Yan Xu

List of Publications by Year
in descending order

67 papers	1,500 citations	394421 19 h-index	330143 37 g-index
67 all docs	67 docs citations	67 times ranked	673 citing authors

#	Article	IF	Citations
1	Local discontinuous Galerkin methods for nonlinear Schrödinger equations. Journal of Computational Physics, 2005, 205, 72-97.	3.8	201
2	A Local Discontinuous Galerkin Method for the Camassa–Holm Equation. SIAM Journal on Numerical Analysis, 2008, 46, 1998-2021.	2.3	122
3	Local discontinuous Galerkin methods for the Cahn–Hilliard type equations. Journal of Computational Physics, 2007, 227, 472-491.	3.8	116
4	Local discontinuous Galerkin methods for the Kuramoto–Sivashinsky equations and the Ito-type coupled KdV equations. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 3430-3447.	6.6	109
5	Error estimates of the semi-discrete local discontinuous Galerkin method for nonlinear convection–diffusion and KdV equations. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 3805-3822.	6.6	96
6	Local discontinuous Galerkin methods for two classes of two-dimensional nonlinear wave equations. Physica D: Nonlinear Phenomena, 2005, 208, 21-58.	2.8	78
7	Optimal Error Estimates of the Semidiscrete Local Discontinuous Galerkin Methods for High Order Wave Equations. SIAM Journal on Numerical Analysis, 2012, 50, 79-104.	2.3	78
8	Efficient time discretization for local discontinuous Galerkin methods. Discrete and Continuous Dynamical Systems - Series B, 2007, 8, 677-693.	0.9	49
9	Accuracy-enhancement of discontinuous Galerkin solutions for convection-diffusion equations in multiple-dimensions. Mathematics of Computation, 2012, 81, 1929-1950.	2.1	38
10	Energy Conserving Local Discontinuous Galerkin Methods for the Nonlinear Schrödinger Equation with Wave Operator. Journal of Scientific Computing, 2015, 65, 622-647.	2.3	37
11	Local discontinuous Galerkin methods for the generalized Zakharov system. Journal of Computational Physics, 2010, 229, 1238-1259.	3.8	35
12	Local Discontinuous Galerkin Method and High Order Semi-Implicit Scheme for the Phase Field Crystal Equation. SIAM Journal of Scientific Computing, 2016, 38, A105-A127.	2.8	33
13	An efficient fully-discrete local discontinuous Galerkin method for the Cahn–Hilliard–Hele–Shaw system. Journal of Computational Physics, 2014, 264, 23-40.	3.8	30
14	Efficient Solvers of Discontinuous Galerkin Discretization for the Cahn–Hilliard Equations. Journal of Scientific Computing, 2014, 58, 380-408.	2.3	25
15	High Order Local Discontinuous Galerkin Methods for the Allen-Cahn Equation: Analysis and Simulation. Journal of Computational Mathematics, 2016, 34, 135-158.	0.4	24
16	Local Discontinuous Galerkin Methods for the Degasperis-Procesi Equation. Communications in Computational Physics, 2011, 10, 474-508.	1.7	22
17	Semi-implicit spectral deferred correction methods for highly nonlinear partial differential equations. Journal of Computational Physics, 2017, 338, 269-284.	3.8	21
18	Local Discontinuous Galerkin Method for Surface Diffusion and Willmore Flow of Graphs. Journal of Scientific Computing, 2009, 40, 375-390.	2.3	20

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19	Local Discontinuous Galerkin Methods for the Degasperis-Procesi Equation. Communications in Computational Physics, 2011, 10, 474-508.	1.7	20
20	Negative-Order Norm Estimates for Nonlinear Hyperbolic Conservation Laws. Journal of Scientific Computing, 2013, 54, 531-548.	2.3	20
21	Space–time discontinuous Galerkin method for nonlinear water waves. Journal of Computational Physics, 2007, 224, 17-39.	3.8	19
22	A local discontinuous Galerkin method for the (non)-isothermal Navier–Stokes–Korteweg equations. Journal of Computational Physics, 2015, 295, 685-714.	3.8	19
23	A PDE-Based Regularization Algorithm Toward Reducing Speckle Tracking Noise. Ultrasonic Imaging, 2015, 37, 277-293.	2.6	16
24	An h-adaptive local discontinuous Galerkin method for the Navier–Stokes–Korteweg equations. Journal of Computational Physics, 2016, 319, 242-265.	3.8	16
25	Globally Divergence-Free Discontinuous Galerkin Methods for Ideal Magnetohydrodynamic Equations. Journal of Scientific Computing, 2018, 77, 1621-1659.	2.3	15
26	A High Order Adaptive Time-Stepping Strategy and Local Discontinuous Galerkin Method for the Modified Phase Field Crystal Equation. Communications in Computational Physics, 2018, 24, .	1.7	15
27	Local Discontinuous Galerkin Method for the Hunter–Saxton Equation and Its Zero-Viscosity and Zero-Dispersion Limits. SIAM Journal of Scientific Computing, 2009, 31, 1249-1268.	2.8	14
28	Discontinuous Galerkin Methods for Isogeometric Analysis for Elliptic Equations on Surfaces. Communications in Mathematics and Statistics, 2014, 2, 431-461.	1.5	14
29	Local Discontinuous Galerkin Methods for the Functionalized Cahn–Hilliard Equation. Journal of Scientific Computing, 2015, 63, 913-937.	2.3	14
30	An ultraweak-local discontinuous Galerkin method for PDEs with high order spatial derivatives. Mathematics of Computation, 2020, 89, 2753-2783.	2.1	13
31	Discontinuous Hamiltonian Finite Element Method for Linear Hyperbolic Systems. Journal of Scientific Computing, 2008, 35, 241-265.	2.3	12
32	Efficient High Order Semi-implicit Time Discretization and Local Discontinuous Galerkin Methods for Highly Nonlinear PDEs. Journal of Scientific Computing, 2016, 68, 1029-1054.	2.3	12
33	Positivity Preserving Limiters for Time-Implicit Higher Order Accurate Discontinuous Galerkin Discretizations. SIAM Journal of Scientific Computing, 2019, 41, A2037-A2063.	2.8	12
34	Positivity-Preserving Well-Balanced Arbitrary Lagrangian–Eulerian Discontinuous Galerkin Methods for the Shallow Water Equations. Journal of Scientific Computing, 2021, 88, 1.	2.3	10
35	Discontinuous Galerkin Methods with Optimal $$L^2$$ Accuracy for One Dimensional Linear PDEs with High Order Spatial Derivatives. Journal of Scientific Computing, 2019, 78, 816-863.	2.3	9
36	Stability Analysis and Error Estimates of Semi-implicit Spectral Deferred Correction Coupled with Local Discontinuous Galerkin Method for Linear Convection–Diffusion Equations. Journal of Scientific Computing, 2018, 77, 1001-1029.	2.3	8

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37	Superconvergence of Local Discontinuous Galerkin Method for One-Dimensional Linear Schrödinger Equations. Journal of Scientific Computing, 2017, 73, 1290-1315.	2.3	7
38	Discontinuous Galerkin Approximations for Computing Electromagnetic Bloch Modes in Photonic Crystals. Journal of Scientific Computing, 2017, 70, 922-964.	2.3	7
39	Local Discontinuous Galerkin Methods for the $$mu$$ μ -Camassa–Holm and $$mu$$ μ -Degasperis–Procesi Equations. Journal of Scientific Computing, 2019, 79, 1294-1334.	2.3	7
40	Stability analysis and error estimates of local discontinuous Galerkin methods with semi-implicit spectral deferred correction time-marching for the Allen–Cahn equation. Journal of Computational and Applied Mathematics, 2020, 376, 112857.	2.0	7
41	A discontinuous Galerkin method and its error estimate for nonlinear fourth-order wave equations. Journal of Computational and Applied Mathematics, 2021, 386, 113230.	2.0	7
42	Dissipative Numerical Methods For the Hunter-Saxton Equation. Journal of Computational Mathematics, 2010, 28, .	0.4	7
43	A Conservative Local Discontinuous Galerkin Method for the Schrödinger-KdV System. Communications in Computational Physics, 2014, 15, 1091-1107.	1.7	6
44	High-Order Positivity-Preserving Well-Balanced Discontinuous Galerkin Methods for Euler Equations with Gravitation on Unstructured Meshes. Communications in Computational Physics, 2022, 31, 771-815.	1.7	6
45	Interior Penalty Discontinuous Galerkin Based Isogeometric Analysis for Allen-Cahn Equations on Surfaces. Communications in Computational Physics, 2015, 18, 1380-1416.	1.7	5
46	An efficient, unconditionally energy stable local discontinuous Galerkin scheme for the Cahn–Hilliard–Brinkman system. Journal of Computational Physics, 2015, 298, 387-405.	3.8	5
47	Superconvergence of Arbitrary Lagrangian--Eulerian Discontinuous Galerkin Methods for Linear Hyperbolic Equations. SIAM Journal on Numerical Analysis, 2019, 57, 2142-2165.	2.3	5
48	Local Discontinuous Galerkin Methods for the 2D Simulation of Quantum Transport Phenomena on Quantum Directional Coupler. Communications in Computational Physics, 2014, 15, 1012-1028.	1.7	4
49	Weighted essentially non-oscillatory schemes for Degasperis–Procesi equation with discontinuous solutions. Annals of Mathematical Sciences and Applications, 2017, 2, 319-340.	0.4	4
50	Optimal Error Estimates of the Local Discontinuous Galerkin Method for Surface Diffusion of Graphs on Cartesian Meshes. Journal of Scientific Computing, 2012, 51, 1-27.	2.3	3
51	High Order Numerical Simulations for the Binary Fluid--Surfactant System Using the Discontinuous Galerkin and Spectral Deferred Correction Methods. SIAM Journal of Scientific Computing, 2020, 42, B353-B378.	2.8	3
52	High Order Finite Difference WENO Methods with Unequal-Sized Sub-Stencils for the Degasperis-Procesi Type Equations. Communications in Computational Physics, 2022, 31, 913-946.	1.7	3
53	Investigation of multi-soliton, multi-cuspon solutions to the Camassa-Holm equation and their interaction. Chinese Annals of Mathematics Series B, 2012, 33, 225-246.	0.4	2
54	A Local Discontinuous Galerkin Method for the Propagation of Phase Transition in Solids and Fluids. Journal of Scientific Computing, 2014, 59, 688.	2.3	2

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55	A dissipation-rate reserving DG method for wave catching-up phenomena in a nonlinearly elastic composite bar. Journal of Computational Physics, 2014, 258, 405-430.	3.8	2
56	Fast Solver for the Local Discontinuous Galerkin Discretization of the KdV Type Equations. Communications in Computational Physics, 2015, 17, 424-457.	1.7	2
57	Local Discontinuous Galerkin Methods to a Dispersive System of KdV-Type Equations. Journal of Scientific Computing, 2021, 86, 1.	2.3	2
58	Negative Norm Estimates for Arbitrary Lagrangian-Eulerian Discontinuous Galerkin Method for Nonlinear Hyperbolic Equations. Communications on Applied Mathematics and Computation, 2022, 4, 250-270.	1.7	2
59	Error Analysis of an Unconditionally Energy Stable Local Discontinuous Galerkin Scheme for the Cahnâ€"Hilliard Equation with Concentration-Dependent Mobility. Computational Methods in Applied Mathematics, 2021, .	0.8	2
60	Asymptotically compatible approximations of linear nonlocal conservation laws with variable horizon. Numerical Methods for Partial Differential Equations, 2022, 38, 1948-1966.	3.6	2
61	Efficient, Accurate and Energy Stable Discontinuous Galerkin Methods for Phase Field Models of Two-Phase Incompressible Flows. Communications in Computational Physics, 2019, 26, 1224-1248.	1.7	2
62	Local Discontinuous Galerkin Method for the Impact-Induced Wave in a Slender Cylinder Composed of a Non-Convex Elastic Material. Communications in Mathematics and Statistics, 2013, 1, 393-415.	1.5	1
63	Spectral approximation for polynomial eigenvalue problems. Computers and Mathematics With Applications, 2018, 76, 1184-1197.	2.7	1
64	Local Discontinuous Galerkin Methods for the Two-Dimensional Camassaâ€"Holm Equation. Communications in Mathematics and Statistics, 2018, 6, 359-388.	1.5	1
65	Adaptive local discontinuous Galerkin methods with semi-implicit time discretizations for the Navier-Stokes equations. Advances in Aerodynamics, 2022, 4, .	2.5	1
66	Discontinuous Galerkin Based Isogeometric Analysis for Geometric Flows and Applications in Geometric Modeling. Journal of Scientific Computing, 2017, 71, 525-546.	2.3	0
67	Preface to Focused Issue on Discontinuous Galerkin Methods. Communications on Applied Mathematics and Computation, 0, , 1.	1.7	0