Stig Larsson

List of Publications by Year
in descending order

52 papers	1,607 citations	279798 23 h-index	302126 39 g-index
55 all docs	55 docs citations	55 times ranked	678 citing authors

#	Article	IF	Citations
1	Error estimates with smooth and nonsmooth data for a finite element method for the Cahn-Hilliard equation. Mathematics of Computation, 1992, 58, 603.	2.1	140
2	Numerical solution of parabolic integro-differential equations by the discontinuous Galerkin method. Mathematics of Computation, 1998, 67, 45-71.	2.1	108
3	The stability of rational approximations of analytic semigroups. BIT Numerical Mathematics, 1993, 33, 74-84.	2.0	83
4	Finite-Element Methods for a Strongly Damped Wave Equation. IMA Journal of Numerical Analysis, 1991, 11, 115-142.	2.9	67
5	Adaptive Finite Element Methods for Parabolic Problems VI: Analytic Semigroups. SIAM Journal on Numerical Analysis, 1998, 35, 1315-1325.	2.3	63
6	The Long-Time Behavior of Finite-Element Approximations of Solutions to Semilinear Parabolic Problems. SIAM Journal on Numerical Analysis, 1989, 26, 348-365.	2.3	59
7	Finite Element Approximation of the Linear Stochastic Wave Equation with Additive Noise. SIAM Journal on Numerical Analysis, 2010, 48, 408-427.	2.3	57
8	Posterior contraction rates for the Bayesian approach to linear ill-posed inverse problems. Stochastic Processes and Their Applications, 2013, 123, 3828-3860.	0.9	55
9	Rate of weak convergence of the finite element method for the stochastic heat equation with additive noise. BIT Numerical Mathematics, 2009, 49, 343-356.	2.0	50
10	Error estimates for spatially discrete approximations of semilinear parabolic equations with nonsmooth initial data. Mathematics of Computation, 1987, 49, 331-357.	2.1	46
11	Weak convergence of finite element approximations of linear stochastic evolution equations with additive noise. BIT Numerical Mathematics, 2012, 52, 85-108.	2.0	46
12	A Trigonometric Method for the Linear Stochastic Wave Equation. SIAM Journal on Numerical Analysis, 2013, 51, 204-222.	2.3	46
13	Weak convergence for a spatial approximation of the nonlinear stochastic heat equation. Mathematics of Computation, 2015, 85, 1335-1358.	2.1	45
14	Discontinuous Galerkin method for an integro-differential equation modeling dynamic fractional order viscoelasticity. Computer Methods in Applied Mechanics and Engineering, 2015, 283, 196-209.	6.6	45
15	Adaptive discretization of fractional order viscoelasticity using sparse time history. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 4567-4590.	6.6	44
16	Strong convergence of the finite element method with truncated noise for semilinear parabolic stochastic equations with additive noise. Numerical Algorithms, 2010, 53, 309-320.	1.9	43
17	Full Discretization of Semilinear Stochastic Wave Equations Driven by Multiplicative Noise. SIAM Journal on Numerical Analysis, 2016, 54, 1093-1119.	2.3	43
18	Finite Element Approximation of the Cahn–Hilliard–Cook Equation. SIAM Journal on Numerical Analysis, 2011, 49, 2407-2429.	2.3	42

#	Article	IF	Citations
19	Error Estimates of Optimal Order for Finite Element Methods with Interpolated Coefficients for the Nonlinear Heat Equation. IMA Journal of Numerical Analysis, 1989, 9, 507-524.	2.9	38
20	Analytical solution for heat conduction due to a moving Gaussian heat flux with piecewise constant parameters. Applied Mathematical Modelling, 2019, 66, 227-240.	4.2	32
21	Interpolation of coefficients and transformation of the dependent variable in finite element methods for the non-linear heat equation. Mathematical Methods in the Applied Sciences, 1989, 11, 105-124.	2.3	30
22	Linearly Implicit Finite Element Methods for the Time-Dependent Joule Heating Problem. BIT Numerical Mathematics, 2005, 45, 429-442.	2.0	30
23	The Behavior of Finite Element Solutions of Semilinear Parabolic Problems Near Stationary Points. SIAM Journal on Numerical Analysis, 1994, 31, 1000-1018.	2.3	29
24	Adaptive discretization of an integro-differential equation with a weakly singular convolution kernel. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 5285-5304.	6.6	24
25	Finite-element approximation of the linearized Cahn-Hilliard-Cook equation. IMA Journal of Numerical Analysis, 2011, 31, 1315-1333.	2.9	24
26	Optimal regularity for semilinear stochastic partial differential equations with multiplicative noise. Electronic Journal of Probability, 2012, 17, .	1.0	24
27	On the discretisation in time of the stochastic Allen–Cahn equation. Mathematische Nachrichten, 2018, 291, 966-995.	0.8	24
28	On the Backward Euler Approximation of the Stochastic Allen-Cahn Equation. Journal of Applied Probability, 2015, 52, 323-338.	0.7	23
29	The continuous Galerkin method for an integro-differential equation modeling dynamic fractional order viscoelasticity. IMA Journal of Numerical Analysis, 2010, 30, 964-986.	2.9	22
30	Weak convergence of finite element approximations of linear stochastic evolution equations with additive noise II. Fully discrete schemes. BIT Numerical Mathematics, 2013, 53, 497.	2.0	21
31	Pointwise a Posteriori Error Analysis for an Adaptive Penalty Finite Element Method for the Obstacle Problem. Computational Methods in Applied Mathematics, 2001, 1, 18-38.	0.8	18
32	Strong Convergence of a Fully Discrete Finite Element Approximation of the Stochastic Cahn--Hilliard Equation. SIAM Journal on Numerical Analysis, 2018, 56, 708-731.	2.3	18
33	A shadowing result with applications to finite element approximation of reaction-diffusion equations. Mathematics of Computation, 1999, 68, 55-73.	2.1	15
34	Weak error analysis for semilinear stochastic Volterra equations with additive noise. Journal of Mathematical Analysis and Applications, 2016, 437, 1283-1304.	1.0	15
35	Optimal closing of a pair trade with a model containing jumps. Applications of Mathematics, 2013, 58, 249-268.	0.9	14
36	Space-time Discretization of an Integro-differential Equation Modeling Quasi-static Fractional-order Viscoelasticity. JVC/Journal of Vibration and Control, 2008, 14, 1631-1649.	2.6	13

#	Article	IF	Citations
37	Mittag--Leffler Euler Integrator for a Stochastic Fractional Order Equation with Additive Noise. SIAM Journal on Numerical Analysis, 2020, 58, 66-85.	2.3	13
38	Spatial approximation of stochastic convolutions. Journal of Computational and Applied Mathematics, 2011, 235, 3554-3570.	2.0	12
39	Numerical Solution of Parabolic Problems Based on a Weak Space-Time Formulation. Computational Methods in Applied Mathematics, 2017, 17, 65-84.	0.8	11
40	THE DISCRETE ORDINATES METHOD FOR THE NEUTRON TRANSPORT EQUATION IN AN INFINITE CYLINDRICAL DOMAIN. Mathematical Models and Methods in Applied Sciences, 1992, 02, 317-338.	3.3	9
41	Duality in refined Sobolevâ€"Malliavin spaces and weak approximation of SPDE. Stochastics and Partial Differential Equations: Analysis and Computations, 2016, 4, 113-149.	0.9	9
42	On a Randomized Backward Euler Method for Nonlinear Evolution Equations with Time-Irregular Coefficients. Foundations of Computational Mathematics, 2019, 19, 1387-1430.	2.5	8
43	Covariance structure of parabolic stochastic partial differential equations. Stochastics and Partial Differential Equations: Analysis and Computations, 2013, 1, 351-364.	0.9	7
44	Local pointwise a posteriori gradient error bounds for the Stokes equations. Mathematics of Computation, 2012, 82, 625-649.	2.1	5
45	Covariance structure of parabolic stochastic partial differential equations with multiplicative LÃ©vy noise. Journal of Differential Equations, 2017, 262, 5896-5927.	2.2	5
46	The dual weighted residuals approach to optimal control of ordinary differential equations. BIT Numerical Mathematics, 2010, 50, 587-607.	2.0	2
47	On the Backward Euler Approximation of the Stochastic Allen-Cahn Equation. Journal of Applied Probability, 2015, 52, 323-338.	0.7	2
48	A Weak Space-Time Formulation for the Linear Stochastic Heat Equation. International Journal of Applied and Computational Mathematics, 2017, 3, 787-806.	1.6	2
49	Error estimates of the backward Eulerâ€"Maruyama method for multi-valued stochastic differential equations. BIT Numerical Mathematics, 0, , 1.	2.0	2
50	An Error Estimate for Symplectic Euler Approximation of Optimal Control Problems. SIAM Journal of Scientific Computing, 2015, 37, A946-A969.	2.8	1
51	A greedy algorithm for optimal heating in powder-bed-based additive manufacturing. Journal of Mathematics in Industry, 2021, 11, .	1.2	1
52	ADAPTIVE DISCRETIZATION OF AN INTEGRO-DIFFERENTIAL EQUATION MODELING QUASI-STATIC FRACTIONAL ORDER VISCOELASTICITY. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 397-401.	0.4	0