

Christoph Schwab

List of Publications by Year in descending order

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178
papers

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docs citations

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2637
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#	ARTICLE	IF	CITATIONS
1	Exponential ReLU Neural Network Approximation Rates for Point and Edge Singularities. Foundations of Computational Mathematics, 2023, 23, 1043-1127.	2.5	5
2	DNN Expression Rate Analysis of High-Dimensional PDEs: Application to Option Pricing. Constructive Approximation, 2022, 55, 3-71.	3.0	43
3	Constructive Deep ReLU Neural Network Approximation. Journal of Scientific Computing, 2022, 90, 1.	2.3	4
4	Deep solution operators for variational inequalities via proximal neural networks. Research in Mathematical Sciences, 2022, 9, .	1.0	1
5	Extrapolated Polynomial Lattice Rule Integration in Computational Uncertainty Quantification. SIAM-ASA Journal on Uncertainty Quantification, 2022, 10, 651-686.	2.0	0
6	Exponential convergence of mixed hp-DGFEM for the incompressible Navier–Stokes equations in \mathbb{R}^2 . IMA Journal of Numerical Analysis, 2021, 41, 1966-1999.	2.9	2
7	Shape Holomorphy of the Calderón Projector for the Laplacian in \mathbb{R}^2 . Integral Equations and Operator Theory, 2021, 93, 1.	0.8	5
8	Deep ReLU network expression rates for option prices in high-dimensional, exponential Lévy models. Finance and Stochastics, 2021, 25, 615-657.	1.1	7
9	Multilevel Markov Chain Monte Carlo for Bayesian Inversion of Parabolic Partial Differential Equations under Gaussian Prior. SIAM-ASA Journal on Uncertainty Quantification, 2021, 9, 384-419.	2.0	3
10	Space–time discontinuous Galerkin approximation of acoustic waves with point singularities. IMA Journal of Numerical Analysis, 2021, 41, 2056-2109.	2.9	12
11	Higher-Order Quasi-Monte Carlo Training of Deep Neural Networks. SIAM Journal of Scientific Computing, 2021, 43, A3938-A3966.	2.8	5
12	Analysis of a multilevel Markov chain Monte Carlo finite element method for Bayesian inversion of log-normal diffusions. Inverse Problems, 2020, 36, 035021.	2.0	7
13	Convergence rates of high dimensional Smolyak quadrature. ESAIM: Mathematical Modelling and Numerical Analysis, 2020, 54, 1259-1307.	1.9	17
14	Multilevel approximation of Gaussian random fields: Fast simulation. Mathematical Models and Methods in Applied Sciences, 2020, 30, 181-223.	3.3	17
15	Analytic Regularity for the Incompressible Navier–Stokes Equations in Polygons. SIAM Journal on Mathematical Analysis, 2020, 52, 2945-2968.	1.9	8
16	Deep ReLU networks and high-order finite element methods. Analysis and Applications, 2020, 18, 715-770.	2.2	52
17	Domain Uncertainty Quantification in Computational Electromagnetics. SIAM-ASA Journal on Uncertainty Quantification, 2020, 8, 301-341.	2.0	8
18	Deep neural network expression of posterior expectations in Bayesian PDE inversion. Inverse Problems, 2020, 36, 125011.	2.0	17

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19	Multilevel Quasi-Monte Carlo Uncertainty Quantification for Advection-Diffusion-Reaction. Springer Proceedings in Mathematics and Statistics, 2020, , 31-67.	0.2	2
20	Deep learning in high dimension: Neural network expression rates for generalized polynomial chaos expansions in UQ. Analysis and Applications, 2019, 17, 19-55.	2.2	133
21	Uncertainty Quantification for Spectral Fractional Diffusion: Sparsity Analysis of Parametric Solutions. SIAM-ASA Journal on Uncertainty Quantification, 2019, 7, 913-947.	2.0	1
22	Multilevel approximation of parametric and stochastic PDES. Mathematical Models and Methods in Applied Sciences, 2019, 29, 1753-1817.	3.3	18
23	Improved Efficiency of a Multi-Index FEM for Computational Uncertainty Quantification. SIAM Journal on Numerical Analysis, 2019, 57, 1744-1769.	2.3	5
24	QMC integration for lognormal-parametric, elliptic PDEs: local supports and product weights. Numerische Mathematik, 2019, 141, 63-102.	1.9	14
25	Higher order Quasi-Monte Carlo integration for Bayesian PDE Inversion. Computers and Mathematics With Applications, 2019, 77, 144-172.	2.7	14
26	Tensor FEM for Spectral Fractional Diffusion. Foundations of Computational Mathematics, 2019, 19, 901-962.	2.5	34
27	Adaptive anisotropic Petrov-Galerkin methods for first order transport equations. Journal of Computational and Applied Mathematics, 2018, 340, 191-220.	2.0	7
28	Quasi-Monte Carlo Integration for Affine-Parametric, Elliptic PDEs: Local Supports and Product Weights. SIAM Journal on Numerical Analysis, 2018, 56, 111-135.	2.3	24
29	Shape Holomorphy of the Stationary Navier-Stokes Equations. SIAM Journal on Mathematical Analysis, 2018, 50, 1720-1752.	1.9	22
30	Discontinuous Galerkin Methods for Acoustic Wave Propagation in Polygons. Journal of Scientific Computing, 2018, 77, 1909-1935.	2.3	7
31	Exponential Convergence of hp-FEM for Elliptic Problems in Polyhedra: Mixed Boundary Conditions and Anisotropic Polynomial Degrees. Foundations of Computational Mathematics, 2018, 18, 595-660.	2.5	7
32	Quantized tensor-structured finite elements for second-order elliptic PDEs in two dimensions. Numerische Mathematik, 2018, 138, 133-190.	1.9	19
33	Multilevel QMC with Product Weights for Affine-Parametric, Elliptic PDEs. , 2018, , 373-405.		7
34	Space-time hp-approximation of parabolic equations. Calcolo, 2018, 55, 1.	1.1	11
35	QMC Algorithms with Product Weights for Lognormal-Parametric, Elliptic PDEs. Springer Proceedings in Mathematics and Statistics, 2018, , 313-330.	0.2	7
36	Multilevel higher-order quasi-Monte Carlo Bayesian estimation. Mathematical Models and Methods in Applied Sciences, 2017, 27, 953-995.	3.3	34

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37	A multilevel Monte Carlo finite difference method for random scalar degenerate convection-diffusion equations. <i>Journal of Hyperbolic Differential Equations</i> , 2017, 14, 415-454.	0.5	19
38	Symmetric Interior Penalty Discontinuous Galerkin Methods for Elliptic Problems in Polygons. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 2490-2521.	2.3	5
39	Fully Discrete Approximation of Parametric and Stochastic Elliptic PDEs. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 2151-2186.	2.3	24
40	Multilevel Quasi-Monte Carlo methods for lognormal diffusion problems. <i>Mathematics of Computation</i> , 2017, 86, 2827-2860.	2.1	54
41	Fractional Space-Time Variational Formulations of (Navier-) Stokes Equations. <i>SIAM Journal on Mathematical Analysis</i> , 2017, 49, 2442-2467.	1.9	14
42	Electromagnetic wave scattering by random surfaces: Shape holomorphy. <i>Mathematical Models and Methods in Applied Sciences</i> , 2017, 27, 2229-2259.	3.3	28
43	QTT-finite-element approximation for multiscale problems I: model problems in one dimension. <i>Advances in Computational Mathematics</i> , 2017, 43, 411-442.	1.6	16
44	Monte-Carlo Finite-Volume Methods in Uncertainty Quantification for Hyperbolic Conservation Laws. <i>SEMA SIMAI Springer Series</i> , 2017, , 231-277.	0.7	2
45	Model Order Reduction Methods in Computational Uncertainty Quantification. , 2017, , 937-990.		2
46	Finite elements with mesh refinement for elastic wave propagation in polygons. <i>Mathematical Methods in the Applied Sciences</i> , 2016, 39, 5027-5042.	2.3	10
47	Scaling limits in computational Bayesian inversion. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2016, 50, 1825-1856.	1.9	22
48	Compressive sensing Petrov-Galerkin approximation of high-dimensional parametric operator equations. <i>Mathematics of Computation</i> , 2016, 86, 661-700.	2.1	33
49	Multilevel Higher Order QMC Petrov-Galerkin Discretization for Affine Parametric Operator Equations. <i>SIAM Journal on Numerical Analysis</i> , 2016, 54, 2541-2568.	2.3	35
50	Numerical approximation of statistical solutions of planar, incompressible flows. <i>Mathematical Models and Methods in Applied Sciences</i> , 2016, 26, 2471-2523.	3.3	6
51	Numerical Solution of Scalar Conservation Laws with Random Flux Functions. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2016, 4, 552-591.	2.0	28
52	Sparse Adaptive Tensor Galerkin Approximations of Stochastic PDE-Constrained Control Problems. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2016, 4, 1034-1059.	2.0	15
53	Higher Order Quasi-Monte Carlo Integration for Holomorphic, Parametric Operator Equations. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2016, 4, 48-79.	2.0	31
54	Computational Higher Order Quasi-Monte Carlo Integration. <i>Springer Proceedings in Mathematics and Statistics</i> , 2016, , 271-288.	0.2	17

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55	Multilevel Monte Carlo Simulation of Statistical Solutions to the Navier–Stokes Equations. Springer Proceedings in Mathematics and Statistics, 2016, , 209-227.	0.2	5
56	Sparse-grid, reduced-basis Bayesian inversion: Nonaffine-parametric nonlinear equations. Journal of Computational Physics, 2016, 316, 470-503.	3.8	32
57	Multilevel Monte Carlo front-tracking for random scalar conservation laws. BIT Numerical Mathematics, 2016, 56, 263-292.	2.0	4
58	Adaptive Sparse Grid Model Order Reduction for Fast Bayesian Estimation and Inversion. Lecture Notes in Computational Science and Engineering, 2016, , 1-27.	0.3	7
59	Binned Multilevel Monte Carlo for Bayesian Inverse Problems with Large Data. Lecture Notes in Computational Science and Engineering, 2016, , 511-519.	0.3	1
60	Approximation of Singularities by Quantized-Tensor FEM. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 743-746.	0.2	4
61	Tensor Approximation of Stationary Distributions of Chemical Reaction Networks. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 1221-1247.	1.4	18
62	Model Order Reduction Methods in Computational Uncertainty Quantification. , 2015, , 1-53.		2
63	Isotropic Gaussian random fields on the sphere: Regularity, fast simulation and stochastic partial differential equations. Annals of Applied Probability, 2015, 25, .	1.3	105
64	A convergent adaptive stochastic Galerkin finite element method with quasi-optimal spatial meshes. ESAIM: Mathematical Modelling and Numerical Analysis, 2015, 49, 1367-1398.	1.9	34
65	Efficient Characterization of Parametric Uncertainty of Complex (Bio)chemical Networks. PLoS Computational Biology, 2015, 11, e1004457.	3.2	18
66	hp-dGFEM for second-order mixed elliptic problems in polyhedra. Mathematics of Computation, 2015, 85, 1051-1083.	2.1	13
67	Compressed sensing Petrov-Galerkin approximations for parametric PDEs. , 2015, , .		5
68	Finite Elements with mesh refinement for wave equations in polygons. Journal of Computational and Applied Mathematics, 2015, 283, 163-181.	2.0	17
69	Quadrature algorithms for high dimensional singular integrands on simplices. Numerical Algorithms, 2015, 70, 847-874.	1.9	4
70	Multi-level Quasi-Monte Carlo Finite Element Methods for a Class of Elliptic PDEs with Random Coefficients. Foundations of Computational Mathematics, 2015, 15, 411-449.	2.5	75
71	Intrinsic fault tolerance of multilevel Monte Carlo methods. Journal of Parallel and Distributed Computing, 2015, 84, 24-36.	4.1	10
72	Exponential convergence for hp-version and spectral finite element methods for elliptic problems in polyhedra. Mathematical Models and Methods in Applied Sciences, 2015, 25, 1617-1661.	3.3	14

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73	Fast QMC Matrix-Vector Multiplication. SIAM Journal of Scientific Computing, 2015, 37, A1436-A1450.	2.8	9
74	Sparse-grid, reduced-basis Bayesian inversion. Computer Methods in Applied Mechanics and Engineering, 2015, 297, 84-115.	6.6	33
75	Breaking the curse of dimensionality in sparse polynomial approximation of parametric PDEs. Journal Des Mathematiques Pures Et Appliquees, 2015, 103, 400-428.	1.6	114
76	Exponential Convergence of Simplicial h p -FEM for H^1 -Functions with Isotropic Singularities. Lecture Notes in Computational Science and Engineering, 2015, , 435-443.	0.3	2
77	Higher Order Quasi Monte-Carlo Integration in Uncertainty Quantification. Lecture Notes in Computational Science and Engineering, 2015, , 445-453.	0.3	1
78	Methods for High-Dimensional Parametric and Stochastic Elliptic PDEs. , 2015, , 903-913.		0
79	N-TERM WIENER CHAOS APPROXIMATION RATES FOR ELLIPTIC PDEs WITH LOGNORMAL GAUSSIAN RANDOM INPUTS. Mathematical Models and Methods in Applied Sciences, 2014, 24, 797-826.	3.3	42
80	Direct Solution of the Chemical Master Equation Using Quantized Tensor Trains. PLoS Computational Biology, 2014, 10, e1003359.	3.2	103
81	Higher Order QMC Petrov-Galerkin Discretization for Affine Parametric Operator Equations with Random Field Inputs. SIAM Journal on Numerical Analysis, 2014, 52, 2676-2702.	2.3	70
82	Space-time variational saddle point formulations of Stokes and Navier-Stokes equations. ESAIM: Mathematical Modelling and Numerical Analysis, 2014, 48, 875-894.	1.9	10
83	High-Dimensional Adaptive Sparse Polynomial Interpolation and Applications to Parametric PDEs. Foundations of Computational Mathematics, 2014, 14, 601-633.	2.5	126
84	Multilevel Monte Carlo Finite Element Methods for Stochastic Elliptic Variational Inequalities. SIAM Journal on Numerical Analysis, 2014, 52, 1243-1268.	2.3	11
85	Adaptive stochastic Galerkin FEM. Computer Methods in Applied Mechanics and Engineering, 2014, 270, 247-269.	6.6	78
86	Optimality of adaptive Galerkin methods for random parabolic partial differential equations. Journal of Computational and Applied Mathematics, 2014, 263, 189-201.	2.0	22
87	Exponential Convergence of hp -DGfEM for Elliptic Problems in Polyhedral Domains. Lecture Notes in Computational Science and Engineering, 2014, , 57-73.	0.3	3
88	Efficient Resolution of Anisotropic Structures. Lecture Notes in Computational Science and Engineering, 2014, , 25-51.	0.3	4
89	Sparse Approximation Algorithms for High Dimensional Parametric Initial Value Problems. , 2014, , 63-81.		2
90	The multi-level Monte Carlo finite element method for a stochastic Brinkman Problem. Numerische Mathematik, 2013, 125, 347-386.	1.9	27

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91	Computational Methods for Quantitative Finance. Springer Finance, 2013, , .	0.0	32
92	Sparse Adaptive Approximation of High Dimensional Parametric Initial Value Problems. Vietnam Journal of Mathematics, 2013, 41, 181-215.	0.8	30
93	Sparse tensor edge elements. BIT Numerical Mathematics, 2013, 53, 925-939.	2.0	6
94	Covariance structure of parabolic stochastic partial differential equations. Stochastics and Partial Differential Equations: Analysis and Computations, 2013, 1, 351-364.	0.9	7
95	Adaptive Galerkin approximation algorithms for Kolmogorov equations in infinite dimensions. Stochastics and Partial Differential Equations: Analysis and Computations, 2013, 1, 204-239.	0.9	4
96	Analytic Regularity and GPC Approximation for Control Problems Constrained by Linear Parametric Elliptic and Parabolic PDEs. SIAM Journal on Control and Optimization, 2013, 51, 2442-2471.	2.1	38
97	Sparse Tensor Galerkin Discretization of Parametric and Random Parabolic PDEs—Analytic Regularity and Generalized Polynomial Chaos Approximation. SIAM Journal on Mathematical Analysis, 2013, 45, 3050-3083.	1.9	23
98	Low-rank tensor structure of linear diffusion operators in the TT and QTT formats. Linear Algebra and Its Applications, 2013, 438, 4204-4221.	0.9	28
99	Wavelet Methods. Springer Finance, 2013, , 159-176.	0.0	3
100	Multidimensional Lévy Models. Springer Finance, 2013, , 197-228.	0.0	0
101	Multilevel Monte Carlo method for parabolic stochastic partial differential equations. BIT Numerical Mathematics, 2013, 53, 3-27.	2.0	51
102	Complexity analysis of accelerated MCMC methods for Bayesian inversion. Inverse Problems, 2013, 29, 085010.	2.0	73
103	Multilevel Monte Carlo Methods for Stochastic Elliptic Multiscale PDEs. Multiscale Modeling and Simulation, 2013, 11, 1033-1070.	1.6	24
104	HIGH-ORDER GALERKIN APPROXIMATIONS FOR PARAMETRIC SECOND-ORDER ELLIPTIC PARTIAL DIFFERENTIAL EQUATIONS. Mathematical Models and Methods in Applied Sciences, 2013, 23, 1729-1760.	3.3	26
105	First order k -th moment finite element analysis of nonlinear operator equations with stochastic data. Mathematics of Computation, 2013, 82, 1859-1888.	2.1	40
106	Sparse adaptive Taylor approximation algorithms for parametric and stochastic elliptic PDEs. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 253-280.	1.9	74
107	Analytic regularity and nonlinear approximation of a class of parametric semilinear elliptic PDEs. Mathematische Nachrichten, 2013, 286, 832-860.	0.8	20
108	High order approximation of probabilistic shock profiles in hyperbolic conservation laws with uncertain initial data. ESAIM: Mathematical Modelling and Numerical Analysis, 2013, 47, 807-835.	1.9	16

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109	Multi-level Monte Carlo Finite Volume Methods for Uncertainty Quantification in Nonlinear Systems of Balance Laws. Lecture Notes in Computational Science and Engineering, 2013, , 225-294.	0.3	11
110	QMC Galerkin Discretization of Parametric Operator Equations. Springer Proceedings in Mathematics and Statistics, 2013, , 613-629.	0.2	13
111	Sparse, adaptive Smolyak quadratures for Bayesian inverse problems. Inverse Problems, 2013, 29, 065011.	2.0	92
112	REGULARITY AND GENERALIZED POLYNOMIAL CHAOS APPROXIMATION OF PARAMETRIC AND RANDOM SECOND-ORDER HYPERBOLIC PARTIAL DIFFERENTIAL EQUATIONS. Analysis and Applications, 2012, 10, 295-326.	2.2	18
113	hp-DGFEM FOR KOLMOGOROV-FOKKER-PLANCK EQUATIONS OF MULTIVARIATE LÄ%VY PROCESSES. Mathematical Models and Methods in Applied Sciences, 2012, 22, .	3.3	4
114	Exponential Convergence of Gauss-Jacobi Quadratures for Singular Integrals over Simplices in Arbitrary Dimension. SIAM Journal on Numerical Analysis, 2012, 50, 1433-1455.	2.3	11
115	Adaptive Petrov-Galerkin Methods for First Order Transport Equations. SIAM Journal on Numerical Analysis, 2012, 50, 2420-2445.	2.3	82
116	Quasi-Monte Carlo Finite Element Methods for a Class of Elliptic Partial Differential Equations with Random Coefficients. SIAM Journal on Numerical Analysis, 2012, 50, 3351-3374.	2.3	176
117	hp-FEM for second moments of elliptic PDEs with stochastic data. II: Exponential convergence for stationary singular covariance functions. Numerical Methods for Partial Differential Equations, 2012, 28, 1527-1557.	3.6	3
118	hp-FEM for second moments of elliptic PDEs with stochastic data. I. Analytic regularity. Numerical Methods for Partial Differential Equations, 2012, 28, 1497-1526.	3.6	2
119	Sparse Tensor Approximation of Parametric Eigenvalue Problems. Lecture Notes in Computational Science and Engineering, 2012, , 203-241.	0.3	18
120	Sparse tensor discretizations of high-dimensional parametric and stochastic PDEs. Acta Numerica, 2011, 20, 291-467.	10.7	197
121	Boundary Element Methods. Springer Series in Computational Mathematics, 2011, , .	0.2	315
122	Tensor-Structured Galerkin Approximation of Parametric and Stochastic Elliptic PDEs. SIAM Journal of Scientific Computing, 2011, 33, 364-385.	2.8	121
123	Sparse Discrete Ordinates Method in Radiative Transfer. Computational Methods in Applied Mathematics, 2011, 11, 305-326.	0.8	13
124	Exponential convergence of hp -quadrature for integral operators with Gevrey kernels. ESAIM: Mathematical Modelling and Numerical Analysis, 2011, 45, 387-422.	1.9	28
125	Sparse tensor finite elements for elliptic multiple scale problems. Computer Methods in Applied Mechanics and Engineering, 2011, 200, 3100-3110.	6.6	8
126	Multi-level Monte Carlo Finite Element method for elliptic PDEs with stochastic coefficients. Numerische Mathematik, 2011, 119, 123-161.	1.9	248

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127	Fast evaluation of nonlinear functionals of tensor product wavelet expansions. Numerische Mathematik, 2011, 119, 765-786.	1.9	7
128	A multiscale hp-FEM for 2D photonic crystal bands. Journal of Computational Physics, 2011, 230, 349-374.	3.8	10
129	ANALYTIC REGULARITY AND POLYNOMIAL APPROXIMATION OF PARAMETRIC AND STOCHASTIC ELLIPTIC PDE'S. Analysis and Applications, 2011, 09, 11-47.	2.2	230
130	Convergence Rates of Best N-term Galerkin Approximations for a Class of Elliptic sPDEs. Foundations of Computational Mathematics, 2010, 10, 615-646.	2.5	228
131	Sparse Tensor Discretization of Elliptic sPDEs. SIAM Journal of Scientific Computing, 2010, 31, 4281-4304.	2.8	68
132	Boundary Element Methods. Springer Series in Computational Mathematics, 2010, , 183-287.	0.2	62
133	Numerical Analysis of Additive, Lévy and Feller Processes with Applications to Option Pricing. Lecture Notes in Mathematics, 2010, , 137-196.	0.2	3
134	Sparse p-version BEM for first kind boundary integral equations with random loading. Applied Numerical Mathematics, 2009, 59, 2698-2712.	2.1	9
135	An Adaptive Wavelet Method for Solving High-Dimensional Elliptic PDEs. Constructive Approximation, 2009, 30, 423-455.	3.0	53
136	Sparse high order FEM for elliptic sPDEs. Computer Methods in Applied Mechanics and Engineering, 2009, 198, 1149-1170.	6.6	114
137	Space-time adaptive wavelet methods for parabolic evolution problems. Mathematics of Computation, 2009, 78, 1293-1318.	2.1	146
138	Sparse second moment analysis for elliptic problems in stochastic domains. Numerische Mathematik, 2008, 109, 385-414.	1.9	93
139	Multilevel frames for sparse tensor product spaces. Numerische Mathematik, 2008, 110, 199-220.	1.9	41
140	Adaptive wavelet algorithms for elliptic PDE's on product domains. Mathematics of Computation, 2008, 77, 71-92.	2.1	72
141	Numerical Simulation of Compressible Magnetohydrodynamic Plasma Flow in a Circuit Breaker. , 2008, , .		0
142	Sparse finite element approximation of high-dimensional transport-dominated diffusion problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2008, 42, 777-819.	1.9	30
143	ANISOTROPIC STABLE LEVY COPULA PROCESSES – ANALYTICAL AND NUMERICAL ASPECTS. Mathematical Models and Methods in Applied Sciences, 2007, 17, 1405-1443.	3.3	22
144	Convergence rates for sparse chaos approximations of elliptic problems with stochastic coefficients. IMA Journal of Numerical Analysis, 2007, 27, 232-261.	2.9	168

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145	Analytic regularity of Stokes flow on polygonal domains in countably weighted Sobolev spaces. <i>Journal of Computational and Applied Mathematics</i> , 2006, 190, 487-519.	2.0	39
146	Karhunen-Loève approximation of random fields by generalized fast multipole methods. <i>Journal of Computational Physics</i> , 2006, 217, 100-122.	3.8	287
147	Sparse finite element methods for operator equations with stochastic data. <i>Applications of Mathematics</i> , 2006, 51, 145-180.	0.9	69
148	Finite elements for elliptic problems with stochastic coefficients. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2005, 194, 205-228.	6.6	316
149	EXPONENTIAL CONVERGENCE OF hp -FEM FOR MAXWELL EQUATIONS WITH WEIGHTED REGULARIZATION IN POLYGONAL DOMAINS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2005, 15, 575-622.	3.3	71
150	EXISTENCE OF GLOBAL WEAK SOLUTIONS FOR SOME POLYMERIC FLOW MODELS. <i>Mathematical Models and Methods in Applied Sciences</i> , 2005, 15, 939-983.	3.3	74
151	High-Dimensional Finite Elements for Elliptic Problems with Multiple Scales. <i>Multiscale Modeling and Simulation</i> , 2005, 3, 168-194.	1.6	73
152	Heterogeneous Multiscale FEM for Diffusion Problems on Rough Surfaces. <i>Multiscale Modeling and Simulation</i> , 2005, 3, 195-220.	1.6	87
153	Fast Numerical Solution of Parabolic Integrodifferential Equations with Applications in Finance. <i>SIAM Journal of Scientific Computing</i> , 2005, 27, 369-393.	2.8	58
154	Numerical solution of parabolic equations in high dimensions. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2004, 38, 93-127.	1.9	90
155	Fast deterministic pricing of options on Lévy driven assets. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2004, 38, 37-71.	1.9	97
156	Higher-Order Convex Approximations of Young Measures in Optimal Control. <i>Advances in Computational Mathematics</i> , 2003, 19, 73-97.	1.6	6
157	Mixed HP -finite element approximations on geometric edge and boundary layer meshes in three dimensions. <i>Numerische Mathematik</i> , 2003, 94, 771-801.	1.9	12
158	Sparse finite elements for elliptic problems with stochastic loading. <i>Numerische Mathematik</i> , 2003, 95, 707-734.	1.9	121
159	Two-scale FEM for homogenization problems. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2002, 36, 537-572.	1.9	44
160	Discontinuous hp -Finite Element Methods for Advection-Diffusion-Reaction Problems. <i>SIAM Journal on Numerical Analysis</i> , 2002, 39, 2133-2163.	2.3	389
161	Local Discontinuous Galerkin Methods for the Stokes System. <i>SIAM Journal on Numerical Analysis</i> , 2002, 40, 319-343.	2.3	226
162	Mixed hp -DGFEM for Incompressible Flows. <i>SIAM Journal on Numerical Analysis</i> , 2002, 40, 2171-2194.	2.3	123

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163	Wavelet Galerkin BEM on Unstructured Meshes by Aggregation. Lecture Notes in Computational Science and Engineering, 2002, , 359-378.	0.3	9
164	hp-discontinuous Galerkin time-stepping for parabolic problems. Comptes Rendus Mathematique, 2001, 333, 1121-1126.	0.5	24
165	Optimal a priori error estimates for the hp -version of the local discontinuous Galerkin method for convection-diffusion problems. Mathematics of Computation, 2001, 71, 455-479.	2.1	186
166	Approximation on Simplices with Respect to Weighted Sobolev Norms. Journal of Approximation Theory, 2000, 103, 329-337.	0.8	26
167	Time Discretization of Parabolic Problems by the HP-Version of the Discontinuous Galerkin Finite Element Method. SIAM Journal on Numerical Analysis, 2000, 38, 837-875.	2.3	161
168	Stabilizedhp-Finite Element Methods for First-Order Hyperbolic Problems. SIAM Journal on Numerical Analysis, 2000, 37, 1618-1643.	2.3	107
169	Advanced Boundary Element Algorithms. , 2000, , 283-306.		3
170	Mixed hp-FEM on anisotropic meshes II: Hanging nodes and tensor products of boundary layer meshes. Numerische Mathematik, 1999, 83, 667-697.	1.9	35
171	Wavelet Galerkin Algorithms for Boundary Integral Equations. SIAM Journal of Scientific Computing, 1999, 20, 2195-2222.	2.8	78
172	hp-FEM for Fluid Flow Simulation. Lecture Notes in Computational Science and Engineering, 1999, , 325-438.	0.3	4
173	Multiwavelets for Second-Kind Integral Equations. SIAM Journal on Numerical Analysis, 1997, 34, 2212-2227.	2.3	84
174	The Optimalp-Version Approximation of Singularities on Polyhedra in the Boundary Element Method. SIAM Journal on Numerical Analysis, 1996, 33, 729-759.	2.3	30
175	Wavelet approximations for first kind boundary integral equations on polygons. Numerische Mathematik, 1996, 74, 479-516.	1.9	101
176	The sp and hp versions of the finite element method for problems with boundary layers. Mathematics of Computation, 1996, 65, 1403-1430.	2.1	123
177	Electromagnetic wave scattering by random surfaces: uncertainty quantification via sparse tensor boundary elements. IMA Journal of Numerical Analysis, 0, , drw031.	2.9	1
178	Anisotropic Stable Levy Copula Processes - Analysis and Numerical Pricing Methods. SSRN Electronic Journal, 0, , .	0.4	1