# Xiaofei Zhao

List of Publications by Year
in descending order



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|---|---|---|---|
| 38 papers | 627 citations | 567281 15 h-index | 642732 23 g-index |
| 38 all docs | 38 docs citations | 38 times ranked | 139 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | A Uniformly Accurate Multiscale Time Integrator Pseudospectral Method for the Klein–Gordon Equation in the Nonrelativistic Limit Regime. SIAM Journal on Numerical Analysis, 2014, 52, 2488-2511. | 2.3 | 63 |
| 2 | An Exponential Wave Integrator Sine Pseudospectral Method for the Klein–Gordon–Zakharov System. SIAM Journal of Scientific Computing, 2013, 35, A2903-A2927. | 2.8 | 54 |
| 3 | Unconditional and optimal H 2-error estimates of two linear and conservative finite difference schemes for the Klein-Gordon-SchrÃ¶dinger equation in high dimensions. Advances in Computational Mathematics, 2018, 44, 477-503. | 1.6 | 41 |
| 4 | Optimal l âˆž error estimates of finite difference methods for the coupled Gross-Pitaevskii equations in high dimensions. Science China Mathematics, 2014, 57, 2189-2214. | 1.7 | 37 |
| 5 | A uniformly accurate (UA) multiscale time integrator Fourier pseudospectral method for the Kleinâ€“Gordonâ€“SchrÃ¶dinger equations in the nonrelativistic limit regime. Numerische Mathematik, 2017, 135, 833-873. | 1.9 | 35 |
| 6 | On error estimates of an exponential wave integrator sine pseudospectral method for the ‹scp›K‹/scp›leinâ€“‹scp›G‹/scp›ordonâ€“‹scp›Z‹/scp›akharov system. Numerical Methods for Partial Differential Equations, 2016, 32, 266-291. | 3.6 | 31 |
| 7 | A uniformly accurate multiscale time integrator spectral method for the Kleinâ€“Gordonâ€“Zakharov system in the high-plasma-frequency limit regime. Journal of Computational Physics, 2016, 327, 270-293. | 3.8 | 28 |
| 8 | Comparison of numerical methods for the nonlinear Klein-Gordon equation in the nonrelativistic limit regime. Journal of Computational Physics, 2019, 398, 108886. | 3.8 | 26 |
| 9 | Error Estimates of Some Splitting Schemes for Charged-Particle Dynamics under Strong Magnetic Field. SIAM Journal on Numerical Analysis, 2021, 59, 2075-2105. | 2.3 | 25 |
| 10 | Uniformly accurate Particle-in-Cell method for the long time solution of the two-dimensional Vlasovâ€“Poisson equation with uniform strong magnetic field. Journal of Computational Physics, 2017, 346, 172-190. | 3.8 | 24 |
| 11 | Low-regularity integrators for nonlinear Dirac equations. Mathematics of Computation, 2020, 90, 189-214. | 2.1 | 24 |
| 12 | On Time-Splitting Pseudospectral Discretization for Nonlinear Klein-Gordon Equation in Nonrelativistic Limit Regime. Communications in Computational Physics, 2014, 16, 440-466. | 1.7 | 21 |
| 13 | Uniformly accurate numerical schemes for the nonlinear Dirac equation in the nonrelativistic limit regime. Communications in Mathematical Sciences, 2017, 15, 1107-1128. | 1.0 | 19 |
| 14 | Scalar-field theory of dark matter. International Journal of Modern Physics A, 2014, 29, 1450074. | 1.5 | 18 |
| 15 | Uniformly Accurate Methods for Three Dimensional Vlasov Equations under Strong Magnetic Field with Varying Direction. SIAM Journal of Scientific Computing, 2020, 42, B520-B547. | 2.8 | 15 |
| 16 | Uniformly accurate methods for Vlasov equations with non-homogeneous strong magnetic field. Mathematics of Computation, 2019, 88, 2697-2736. | 2.1 | 14 |
| 17 | An Exponential Wave Integrator Pseudospectral Method for the Symmetric Regularized-Long-Wave Equation. Journal of Computational Mathematics, 2016, 34, 49-69. | 0.4 | 14 |
| 18 | Embedded exponential-type low-regularity integrators for KdV equation under rough data. BIT Numerical Mathematics, 2022, 62, 1049-1090. | 2.0 | 13 |

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|---|---|---|---|
| 19 | Optimal convergence of a second-order low-regularity integrator for the KdV equation. IMA Journal of Numerical Analysis, 2022, 42, 3499-3528. | 2.9 | 12 |
| 20 | Unconditional $$L^{infty }$$ L âˆž -convergence of two compact conservative finite difference schemes for the nonlinear SchrÃ¶dinger equation in multi-dimensions. Calcolo, 2018, 55, 1. | 1.1 | 11 |
| 21 | Uniformly Accurate Forward Semi-Lagrangian Methods for Highly Oscillatory Vlasov--Poisson Equations. Multiscale Modeling and Simulation, 2017, 15, 723-744. | 1.6 | 10 |
| 22 | Numerical methods for the two-dimensional Vlasovâ€“Poisson equation in the finite Larmor radius approximation regime. Journal of Computational Physics, 2018, 375, 619-640. | 3.8 | 9 |
| 23 | A symmetric low-regularity integrator for nonlinear Klein-Gordon equation. Mathematics of Computation, 2022, 91, 2215-2245. | 2.1 | 9 |
| 24 | Numerical Methods and Simulations for the Dynamics of One-Dimensional Zakharovâ€“Rubenchik Equations. Journal of Scientific Computing, 2014, 59, 412-438. | 2.3 | 8 |
| 25 | Multiscale Particle-in-Cell methods and comparisons for the long-time two-dimensional Vlasovâ€“Poisson equation with strong magnetic field. Computer Physics Communications, 2018, 222, 136-151. | 7.5 | 8 |
| 26 | A combination of multiscale time integrator and two-scale formulation for the nonlinear SchrÃ¶dinger equation with wave operator. Journal of Computational and Applied Mathematics, 2017, 326, 320-336. | 2.0 | 7 |
| 27 | On multichannel solutions of nonlinear SchrÃ¶dinger equations: algorithm, analysis and numerical explorations. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 135201. | 2.1 | 6 |
| 28 | On time-splitting methods for nonlinear SchrÃ¶dinger equation with highly oscillatory potential. ESAIM: Mathematical Modelling and Numerical Analysis, 2020, 54, 1491-1508. | 1.9 | 6 |
| 29 | Derivative-free high-order uniformly accurate schemes for highly oscillatory systems. IMA Journal of Numerical Analysis, 2022, 42, 1623-1644. | 2.9 | 6 |
| 30 | An Embedded Exponential-Type Low-Regularity Integrator for mKdV Equation. SIAM Journal on Numerical Analysis, 2022, 60, 999-1025. | 2.3 | 6 |
| 31 | Uniformly accurate multiscale time integrators for second order oscillatory differential equations with large initial data. BIT Numerical Mathematics, 2017, 57, 649-683. | 2.0 | 5 |
| 32 | On the Rotating Nonlinear Klein--Gordon Equation: NonRelativistic Limit and Numerical Methods. Multiscale Modeling and Simulation, 2020, 18, 999-1024. | 1.6 | 5 |
| 33 | Splitting methods for nonlinear Dirac equations with Thirring type interaction in the nonrelativistic limit regime. Journal of Computational and Applied Mathematics, 2021, 387, 112494. | 2.0 | 5 |
| 34 | A uniformly first-order accurate method for Klein-Gordon-Zakharov system in simultaneous high-plasma-frequency and subsonic limit regime. Journal of Computational Physics, 2021, 428, 110064. | 3.8 | 5 |
| 35 | Numerical Integrators for Continuous Disordered Nonlinear SchrÃ¶dinger Equation. Journal of Scientific Computing, 2021, 89, 1. | 2.3 | 3 |
| 36 | A modulation equations approach for numerically solving the moving soliton and radiation solutions of NLS. Physica D: Nonlinear Phenomena, 2016, 320, 77-88. | 2.8 | 2 |

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|---|---|---|---|
| 37 | Modulation equations approach for solving vortex and radiation in nonlinear SchrÃ¶dinger equation. IMA Journal of Applied Mathematics, 2018, 83, 496-513. | 1.6 | 1 |
| 38 | Pseudospectral methods with PML for nonlinear Klein-Gordon equations in classical and non-relativistic regimes. Journal of Computational Physics, 2022, 448, 110728. | 3.8 | 1 |