initial-Value Problems. *Journal of Computational Physics*, **1997**, 130, 123-128	4.1	31
278	Explicit high order methods for the numerical integration of periodic initial-value problems. *Applied Mathematics and Computation*, **1998**, 95, 15-26	2.7	31
277	P-stable Four-Step Exponentially-Fitted Method for the Numerical Integration of the Schr□odinger Equation. *Computing Letters*, **2004**, 1, 37-44		31
276	AN EMBEDDED RUNGE□KUTTA METHOD WITH PHASE-LAG OF ORDER INFINITY FOR THE NUMERICAL SOLUTION OF THE SCHR□DINGER EQUATION. *International Journal of Modern Physics C*, **2000**, 11, 1115-1133	1.1	31
275	Explicit eighth order methods for the numerical integration of initial-value problems with periodic or oscillating solutions. *Computer Physics Communications*, **1999**, 119, 32-44	4.2	31
274	Predictor□corrector phase-fitted methods for Y? = F(X, Y) and an application to the Schr□dinger equation. *International Journal of Quantum Chemistry*, **1995**, 53, 473-483	2.1	31
273	A family of Numerov-type exponentially fitted predictor-corrector methods for the numerical integration of the radial Schr□dinger equation. *Journal of Computational and Applied Mathematics*, **1996**, 67, 255-270	2.4	31

272	An Efficient Numerical Method for the Solution of the Schrdinger Equation. *Advances in Mathematical Physics*, **2016**, 2016, 1-20	1.1	31
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