Gunilla Kreiss

List of Publications by Year
in descending order

68	2,508	430442 18	197535 49
papers	citations	h-index	g-index

69	69	69	1732
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A conservative level set method for two phase flow. Journal of Computational Physics, 2005, 210, 225-246.	1.9	994
2	A conservative level set method for two phase flow II. Journal of Computational Physics, 2007, 225, 785-807.	1.9	436
3	Perfectly Matched Layers for Hyperbolic Systems: General Formulation, Wellâ€posedness, and Stability. SIAM Journal on Applied Mathematics, 2006, 67, 1-23.	0.8	125
4	A new absorbing layer for elastic waves. Journal of Computational Physics, 2006, 215, 642-660.	1.9	73
5	Bounds for threshold amplitudes in subcritical shear flows. Journal of Fluid Mechanics, 1994, 270, 175-198.	1.4	71
6	Convergence to steady state of solutions of Burgers' equation. Applied Numerical Mathematics, 1986, 2, 161-179.	1.2	61
7	Spurious currents in finite element based level set methods for twoâ€phase flow. International Journal for Numerical Methods in Fluids, 2012, 69, 1433-1456.	0.9	50
8	A Well-Posed and Discretely Stable Perfectly Matched Layer for Elastic Wave Equations in Second Order Formulation. Communications in Computational Physics, 2012, 11, 1643-1672.	0.7	39
9	A conservative level set method for contact line dynamics. Journal of Computational Physics, 2009, 228, 6361-6375.	1.9	36
10	High Order Finite Difference Methods for the Wave Equation with Non-conforming Grid Interfaces. Journal of Scientific Computing, 2016, 68, 1002-1028.	1.1	35
11	Application of a perfectly matched layer to the nonlinear wave equation. Wave Motion, 2007, 44, 531-548.	1.0	34
12	A uniformly well-conditioned, unfitted Nitsche method for interface problems. BIT Numerical Mathematics, 2013, 53, 791-820.	1.0	32
13	An Optimized Perfectly Matched Layer for the SchrÃ¶dinger Equation. Communications in Computational Physics, 2011, 9, 147-179.	0.7	30
14	Convergence of Summation-by-Parts Finite Difference Methods for the Wave Equation. Journal of Scientific Computing, 2017, 71, 219-245.	1.1	28
15	On the Convergence to Steady State of Solutions of Nonlinear Hyperbolic-Parabolic Systems. SIAM Journal on Numerical Analysis, 1994, 31, 1577-1604.	1.1	25
16	Stable and High-Order Accurate Boundary Treatments for the Elastic Wave Equation on Second-Order Form. SIAM Journal of Scientific Computing, 2014, 36, A2787-A2818.	1.3	22
17	A stabilized Nitsche cut element method for the wave equation. Computer Methods in Applied Mechanics and Engineering, 2016, 309, 364-387.	3.4	22
18	A Remark on Numerical Errors Downstream of Slightly Viscous Shocks. SIAM Journal on Numerical Analysis, 1999, 36, 853-863.	1.1	19

#	Article	IF	Citations
19	A perfectly matched layer applied to a reactive scattering problem. Journal of Chemical Physics, 2010, 133, 054306.	1.2	19
20	High Order Stable Finite Difference Methods for the SchrÃ¶dinger Equation. Journal of Scientific Computing, 2013, 55, 173-199.	1.1	19
21	Effective slip over partially filled microcavities and its possible failure. Physical Review Fluids, 2018, 3, .	1.0	19
22	Bounds for the Threshold Amplitude for Plane Couette Flow. Journal of Nonlinear Mathematical Physics, 2002, 9, 311.	0.8	18
23	Stability at Nonconforming Grid Interfaces for a High Order Discretization of the SchrÃ¶dinger Equation. Journal of Scientific Computing, 2012, 53, 528-551.	1.1	17
24	Higher Order Cut Finite Elements for the Wave Equation. Journal of Scientific Computing, 2019, 80, 1867-1887.	1.1	17
25	Numerical interaction of boundary waves with perfectly matched layers in two space dimensional elastic waveguides. Wave Motion, 2014, 51, 445-465.	1.0	15
26	On the Accuracy and Stability of the Perfectly Matched Layer in Transient Waveguides. Journal of Scientific Computing, 2012, 53, 642-671.	1.1	14
27	Boundary conditions and stability of a perfectly matched layer for the elastic wave equation in first order form. Journal of Computational Physics, 2015, 303, 372-395.	1.9	14
28	Elimination of First Order Errors in Shock Calculations. SIAM Journal on Numerical Analysis, 2001, 38, 1986-1998.	1.1	13
29	Analysis of stresses in two-dimensional isostatic granular systems. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 6263-6276.	1.2	13
30	High-order cut finite elements for the elastic wave equation. Advances in Computational Mathematics, 2020, 46, 1.	0.8	12
31	Analysis of stretched grids as buffer zones in simulations of wave propagation. Applied Numerical Mathematics, 2016, 107, 1-17.	1.2	11
32	Stress Chain Solutions in Two-Dimensional Isostatic Granular Systems: Fabric-Dependent Paths, Leakage, and Branching. Physical Review Letters, 2008, 101, 098001.	2.9	10
33	Discrete stability of perfectly matched layers for anisotropic wave equations in first and second order formulation. BIT Numerical Mathematics, 2013, 53, 641-663.	1.0	10
34	Convergence of finite difference methods for the wave equation in two space dimensions. Mathematics of Computation, 2018, 87, 2737-2763.	1.1	10
35	A RIEMANN PROBLEM AT A JUNCTION OF OPEN CANALS. Journal of Hyperbolic Differential Equations, 2013, 10, 431-460.	0.3	9
36	Boundary Waves and Stability of the Perfectly Matched Layer for the Two Space Dimensional Elastic Wave Equation in Second Order Form. SIAM Journal on Numerical Analysis, 2014, 52, 2883-2904.	1.1	9

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37	Coupling atomistic and continuum modelling of magnetism. Computer Methods in Applied Mechanics and Engineering, 2018, 329, 219-253.	3.4	9
38	Direct numerical simulations of localized disturbances in pipe Poiseuille flow. Computers and Fluids, 2010, 39, 926-935.	1.3	8
39	High-Order Numerical Methods for 2D Parabolic Problems in Single and Composite Domains. Journal of Scientific Computing, 2018, 76, 812-847.	1.1	8
40	A note on the effect of artificial viscosity on solutions of conservation laws. Applied Numerical Mathematics, 1996, 21, 155-173.	1.2	7
41	Elimination of First Order Errors in Time Dependent Shock Calculations. SIAM Journal on Numerical Analysis, 2003, 41, 2131-2148.	1.1	7
42	Efficient and stable perfectly matched layer for CEM. Applied Numerical Mathematics, 2014, 76, 34-47.	1.2	7
43	Scale Transitions in Magnetisation Dynamics. Communications in Computational Physics, 2016, 20, 969-988.	0.7	7
44	On energy stable discontinuous Galerkin spectral element approximations of the perfectly matched layer for the wave equation. Computer Methods in Applied Mechanics and Engineering, 2019, 350, 898-937.	3.4	6
45	High Order Cut Discontinuous Galerkin Methods for Hyperbolic Conservation Laws in One Space Dimension. SIAM Journal of Scientific Computing, 2021, 43, A2404-A2424.	1.3	6
46	Analytical and Numerical Investigation of the Resolvent for Plane Couette Flow. SIAM Journal on Applied Mathematics, 2003, 63, 801-817.	0.8	5
47	Resolvent bounds for pipe Poiseuille flow. Journal of Fluid Mechanics, 2006, 568, 451.	1.4	5
48	Stability of Viscous Shocks on Finite Intervals. Archive for Rational Mechanics and Analysis, 2007, 187, 157-183.	1.1	5
49	A phase-field microscale enhancement for macro models of capillary-driven contact point dynamics. Journal of Computational Multiphase Flows, 2017, 9, 114-126.	0.8	5
50	An investigation of the internal structure of shock profiles for shock capturing schemes. Journal of Computational and Applied Mathematics, 2007, 201, 8-29.	1.1	4
51	On a Rigorous Resolvent Estimate for Plane Couette Flow. Journal of Mathematical Fluid Mechanics, 2007, 9, 153-180.	0.4	4
52	Atomistic-continuum multiscale modelling of magnetisation dynamics at non-zero temperature. Advances in Computational Mathematics, 2018, 44, 1119-1151.	0.8	4
53	Temporal upscaling in micromagnetism via heterogeneous multiscale methods. Journal of Computational and Applied Mathematics, 2019, 345, 99-113.	1.1	4
54	Stability analysis of high order methods for the wave equation. Journal of Computational and Applied Mathematics, 2021, 404, 113900.	1.1	4

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55	A computer-assisted proof of the existence of solutions to a boundary value problem with an integral boundary condition. Communications in Nonlinear Science and Numerical Simulation, 2011, 16, 1227-1243.	1.7	3
56	A computer-assisted proof of the existence of traveling wave solutions to the scalar Euler equations with artificial viscosity. Nonlinear Differential Equations and Applications, 2012, 19, 97-131.	0.4	3
57	A delayed feedback control for network of open canals. International Journal of Dynamics and Control, 2013, 1, 316-329.	1.5	3
58	Coupling of Gaussian Beam and Finite Difference Solvers for Semiclassical SchrÃ¶dinger Equations. Advances in Applied Mathematics and Mechanics, 2015, 7, 687-714.	0.7	3
59	An equation-free approach for second order multiscale hyperbolic problems in non-divergence form. Communications in Mathematical Sciences, 2018, 16, 2317-2343.	0.5	3
60	Convergence to steady state of solutions of the euler equations, I. BIT Numerical Mathematics, 1988, 28, 144-162.	1.0	2
61	Asymptotic expansions for hyperbolic-parabolic systems with a small parameter. Mathematical Methods in the Applied Sciences, 1990, 13, 493-514.	1.2	2
62	Stability of Steady Solutions of Burgers's Equation. SIAM Journal on Numerical Analysis, 1998, 35, 2329-2349.	1.1	1
63	An Explicit Hermite-Taylor Method for the SchrÃ¶dinger Equation. Communications in Computational Physics, 2017, 21, 1207-1230.	0.7	1
64	Modelling long-range interactions in multiscale simulations of ferromagnetic materials. Advances in Computational Mathematics, 2020, 46, 1.	0.8	1
65	The Dependence on the Outflow Boundary Condition of the Solution of Steady, Incompressible Euler Equations. SIAM Journal on Numerical Analysis, 1991, 28, 1242-1264.	1.1	0
66	Stability of Viscous Shock Waves for Problems with Nonsymmetric Viscosity Matrices. SIAM Journal on Mathematical Analysis, 2001, 33, 913-929.	0.9	0
67	Interface waves in almost incompressible elastic materials. Journal of Computational Physics, 2015, 303, 313-330.	1.9	0
68	Approximate solutions to slightly viscous conservation laws. Quarterly of Applied Mathematics, 2004, 62, 117-133.	0.5	0