

# Jie Shen

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/4734549/jie-shen-publications-by-citations.pdf>

**Version:** 2024-04-29

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

241  
papers

11,947  
citations

55  
h-index

104  
g-index

254  
ext. papers

13,730  
ext. citations

2.6  
avg, IF

7.13  
L-index

#	Paper	IF	Citations
241	Applications of semi-implicit Fourier-spectral method to phase field equations. <i>Computer Physics Communications</i> , <b>1998</b> , 108, 147-158	4.2	750
240	An overview of projection methods for incompressible flows. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2006</b> , 195, 6011-6045	5.7	731
239	A diffuse-interface method for simulating two-phase flows of complex fluids. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 515, 293-317	3.7	629
238	Spectral Methods. <i>Springer Series in Computational Mathematics</i> , <b>2011</b> ,	0.9	511
237	Numerical approximations of Allen-Cahn and Cahn-Hilliard equations. <i>Discrete and Continuous Dynamical Systems</i> , <b>2010</b> , 28, 1669-1691	2	418
236	Efficient Spectral-Galerkin Method I. Direct Solvers of Second- and Fourth-Order Equations Using Legendre Polynomials. <i>SIAM Journal of Scientific Computing</i> , <b>1994</b> , 15, 1489-1505	2.6	380
235	A phase field model for the mixture of two incompressible fluids and its approximation by a Fourier-spectral method. <i>Physica D: Nonlinear Phenomena</i> , <b>2003</b> , 179, 211-228	3.3	376
234	Coarsening kinetics from a variable-mobility Cahn-Hilliard equation: application of a semi-implicit Fourier spectral method. <i>Physical Review E</i> , <b>1999</b> , 60, 3564-72	2.4	325
233	The scalar auxiliary variable (SAV) approach for gradient flows. <i>Journal of Computational Physics</i> , <b>2018</b> , 353, 407-416	4.1	285
232	A Phase-Field Model and Its Numerical Approximation for Two-Phase Incompressible Flows with Different Densities and Viscosities. <i>SIAM Journal of Scientific Computing</i> , <b>2010</b> , 32, 1159-1179	2.6	191
231	Second-order Convex Splitting Schemes for Gradient Flows with Ehrlich-Schwoebel Type Energy: Application to Thin Film Epitaxy. <i>SIAM Journal on Numerical Analysis</i> , <b>2012</b> , 50, 105-125	2.4	190
230	On Error Estimates of Projection Methods for Navier-Stokes Equations: First-Order Schemes. <i>SIAM Journal on Numerical Analysis</i> , <b>1992</b> , 29, 57-77	2.4	181
229	Numerical simulations of jet pinching-off and drop formation using an energetic variational phase-field method. <i>Journal of Computational Physics</i> , <b>2006</b> , 218, 417-428	4.1	163
228	Velocity-Correction Projection Methods for Incompressible Flows. <i>SIAM Journal on Numerical Analysis</i> , <b>2003</b> , 41, 112-134	2.4	158
227	Efficient Spectral-Galerkin Method II. Direct Solvers of Second- and Fourth-Order Equations Using Chebyshev Polynomials. <i>SIAM Journal of Scientific Computing</i> , <b>1995</b> , 16, 74-87	2.6	156
226	A New Class of Efficient and Robust Energy Stable Schemes for Gradient Flows. <i>SIAM Review</i> , <b>2019</b> , 61, 474-506	7.4	144
225	Stable and Efficient Spectral Methods in Unbounded Domains Using Laguerre Functions. <i>SIAM Journal on Numerical Analysis</i> , <b>2000</b> , 38, 1113-1133	2.4	144

224	Generalized Jacobi functions and their applications to fractional differential equations. <i>Mathematics of Computation</i> , <b>2015</b> , 85, 1603-1638	1.6	143
223	On error estimates of the projection methods for the Navier-Stokes equations: Second-order schemes. <i>Mathematics of Computation</i> , <b>1996</b> , 65, 1039-1066	1.6	139
222	Decoupled, Energy Stable Schemes for Phase-Field Models of Two-Phase Incompressible Flows. <i>SIAM Journal on Numerical Analysis</i> , <b>2015</b> , 53, 279-296	2.4	135
221	Long time stability and convergence for fully discrete nonlinear galerkin methods. <i>Applicable Analysis</i> , <b>1990</b> , 38, 201-229	0.8	129
220	On the error estimates for the rotational pressure-correction projection methods. <i>Mathematics of Computation</i> , <b>2003</b> , 73, 1719-1738	1.6	123
219	Hopf bifurcation of the unsteady regularized driven cavity flow. <i>Journal of Computational Physics</i> , <b>1991</b> , 95, 228-245	4.1	122
218	Laguerre-Galerkin method for nonlinear partial differential equations on a semi-infinite interval. <i>Numerische Mathematik</i> , <b>2000</b> , 86, 635-654	2.2	113
217	A time-stepping scheme involving constant coefficient matrices for phase-field simulations of two-phase incompressible flows with large density ratios. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 5788-5804	4.1	104
216	A new class of truly consistent splitting schemes for incompressible flows. <i>Journal of Computational Physics</i> , <b>2003</b> , 192, 262-276	4.1	103
215	Diffuse-interface simulations of drop coalescence and retraction in viscoelastic fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2005</b> , 129, 163-176	2.7	101
214	Convergence and Error Analysis for the Scalar Auxiliary Variable (SAV) Schemes to Gradient Flows. <i>SIAM Journal on Numerical Analysis</i> , <b>2018</b> , 56, 2895-2912	2.4	98
213	Optimal Spectral-Galerkin Methods Using Generalized Jacobi Polynomials. <i>Journal of Scientific Computing</i> , <b>2006</b> , 27, 305-322	2.3	97
212	A Fourth-Order Time-Splitting Laguerre-Hermite Pseudospectral Method for Bose-Einstein Condensates. <i>SIAM Journal of Scientific Computing</i> , <b>2005</b> , 26, 2010-2028	2.6	96
211	On error estimates of some higher order projection and penalty-projection methods for Navier-Stokes equations. <i>Numerische Mathematik</i> , <b>1992</b> , 62, 49-73	2.2	95
210	Efficient Spectral-Galerkin Methods III: Polar and Cylindrical Geometries. <i>SIAM Journal of Scientific Computing</i> , <b>1997</b> , 18, 1583-1604	2.6	92
209	Numerical approximations for a three-component Cahn-Hilliard phase-field model based on the invariant energy quadratization method. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2017</b> , 27, 1993-2030	3.5	91
208	Computer simulation of spinodal decomposition in constrained films. <i>Acta Materialia</i> , <b>2003</b> , 51, 5173-5185	3.4	89
207	On Error Estimates of the Penalty Method for Unsteady Navier-Stokes Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>1995</b> , 32, 386-403	2.4	88

206	Viscoelastic effects on drop deformation in steady shear. <i>Journal of Fluid Mechanics</i> , <b>2005</b> , 540, 427	3.7	86
205	A New Dual-Petrov-Galerkin Method for Third and Higher Odd-Order Differential Equations: Application to the KDV Equation. <i>SIAM Journal on Numerical Analysis</i> , <b>2003</b> , 41, 1595-1619	2.4	86
204	A Rational Approximation and Its Applications to Differential Equations on the Half Line. <i>Journal of Scientific Computing</i> , <b>2000</b> , 15, 117-147	2.3	81
203	Energy stable schemes for Cahn-Hilliard phase-field model of two-phase incompressible flows. <i>Chinese Annals of Mathematics Series B</i> , <b>2010</b> , 31, 743-758	0.4	80
202	Morphological evolution during phase separation and coarsening with strong inhomogeneous elasticity. <i>Modelling and Simulation in Materials Science and Engineering</i> , <b>2001</b> , 9, 499-511	2	76
201	Decoupled Energy Stable Schemes for Phase-Field Models of Two-Phase Complex Fluids. <i>SIAM Journal of Scientific Computing</i> , <b>2014</b> , 36, B122-B145	2.6	74
200	An Efficient Spectral-Projection Method for the Navier-Stokes Equations in Cylindrical Geometries. <i>Journal of Computational Physics</i> , <b>1998</b> , 139, 308-326	4.1	73
199	Efficient energy stable numerical schemes for a phase field moving contact line model. <i>Journal of Computational Physics</i> , <b>2015</b> , 284, 617-630	4.1	72
198	An efficient moving mesh spectral method for the phase-field model of two-phase flows. <i>Journal of Computational Physics</i> , <b>2009</b> , 228, 2978-2992	4.1	72
197	Efficient and accurate spectral method using generalized Jacobi functions for solving Riesz fractional differential equations. <i>Applied Numerical Mathematics</i> , <b>2016</b> , 106, 165-181	2.5	69
196	Decoupled Energy Stable Schemes for a Phase-Field Model of Two-Phase Incompressible Flows with Variable Density. <i>Journal of Scientific Computing</i> , <b>2015</b> , 62, 601-622	2.3	64
195	Generalized Jacobi polynomials/functions and their applications. <i>Applied Numerical Mathematics</i> , <b>2009</b> , 59, 1011-1028	2.5	64
194	Error Analysis of Pressure-Correction Schemes for the Time-Dependent Stokes Equations with Open Boundary Conditions. <i>SIAM Journal on Numerical Analysis</i> , <b>2005</b> , 43, 239-258	2.4	64
193	Efficient spectral-Galerkin methods for fractional partial differential equations with variable coefficients. <i>Journal of Computational Physics</i> , <b>2016</b> , 307, 243-261	4.1	63
192	On the maximum principle preserving schemes for the generalized Allen-Cahn equation. <i>Communications in Mathematical Sciences</i> , <b>2016</b> , 14, 1517-1534	1	63
191	Efficient, adaptive energy stable schemes for the incompressible Cahn-Hilliard Navier-Stokes phase-field models. <i>Journal of Computational Physics</i> , <b>2016</b> , 308, 40-56	4.1	61
190	Gauge-Uzawa methods for incompressible flows with variable density. <i>Journal of Computational Physics</i> , <b>2007</b> , 221, 181-197	4.1	59
189	Fourierization of the Legendre-Galerkin method and a new space-time spectral method. <i>Applied Numerical Mathematics</i> , <b>2007</b> , 57, 710-720	2.5	57

188	Efficient Energy Stable Schemes with Spectral Discretization in Space for Anisotropic Cahn-Hilliard Systems. <i>Communications in Computational Physics</i> , <b>2013</b> , 13, 1189-1208	2.4	55
187	Chebyshev rational spectral and pseudospectral methods on a semi-infinite interval. <i>International Journal for Numerical Methods in Engineering</i> , <b>2002</b> , 53, 65-84	2.4	55
186	Efficient Spectral Sparse Grid Methods and Applications to High-Dimensional Elliptic Problems. <i>SIAM Journal of Scientific Computing</i> , <b>2010</b> , 32, 3228-3250	2.6	54
185	Pressure boundary condition for the time-dependent incompressible Navier-Stokes equations. <i>International Journal for Numerical Methods in Fluids</i> , <b>2006</b> , 50, 673-682	1.9	54
184	Spectral and Pseudospectral Approximations Using Hermite Functions: Application to the Dirac Equation. <i>Advances in Computational Mathematics</i> , <b>2003</b> , 19, 35-55	1.6	54
183	An Efficient, Energy Stable Scheme for the Cahn-Hilliard-Brinkman System. <i>Communications in Computational Physics</i> , <b>2013</b> , 13, 929-957	2.4	52
182	Mass and Volume Conservation in Phase Field Models for Binary Fluids. <i>Communications in Computational Physics</i> , <b>2013</b> , 13, 1045-1065	2.4	52
181	An Efficient Spectral-Projection Method for the Navier-Stokes Equations in Cylindrical Geometries. <i>Journal of Computational Physics</i> , <b>2002</b> , 176, 384-401	4.1	52
180	A decoupled energy stable scheme for a hydrodynamic phase-field model of mixtures of nematic liquid crystals and viscous fluids. <i>Journal of Computational Physics</i> , <b>2016</b> , 305, 539-556	4.1	50
179	Surface effect on domain wall width in ferroelectrics. <i>Journal of Applied Physics</i> , <b>2009</b> , 106, 084102	2.5	50
178	Efficient stochastic Galerkin methods for random diffusion equations. <i>Journal of Computational Physics</i> , <b>2009</b> , 228, 266-281	4.1	49
177	Mode interactions in an enclosed swirling flow: a double Hopf bifurcation between azimuthal wavenumbers 0 and 2. <i>Journal of Fluid Mechanics</i> , <b>2002</b> , 455, 263-281	3.7	47
176	Analysis of a Spectral-Galerkin Approximation to the Helmholtz Equation in Exterior Domains. <i>SIAM Journal on Numerical Analysis</i> , <b>2007</b> , 45, 1954-1978	2.4	46
175	Instability and mode interactions in a differentially driven rotating cylinder. <i>Journal of Fluid Mechanics</i> , <b>2002</b> , 462, 383-409	3.7	46
174	Multiple Scalar Auxiliary Variable (MSAV) Approach and its Application to the Phase-Field Vesicle Membrane Model. <i>SIAM Journal of Scientific Computing</i> , <b>2018</b> , 40, A3982-A4006	2.6	45
173	Remarks on the pressure error estimates for the projection methods. <i>Numerische Mathematik</i> , <b>1994</b> , 67, 513-520	2.2	44
172	Spectral Approximation of the Helmholtz Equation with High Wave Numbers. <i>SIAM Journal on Numerical Analysis</i> , <b>2005</b> , 43, 623-644	2.4	43
171	A Generalized-Laguerre-Bourier-Hermite Pseudospectral Method for Computing the Dynamics of Rotating Bose-Einstein Condensates. <i>SIAM Journal of Scientific Computing</i> , <b>2009</b> , 31, 3685-3711	2.6	39

170	On Numerical Approximations of Forward-Backward Stochastic Differential Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>2008</b> , 46, 2636-2661	2.4	39
169	On spectral approximations using modified Legendre rational functions: Application to the Korteweg-de Vries equation on the half line. <i>Indiana University Mathematics Journal</i> , <b>2001</b> , 50, 181-204	0.6	39
168	Transient drop deformation upon startup of shear in viscoelastic fluids. <i>Physics of Fluids</i> , <b>2005</b> , 17, 12310-12314	4.4	38
167	Energy stability and convergence of SAV block-centered finite difference method for gradient flows. <i>Mathematics of Computation</i> , <b>2019</b> , 88, 2047-2068	1.6	37
166	Modeling and simulations of drop pinch-off from liquid crystal filaments and the leaky liquid crystal faucet immersed in viscous fluids. <i>Journal of Computational Physics</i> , <b>2013</b> , 236, 1-14	4.1	37
165	Sparse Spectral Approximations of High-Dimensional Problems Based on Hyperbolic Cross. <i>SIAM Journal on Numerical Analysis</i> , <b>2010</b> , 48, 1087-1109	2.4	37
164	Highly Efficient and Accurate Numerical Schemes for the Epitaxial Thin Film Growth Models by Using the SAV Approach. <i>Journal of Scientific Computing</i> , <b>2019</b> , 78, 1467-1487	2.3	34
163	A stable, high-order method for three-dimensional, bounded-obstacle, acoustic scattering. <i>Journal of Computational Physics</i> , <b>2007</b> , 224, 1145-1169	4.1	33
162	A Stable High-Order Method for Two-Dimensional Bounded-Obstacle Scattering. <i>SIAM Journal of Scientific Computing</i> , <b>2006</b> , 28, 1398-1419	2.6	32
161	Efficient and accurate numerical schemes for a hydro-dynamically coupled phase field diblock copolymer model. <i>Journal of Computational Physics</i> , <b>2017</b> , 341, 44-60	4.1	30
160	Hermite Spectral Methods for Fractional PDEs in Unbounded Domains. <i>SIAM Journal of Scientific Computing</i> , <b>2017</b> , 39, A1928-A1950	2.6	30
159	A Triangular Spectral Element Method Using Fully Tensorial Rational Basis Functions. <i>SIAM Journal on Numerical Analysis</i> , <b>2009</b> , 47, 1619-1650	2.4	30
158	Stabilized semi-implicit spectral deferred correction methods for Allen-Cahn and Cahn-Hilliard equations. <i>Mathematical Methods in the Applied Sciences</i> , <b>2015</b> , 38, 4564-4575	2.3	29
157	A generalized-Laguerre-Hermite pseudospectral method for computing symmetric and central vortex states in Bose-Einstein condensates. <i>Journal of Computational Physics</i> , <b>2008</b> , 227, 9778-9793	4.1	29
156	On liquid crystal flows with free-slip boundary conditions. <i>Discrete and Continuous Dynamical Systems</i> , <b>2001</b> , 7, 307-318	2	29
155	A new Lagrange multiplier approach for gradient flows. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2020</b> , 367, 113070	5.7	28
154	A Spectral-Element Method for Transmission Eigenvalue Problems. <i>Journal of Scientific Computing</i> , <b>2013</b> , 57, 670-688	2.3	27
153	An Energetic Variational Formulation with Phase Field Methods for Interfacial Dynamics of Complex Fluids: Advantages and Challenges. <i>The IMA Volumes in Mathematics and Its Applications</i> , <b>2005</b> , 1-26	0.5	27

152	Interfacial forces and Marangoni flow on a nematic drop retracting in an isotropic fluid. <i>Journal of Colloid and Interface Science</i> , <b>2005</b> , 290, 281-8	9.3	26
151	A Dual-Petrov-Galerkin Method for the Kawahara-Type Equations. <i>Journal of Scientific Computing</i> , <b>2008</b> , 34, 48-63	2.3	25
150	Microstructure dependence of diffusional transport. <i>Computational Materials Science</i> , <b>2001</b> , 20, 37-47	3.2	25
149	Efficient Spectral-Galerkin Methods IV. Spherical Geometries. <i>SIAM Journal of Scientific Computing</i> , <b>1999</b> , 20, 1438-1455	2.6	25
148	The IEQ and SAV approaches and their extensions for a class of highly nonlinear gradient flow systems. <i>Contemporary Mathematics</i> , <b>2020</b> , 217-245	1.6	25
147	On a new pseudocompressibility method for the incompressible Navier-Stokes equations. <i>Applied Numerical Mathematics</i> , <b>1996</b> , 21, 71-90	2.5	24
146	Two classes of linearly implicit local energy-preserving approach for general multi-symplectic Hamiltonian PDEs. <i>Journal of Computational Physics</i> , <b>2020</b> , 401, 108975	4.1	24
145	Efficient spectral-Galerkin methods for systems of coupled second-order equations and their applications. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 5016-5028	4.1	23
144	Shear cell rupture of nematic liquid crystal droplets in viscous fluids. <i>Journal of Non-Newtonian Fluid Mechanics</i> , <b>2011</b> , 166, 487-499	2.7	23
143	A Rigorous Numerical Analysis of the Transformed Field Expansion Method. <i>SIAM Journal on Numerical Analysis</i> , <b>2009</b> , 47, 2708-2734	2.4	23
142	Fourier Spectral Approximation to a Dissipative System Modeling the Flow of Liquid Crystals. <i>SIAM Journal on Numerical Analysis</i> , <b>2001</b> , 39, 735-762	2.4	23
141	A pressure correction scheme for generalized form of energy-stable open boundary conditions for incompressible flows. <i>Journal of Computational Physics</i> , <b>2015</b> , 291, 254-278	4.1	22
140	Spectral element method with geometric mesh for two-sided fractional differential equations. <i>Advances in Computational Mathematics</i> , <b>2018</b> , 44, 745-771	1.6	22
139	An unconditionally stable rotational velocity-correction scheme for incompressible flows. <i>Journal of Computational Physics</i> , <b>2010</b> , 229, 7013-7029	4.1	22
138	Efficient Spectral Sparse Grid Methods and Applications to High-Dimensional Elliptic Equations II. Unbounded Domains. <i>SIAM Journal of Scientific Computing</i> , <b>2012</b> , 34, A1141-A1164	2.6	21
137	Optimal error estimates in Jacobi-weighted Sobolev spaces for polynomial approximations on the triangle. <i>Mathematics of Computation</i> , <b>2009</b> , 79, 1621-1646	1.6	21
136	A periodically forced flow displaying symmetry breaking via a three-tori gluing bifurcation and two-tori resonances. <i>Physica D: Nonlinear Phenomena</i> , <b>2001</b> , 156, 81-97	3.3	21
135	Error estimates for time discretizations of Cahn-Hilliard and Allen-Cahn phase-field models for two-phase incompressible flows. <i>Numerische Mathematik</i> , <b>2017</b> , 137, 417-449	2.2	20

134	Efficient SAV approach for imaginary time gradient flows with applications to one- and multi-component Bose-Einstein Condensates. <i>Journal of Computational Physics</i> , <b>2019</b> , 396, 72-88	4.1	20
133	Effect of Ferroelectric Polarization on Ionic Transport and Resistance Degradation in BaTiO <sub>3</sub> by Phase-Field Approach. <i>Journal of the American Ceramic Society</i> , <b>2014</b> , 97, 3568-3575	3.8	20
132	Role of polaron hopping in leakage current behavior of a SrTiO <sub>3</sub> single crystal. <i>Journal of Applied Physics</i> , <b>2013</b> , 114, 224102	2.5	20
131	A remark on the projection-3 method. <i>International Journal for Numerical Methods in Fluids</i> , <b>1993</b> , 16, 249-253	1.9	20
130	MODELING AND NUMERICAL APPROXIMATION OF TWO-PHASE INCOMPRESSIBLE FLOWS BY A PHASE-FIELD APPROACH. <i>Lecture Notes Series, Institute for Mathematical Sciences</i> , <b>2011</b> , 147-195	0.1	20
129	Möitz-Galerkin Methods and Applications to Mixed Dirichlet-Neumann Boundary Value Problems. <i>SIAM Journal of Scientific Computing</i> , <b>2016</b> , 38, A2357-A2381	2.6	20
128	Accurate solution and approximations of the linearized BGK equation for steady Couette flow. <i>Computers and Fluids</i> , <b>2015</b> , 111, 18-32	2.8	19
127	Efficient energy stable schemes for isotropic and strongly anisotropic Cahn-Hilliard systems with the Willmore regularization. <i>Journal of Computational Physics</i> , <b>2018</b> , 365, 56-73	4.1	19
126	Legendre and Chebyshev dual-Petrov-Galerkin methods for Hyperbolic equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2007</b> , 196, 3785-3797	5.7	19
125	On a Wind-Driven, Double-Gyre, Quasi-Geostrophic Ocean Model: Numerical Simulations and Structural Analysis. <i>Journal of Computational Physics</i> , <b>1999</b> , 155, 387-409	4.1	19
124	Projection methods for time-dependent Navier-Stokes equations. <i>Applied Mathematics Letters</i> , <b>1992</b> , 5, 35-37	3.5	19
123	Phase-field modeling of switchable diode-like current-voltage characteristics in ferroelectric BaTiO <sub>3</sub> . <i>Applied Physics Letters</i> , <b>2014</b> , 104, 182905	3.4	18
122	A new fast Chebyshev-Fourier algorithm for Poisson-type equations in polar geometries. <i>Applied Numerical Mathematics</i> , <b>2000</b> , 33, 183-190	2.5	18
121	Stability and error estimates of the SAV Fourier-spectral method for the phase field crystal equation. <i>Advances in Computational Mathematics</i> , <b>2020</b> , 46, 1	1.6	17
120	Laguerre Functions and Their Applications to Tempered Fractional Differential Equations on Infinite Intervals. <i>Journal of Scientific Computing</i> , <b>2018</b> , 74, 1286-1313	2.3	17
119	An efficient direct parallel spectral-element solver for separable elliptic problems. <i>Journal of Computational Physics</i> , <b>2007</b> , 225, 1721-1735	4.1	17
118	Nonlinear Galerkin Method Using Chebyshev and Legendre Polynomials I. The One-Dimensional Case. <i>SIAM Journal on Numerical Analysis</i> , <b>1995</b> , 32, 215-234	2.4	17
117	Convergence of approximate attractors for a fully discrete system for reaction-diffusion equations. <i>Numerical Functional Analysis and Optimization</i> , <b>1989</b> , 10, 1213-1234	1	17

116	Error Analysis of the SAV-MAC Scheme for the Navier--Stokes Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>2020</b> , 58, 2465-2491	2.4	17
115	Spectral approximation to a transmission eigenvalue problem and its applications to an inverse problem. <i>Computers and Mathematics With Applications</i> , <b>2015</b> , 69, 1132-1143	2.7	16
114	Error estimates for a fully discretized scheme to a Cahn-Hilliard phase-field model for two-phase incompressible flows. <i>Mathematics of Computation</i> , <b>2017</b> , 87, 2057-2090	1.6	16
113	Effect of multi-domain structure on ionic transport, electrostatics, and current evolution in BaTiO <sub>3</sub> ferroelectric capacitor. <i>Acta Materialia</i> , <b>2016</b> , 112, 224-230	8.4	16
112	An efficient and stable spectral method for electromagnetic scattering from a layered periodic structure. <i>Journal of Computational Physics</i> , <b>2012</b> , 231, 3007-3022	4.1	16
111	A finite element multigrid preconditioner for Chebyshev collocation methods. <i>Applied Numerical Mathematics</i> , <b>2000</b> , 33, 471-477	2.5	16
110	A Highly Efficient and Accurate New Scalar Auxiliary Variable Approach for Gradient Flows. <i>SIAM Journal of Scientific Computing</i> , <b>2020</b> , 42, A2514-A2536	2.6	16
109	Analysis of the scattering by an unbounded rough surface. <i>Mathematical Methods in the Applied Sciences</i> , <b>2012</b> , 35, 2166-2184	2.3	15
108	Complex dynamics in a short annular container with rotating bottom and inner cylinder. <i>Journal of Fluid Mechanics</i> , <b>2004</b> , 501, 327-354	3.7	15
107	Dynamic Transitions of Quasi-geostrophic Channel Flow. <i>SIAM Journal on Applied Mathematics</i> , <b>2015</b> , 75, 2361-2378	1.8	14
106	Error Analysis of the Strang Time-Splitting Laguerre-Hermite/Hermite Collocation Methods for the Gross-Pitaevskii Equation. <i>Foundations of Computational Mathematics</i> , <b>2013</b> , 13, 99-137	2.7	14
105	A New Spectral Element Method for Pricing European Options Under the Black-Scholes and Merton Jump Diffusion Models. <i>Journal of Scientific Computing</i> , <b>2012</b> , 52, 499-518	2.3	14
104	Stabilized Predictor-Corrector Schemes for Gradient Flows with Strong Anisotropic Free Energy. <i>Communications in Computational Physics</i> , <b>2018</b> , 24,	2.4	14
103	Fast Structured Direct Spectral Methods for Differential Equations with Variable Coefficients, I. The One-Dimensional Case. <i>SIAM Journal of Scientific Computing</i> , <b>2016</b> , 38, A28-A54	2.6	13
102	Unconditionally stable Gauge-Uzawa finite element schemes for incompressible natural convection problems with variable density. <i>Journal of Computational Physics</i> , <b>2017</b> , 348, 776-789	4.1	13
101	Pattern formations of 2D Rayleigh-Benard convection with no-slip boundary conditions for the velocity at the critical length scales. <i>Mathematical Methods in the Applied Sciences</i> , <b>2015</b> , 38, 3792-3806	2.3	13
100	Error analysis of fully discrete velocity-correction methods for incompressible flows. <i>Mathematics of Computation</i> , <b>2008</b> , 77, 1387-1405	1.6	13
99	On Fast Direct Poisson Solver, INF-SUP Constant and Iterative Stokes Solver by Legendre-Galerkin Method. <i>Journal of Computational Physics</i> , <b>1995</b> , 116, 184-188	4.1	13

98	Laguerre and composite Legendre-Laguerre Dual-Petrov-Galerkin methods for third-order equations. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2006</b> , 6, 1381-1402	1.3	13
97	Approximations by orthonormal mapped Chebyshev functions for higher-dimensional problems in unbounded domains. <i>Journal of Computational and Applied Mathematics</i> , <b>2014</b> , 265, 264-275	2.4	12
96	A Pressure-Correction Scheme for Rotational Navier-Stokes Equations and Its Application to Rotating Turbulent Flows. <i>Communications in Computational Physics</i> , <b>2011</b> , 9, 740-755	2.4	12
95	A Unstructured Nodal Spectral-Element Method for the Navier-Stokes Equations. <i>Communications in Computational Physics</i> , <b>2012</b> , 12, 315-336	2.4	12
94	A Laguerre-Legendre Spectral Method for the Stokes Problem in a Semi-Infinite Channel. <i>SIAM Journal on Numerical Analysis</i> , <b>2009</b> , 47, 271-292	2.4	12
93	A few new (?) facts about infinite elements. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2006</b> , 195, 3572-3590	5.7	12
92	Error Analysis for Mapped Legendre Spectral and Pseudospectral Methods. <i>SIAM Journal on Numerical Analysis</i> , <b>2004</b> , 42, 326-349	2.4	12
91	Error Analysis for Mapped Jacobi Spectral Methods. <i>Journal of Scientific Computing</i> , <b>2005</b> , 24, 183-218	2.3	12
90	A new efficient spectral galerkin method for singular perturbation problems. <i>Journal of Scientific Computing</i> , <b>1996</b> , 11, 411-437	2.3	12
89	Fast Fourier-like Mapped Chebyshev Spectral-Galerkin Methods for PDEs with Integral Fractional Laplacian in Unbounded Domains. <i>SIAM Journal on Numerical Analysis</i> , <b>2020</b> , 58, 2435-2464	2.4	12
88	On a SAV-MAC scheme for the Cahn-Hilliard-Navier-Stokes phase-field model and its error analysis for the corresponding Cahn-Hilliard-Stokes case. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2020</b> , 30, 2263-2297	3.5	12
87	Global Constraints Preserving Scalar Auxiliary Variable Schemes for Gradient Flows. <i>SIAM Journal of Scientific Computing</i> , <b>2020</b> , 42, A2489-A2513	2.6	12
86	A Hybrid Spectral Element Method for Fractional Two-Point Boundary Value Problems. <i>Numerical Mathematics</i> , <b>2017</b> , 10, 437-464	1.5	11
85	A Spectrally Accurate Approximation to Subdiffusion Equations Using the Log Orthogonal Functions. <i>SIAM Journal of Scientific Computing</i> , <b>2020</b> , 42, A849-A877	2.6	11
84	Efficient splitting schemes for magneto-hydrodynamic equations. <i>Science China Mathematics</i> , <b>2016</b> , 59, 1495-1510	0.8	11
83	On spectral approximations in elliptical geometries using Mathieu functions. <i>Mathematics of Computation</i> , <b>2008</b> , 78, 815-844	1.6	11
82	Quelques résultats nouveaux sur les méthodes de projection. <i>Comptes Rendus Mathématique</i> , <b>2001</b> , 333, 1111-1116		10
81	A Fast and Accurate Numerical Scheme for the Primitive Equations of the Atmosphere. <i>SIAM Journal on Numerical Analysis</i> , <b>1999</b> , 36, 719-737	2.4	10

80	Normal mode analysis of second-order projection methods for incompressible flows. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2005</b> , 5, 817-840	1.3	10
79	Enriched Spectral Methods and Applications to Problems with Weakly Singular Solutions. <i>Journal of Scientific Computing</i> , <b>2018</b> , 77, 1468-1489	2.3	10
78	A new spectral method for numerical solution of the unbounded rough surface scattering problem. <i>Journal of Computational Physics</i> , <b>2014</b> , 275, 608-625	4.1	9
77	A Triangular Spectral Method for the Stokes Equations. <i>Numerical Mathematics</i> , <b>2011</b> , 4, 158-179	1.5	9
76	Eventual periodicity for the KdV equation on a half-line. <i>Physica D: Nonlinear Phenomena</i> , <b>2007</b> , 227, 105-119	3.1	9
75	Heart-shaped bubbles rising in anisotropic liquids. <i>Physics of Fluids</i> , <b>2007</b> , 19, 041703	4.4	9
74	Numerical simulation of the regularized driven cavity flows at high Reynolds numbers. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>1990</b> , 80, 273-280	5.7	9
73	A spectral-Tau approximation for the Stokes and Navier-Stokes equations. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , <b>1988</b> , 22, 677-693	1.8	9
72	Scalar Auxiliary Variable/Lagrange multiplier based pseudospectral schemes for the dynamics of nonlinear Schrödinger/Gross-Pitaevskii equations. <i>Journal of Computational Physics</i> , <b>2021</b> , 437, 110328	4.1	9
71	A stable scheme and its convergence analysis for a 2D dynamic Q-tensor model of nematic liquid crystals. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2017</b> , 27, 1459-1488	3.5	8
70	An Efficient Space-Time Method for Time Fractional Diffusion Equation. <i>Journal of Scientific Computing</i> , <b>2019</b> , 81, 1088-1110	2.3	8
69	Spectral Direction Splitting Schemes for the Incompressible Navier-Stokes Equations. <i>East Asian Journal on Applied Mathematics</i> , <b>2011</b> , 1, 215-234	4	8
68	A Coupled Legendre-Laguerre Spectral-Element Method for the Navier-Stokes Equations in Unbounded Domains. <i>Journal of Scientific Computing</i> , <b>2010</b> , 42, 1-22	2.3	8
67	Irrational approximations and their applications to partial differential equations in exterior domains,. <i>Advances in Computational Mathematics</i> , <b>2008</b> , 28, 237-267	1.6	8
66	Computing the effective diffusivity using a spectral method. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2001</b> , 311, 135-141	5.3	8
65	Unconditionally Bound Preserving and Energy Dissipative Schemes for a Class of Keller--Segel Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>2020</b> , 58, 1674-1695	2.4	7
64	Optimal error estimates for the scalar auxiliary variable finite-element schemes for gradient flows. <i>Numerische Mathematik</i> , <b>2020</b> , 145, 167-196	2.2	7
63	Dimensional Robustness and Instability of Sheared, Semidilute, Nanorod Dispersions. <i>Multiscale Modeling and Simulation</i> , <b>2008</b> , 7, 622-654	1.8	7

62	On the existence and regularity of solutions of a quasilinear mixed equation of Leray-Lions type. <i>Acta Applicandae Mathematicae</i> , <b>1988</b> , 12, 287-316	1.1	7
61	Error estimates for finite element approximations of consistent splitting schemes for incompressible flows. <i>Discrete and Continuous Dynamical Systems - Series B</i> , <b>2007</b> , 8, 663-676	1.3	7
60	New SAV-pressure correction methods for the Navier-Stokes equations: Stability and error analysis. <i>Mathematics of Computation</i> , 1	1.6	7
59	Dynamics of regularized cavity flow at high Reynolds numbers. <i>Applied Mathematics Letters</i> , <b>1989</b> , 2, 381-384	3.5	6
58	Generalized SAV approaches for gradient systems. <i>Journal of Computational and Applied Mathematics</i> , <b>2021</b> , 394, 113532	2.4	6
57	A thermodynamically consistent phase-field model for viscous sintering. <i>Journal of the American Ceramic Society</i> , <b>2019</b> , 102, 674-685	3.8	5
56	Stability and convergence analysis of rotational velocity correction methods for the Navier-Stokes equations. <i>Advances in Computational Mathematics</i> , <b>2019</b> , 45, 3123-3136	1.6	5
55	On the Approximation of the Fokker-Planck Equation of the Finitely Extensible Nonlinear Elastic Dumbbell Model I: A New Weighted Formulation and an Optimal Spectral-Galerkin Algorithm in Two Dimensions. <i>SIAM Journal on Numerical Analysis</i> , <b>2012</b> , 50, 1136-1161	2.4	5
54	A GPU parallelized spectral method for elliptic equations in rectangular domains. <i>Journal of Computational Physics</i> , <b>2013</b> , 250, 555-564	4.1	5
53	Endwall effects in a periodically forced centrifugally unstable flow. <i>Fluid Dynamics Research</i> , <b>2000</b> , 27, 91-108	1.2	5
52	Unconditionally Stable Pressure-Correction Schemes for a Linear Fluid-Structure Interaction Problem. <i>Numerical Mathematics</i> , <b>2014</b> , 7, 537-554	1.5	5
51	Modeling and simulation of fingering pattern formation in a combustion model. <i>Mathematical Models and Methods in Applied Sciences</i> , <b>2015</b> , 25, 685-720	3.5	4
50	An Efficient and Accurate Numerical Method for the Spectral Fractional Laplacian Equation. <i>Journal of Scientific Computing</i> , <b>2020</b> , 82, 1	2.3	4
49	A bound-preserving high order scheme for variable density incompressible Navier-Stokes equations. <i>Journal of Computational Physics</i> , <b>2021</b> , 425, 109906	4.1	4
48	A Total Fractional-Order Variation Model for Image Super-Resolution and Its SAV Algorithm. <i>Journal of Scientific Computing</i> , <b>2020</b> , 82, 1	2.3	3
47	Efficient Spectral-Galerkin Method and Analysis for Elliptic PDEs with Non-local Boundary Conditions. <i>Journal of Scientific Computing</i> , <b>2016</b> , 68, 417-437	2.3	3
46	Efficient and accurate structure preserving schemes for complex nonlinear systems. <i>Handbook of Numerical Analysis</i> , <b>2019</b> , 20, 647-669	1	3
45	Parallel spectral-element direction splitting method for incompressible Navier-Stokes equations. <i>Applied Numerical Mathematics</i> , <b>2014</b> , 84, 66-79	2.5	3

44	Applications in Multi-Dimensional Domains. <i>Springer Series in Computational Mathematics</i> , <b>2011</b> , 367-413	0.9	3
43	An Efficient and Accurate Spectral Method for Acoustic Scattering in Elliptic Domains. <i>Numerical Mathematics</i> , <b>2009</b> , 2, 258-274	1.5	3
42	Log orthogonal functions: approximation properties and applications. <i>IMA Journal of Numerical Analysis</i> ,	1.8	3
41	Efficient Spectral Methods for PDEs with Spectral Fractional Laplacian. <i>Journal of Scientific Computing</i> , <b>2021</b> , 88, 1	2.3	3
40	Unconditionally positivity preserving and energy dissipative schemes for Poisson–Nernst–Planck equations. <i>Numerische Mathematik</i> , <b>2021</b> , 148, 671-697	2.2	3
39	Bound/Positivity Preserving and Energy Stable Scalar auxiliary Variable Schemes for Dissipative Systems: Applications to Keller–Segel and Poisson–Nernst–Planck Equations. <i>SIAM Journal of Scientific Computing</i> , <b>2021</b> , 43, A1832-A1857	2.6	3
38	Wavenumber explicit analysis for time-harmonic Maxwell equations in a spherical shell and spectral approximations. <i>IMA Journal of Numerical Analysis</i> , <b>2018</b> , 38, 810-851	1.8	3
37	Bound preserving and energy dissipative schemes for porous medium equation. <i>Journal of Computational Physics</i> , <b>2020</b> , 410, 109378	4.1	2
36	Highly Accurate Pseudospectral Approximations of the Prolate Spheroidal Wave Equation for Any Bandwidth Parameter and Zonal Wavenumber. <i>Journal of Scientific Computing</i> , <b>2017</b> , 71, 804-821	2.3	2
35	Orthogonal Polynomials and Related Approximation Results. <i>Springer Series in Computational Mathematics</i> , <b>2011</b> , 47-140	0.9	2
34	Spectral Methods for Second-Order Two-Point Boundary Value Problems. <i>Springer Series in Computational Mathematics</i> , <b>2011</b> , 141-180	0.9	2
33	Stability and Error Analysis of a Class of High-Order IMEX Schemes for Navier–Stokes Equations with Periodic Boundary Conditions. <i>SIAM Journal on Numerical Analysis</i> , <b>2021</b> , 59, 2926-2954	2.4	2
32	A mathematical and numerical study of incompressible flows with a surfactant monolayer. <i>Discrete and Continuous Dynamical Systems</i> , <b>2010</b> , 28, 181-197	2	2
31	Two-phase Stefan problem with smoothed enthalpy. <i>Communications in Mathematical Sciences</i> , <b>2016</b> , 14, 1625-1641	1	2
30	Accurate and Efficient Spectral Methods for Elliptic PDEs in Complex Domains. <i>Journal of Scientific Computing</i> , <b>2020</b> , 83, 1	2.3	2
29	Error estimate of Gauge Uzawa methods for incompressible flows with variable density. <i>Journal of Computational and Applied Mathematics</i> , <b>2020</b> , 364, 112321	2.4	2
28	An Efficient Spectral Method for Elliptic PDEs in Complex Domains with Circular Embedding. <i>SIAM Journal of Scientific Computing</i> , <b>2021</b> , 43, A309-A329	2.6	2
27	Fast structured Jacobi–Jacobi transforms. <i>Mathematics of Computation</i> , <b>2018</b> , 88, 1743-1772	1.6	2

26	A new class of implicit-explicit BDFk SAV schemes for general dissipative systems and their error analysis. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2022</b> , 392, 114718	5.7	2
25	A new interface capturing method for Allen-Cahn type equations based on a flow dynamic approach in Lagrangian coordinates, I. One-dimensional case. <i>Journal of Computational Physics</i> , <b>2020</b> , 419, 109509	4.1	1
24	Approximations on SO(3) by Wigner D-matrix and Applications. <i>Journal of Scientific Computing</i> , <b>2018</b> , 74, 1706-1724	2.3	1
23	Modeling and simulation of switchings in ferroelectric liquid crystals. <i>Discrete and Continuous Dynamical Systems</i> , <b>2010</b> , 26, 1419-1440	2	1
22	A new Lagrange multiplier approach for constructing structure preserving schemes, I. Positivity preserving. <i>Computer Methods in Applied Mechanics and Engineering</i> , <b>2022</b> , 391, 114585	5.7	1
21	Modeling and simulation of cell nuclear architecture reorganization process. <i>Journal of Computational Physics</i> , <b>2021</b> , 110808	4.1	1
20	Fundamental gaps of the fractional Schrödinger operator. <i>Communications in Mathematical Sciences</i> , <b>2019</b> , 17, 447-471	1	1
19	Efficient Structure Preserving Schemes for the Klein-Gordon-Schrödinger Equations. <i>Journal of Scientific Computing</i> , <b>2021</b> , 89, 1	2.3	1
18	Numerical analysis and simulation for a generalized planar Ginzburg-Landau equation in a circular geometry. <i>Communications in Mathematical Sciences</i> , <b>2017</b> , 15, 329-357	1	1
17	Second-Order SAV Schemes for the Nonlinear Schrödinger Equation and Their Error Analysis. <i>Journal of Scientific Computing</i> , <b>2021</b> , 88, 1	2.3	1
16	Stability and Error Analysis of Operator Splitting Methods for American Options Under the Black-Scholes Model. <i>Journal of Scientific Computing</i> , <b>2020</b> , 82, 1	2.3	0
15	The spectral-Galerkin approximation of nonlinear eigenvalue problems. <i>Applied Numerical Mathematics</i> , <b>2018</b> , 131, 1-15	2.5	0
14	On fully decoupled MSAV schemes for the Cahn-Hilliard-Navier-Stokes model of two-phase incompressible flows. <i>Mathematical Models and Methods in Applied Sciences</i> , 1-39	3.5	0
13	Computing interface with quasiperiodicity. <i>Journal of Computational Physics</i> , <b>2021</b> , 424, 109863	4.1	0
12	Efficient linear and unconditionally energy stable schemes for the modified phase field crystal equation. <i>Science China Mathematics</i> , 1	0.8	0
11	A new class of higher-order decoupled schemes for the incompressible Navier-Stokes equations and applications to rotating dynamics. <i>Journal of Computational Physics</i> , <b>2022</b> , 458, 111097	4.1	0
10	Bound/positivity preserving and unconditionally stable schemes for a class of fourth order nonlinear equations. <i>Journal of Computational Physics</i> , <b>2022</b> , 460, 111177	4.1	0
9	Stability and Error Analysis of IMEX SAV Schemes for the Magneto-Hydrodynamic Equations. <i>SIAM Journal on Numerical Analysis</i> , <b>2022</b> , 60, 1026-1054	2.4	0

8	A New Lagrange Multiplier Approach for Constructing Structure Preserving Schemes, II. Bound Preserving. <i>SIAM Journal on Numerical Analysis</i> , <b>2022</b> , 60, 970-998	2.4	○
7	Discrete maximum principle of a high order finite difference scheme for a generalized Allen-Cahn equation. <i>Communications in Mathematical Sciences</i> , <b>2022</b> , 20, 1409-1436	1	○
6	A generalized SAV approach with relaxation for dissipative systems. <i>Journal of Computational Physics</i> , <b>2022</b> , 464, 111311	4.1	○
5	Unconditionally Stable Pressure-Correction Schemes for a Nonlinear Fluid-Structure Interaction Model. <i>Communications on Applied Mathematics and Computation</i> , <b>2019</b> , 1, 61	0.9	
4	An Efficient and Stable Spectral-Element Method for Acoustic Scattering by an Obstacle. <i>East Asian Journal on Applied Mathematics</i> , <b>2013</b> , 3, 190-208	4	
3	A numerical study of periodically forced flows using a spectral-projection method <b>1998</b> , 189-194		
2	Efficient Spectral-Element Methods for the Electronic Schrödinger Equation. <i>Lecture Notes in Computational Science and Engineering</i> , <b>2016</b> , 265-289	0.3	
1	An efficient numerical scheme for a 3D spherical dynamo equation. <i>Journal of Computational and Applied Mathematics</i> , <b>2020</b> , 370, 112628	2.4	