Boris Vexler

List of Publications by Citations

52 papers	1,423 citations	22 h-index	37 g-index
54 ext. papers	1,547 ext. citations	1.8 avg, IF	5.07 L-index

#	Paper	IF	Citations
52	Optimal control of the convection-diffusion equation using stabilized finite element methods. *Numerische Mathematik*, **2007**, 106, 349-367	2.2	113
51	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Optimal Control Problems Part I: Problems Without Control Constraints. *SIAM Journal on Control and Optimization*, **2008**, 47, 1150-1177	1.9	106
50	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Optimal Control Problems Part II: Problems with Control Constraints. *SIAM Journal on Control and Optimization*, **2008**, 47, 1301-1329	1.9	106
49	Adaptive Space-Time Finite Element Methods for Parabolic Optimization Problems. *SIAM Journal on Control and Optimization*, **2007**, 46, 116-142	1.9	91
48	Adaptivity with Dynamic Meshes for Space-Time Finite Element Discretizations of Parabolic Equations. *SIAM Journal of Scientific Computing*, **2008**, 30, 369-393	2.6	81
47	A posteriori error estimation for finite element discretization of parameter identification problems. *Numerische Mathematik*, **2004**, 96, 435-459	2.2	71
46	Efficient numerical solution of parabolic optimization problems by finite element methods. *Optimization Methods and Software*, **2007**, 22, 813-833	1.3	57
45	A posteriori error estimation and adaptivity for elliptic optimal control problems with state constraints. *Computational Optimization and Applications*, **2009**, 44, 3-25	1.4	53
44	A priori error estimates for space–time finite element discretization of semilinear parabolic optimal control problems. *Numerische Mathematik*, **2012**, 120, 345-386	2.2	50
43	Mesh refinement and numerical sensitivity analysis for parameter calibration of partial differential equations. *Journal of Computational Physics*, **2005**, 206, 95-110	4.1	46
42	A Priori Error Estimates for Finite Element Discretizations of Parabolic Optimization Problems with Pointwise State Constraints in Time. *SIAM Journal on Control and Optimization*, **2011**, 49, 1961-1997	1.9	42
41	Optimal Control of the Stokes Equations: A Priori Error Analysis for Finite Element Discretization with Postprocessing. *SIAM Journal on Numerical Analysis*, **2006**, 44, 1903-1920	2.4	41
40	Measure Valued Directional Sparsity for Parabolic Optimal Control Problems. *SIAM Journal on Control and Optimization*, **2014**, 52, 3078-3108	1.9	39
39	A priori error estimates for elliptic optimal control problems with a bilinear state equation. *Journal of Computational and Applied Mathematics*, **2009**, 230, 781-802	2.4	37
38	A Priori Mesh Grading for an Elliptic Problem with Dirac Right-Hand Side. *SIAM Journal on Numerical Analysis*, **2011**, 49, 992-1005	2.4	34
37	Efficient computation of the Tikhonov regularization parameter by goal-oriented adaptive discretization. *Inverse Problems*, **2008**, 24, 025025	2.3	33
36	A Priori Error Analysis for Discretization of Sparse Elliptic Optimal Control Problems in Measure Space. *SIAM Journal on Control and Optimization*, **2013**, 51, 2788-2808	1.9	32

35	Optimal A Priori Error Estimates of Parabolic Optimal Control Problems with Pointwise Control. *SIAM Journal on Numerical Analysis*, **2013**, 51, 2797-2821	2.4	31
34	Semismooth Newton Methods for Optimal Control of the Wave Equation with Control Constraints. *SIAM Journal on Control and Optimization*, **2011**, 49, 830-858	1.9	31
33	New regularity results and improved error estimates for optimal control problems with state constraints. *ESAIM - Control, Optimisation and Calculus of Variations*, **2014**, 20, 803-822	1	27
32	Discrete maximal parabolic regularity for Galerkin finite element methods. *Numerische Mathematik*, **2017**, 135, 923-952	2.2	26
31	A Priori Error Analysis of the Petrov-Galerkin Crank-Nicolson Scheme for Parabolic Optimal Control Problems. *SIAM Journal on Control and Optimization*, **2011**, 49, 2183-2211	1.9	26
30	Finite Element Pointwise Results on Convex Polyhedral Domains. *SIAM Journal on Numerical Analysis*, **2016**, 54, 561-587	2.4	21
29	Efficient numerical realization of discontinuous Galerkin methods for temporal discretization of parabolic problems. *Numerische Mathematik*, **2013**, 124, 151-182	2.2	21
28	Error estimates for the finite element approximation of a semilinear elliptic control problem with state constraints and finite dimensional control space. *ESAIM: Mathematical Modelling and Numerical Analysis*, **2010**, 44, 167-188	1.8	19
27	Pointwise Best Approximation Results for Galerkin Finite Element Solutions of Parabolic Problems. *SIAM Journal on Numerical Analysis*, **2016**, 54, 1365-1384	2.4	19
26	Sparse initial data identification for parabolic PDE and its finite element approximations. *Mathematical Control and Related Fields*, **2015**, 5, 377-399	1.5	18
25	Optimal error estimates for finite element discretization of elliptic optimal control problems with finitely many pointwise state constraints. *Computational Optimization and Applications*, **2013**, 55, 769-802	1.4	17
24	Optimal Control of the Undamped Linear Wave Equation with Measure Valued Controls. *SIAM Journal on Control and Optimization*, **2016**, 54, 1212-1244	1.9	17
23	Optimal Control of a Linear Unsteady Fluid-Structure Interaction Problem. *Journal of Optimization Theory and Applications*, **2016**, 170, 1-27	1.6	14
22	Adaptive discretizations for the choice of a Tikhonov regularization parameter in nonlinear inverse problems. *Inverse Problems*, **2011**, 27, 125008	2.3	13
21	Numerical Sensitivity Analysis for the Quantity of Interest in PDE-Constrained Optimization. *SIAM Journal of Scientific Computing*, **2007**, 29, 22-48	2.6	12
20	A Priori Error Estimates for Three Dimensional Parabolic Optimal Control Problems with Pointwise Control. *SIAM Journal on Control and Optimization*, **2016**, 54, 2403-2435	1.9	10
19	Optimal error estimates for fully discrete Galerkin approximations of semilinear parabolic equations. *ESAIM: Mathematical Modelling and Numerical Analysis*, **2018**, 52, 2307-2325	1.8	10
18	Error Estimates for Space-Time Discretization of Parabolic Time-Optimal Control Problems with Bang-Bang Controls. *SIAM Journal on Control and Optimization*, **2019**, 57, 1730-1756	1.9	7

17	Discrete Maximal Parabolic Regularity for Galerkin Finite Element Methods for Nonautonomous Parabolic Problems. *SIAM Journal on Numerical Analysis*, **2018**, 56, 2178-2202	2.4	6
16	Third order convergent time discretization for parabolic optimal control problems with control constraints. *Computational Optimization and Applications*, **2014**, 57, 205-240	1.4	6
15	Adaptive finite element discretization in PDE-based optimization. *GAMM Mitteilungen*, **2010**, 33, 177-193	1.8	6
14	Optimization of Fishing Strategies in Space and Time as a Non-convex Optimal Control Problem. *Journal of Optimization Theory and Applications*, **2018**, 178, 950-972	1.6	6
13	Finite element error analysis for measure-valued optimal control problems governed by a 1D wave equation with variable coefficients. *Mathematical Control and Related Fields*, **2018**, 8, 411-449	1.5	5
12	A Posteriori Error Estimation in PDE-constrained Optimization with Pointwise Inequality Constraints. *International Series of Numerical Mathematics*, **2012**, 349-373	0.4	4
11	New regularity results and finite element error estimates for a class of parabolic optimal control problems with pointwise state constraints. *ESAIM - Control, Optimisation and Calculus of Variations*, **2021**, 27, 4	1	4
10	Numerical analysis of sparse initial data identification for parabolic problems. *ESAIM: Mathematical Modelling and Numerical Analysis*, **2020**, 54, 1139-1180	1.8	3
9	Global and Local Pointwise Error Estimates for Finite Element Approximations to the Stokes Problem on Convex Polyhedra. *SIAM Journal on Numerical Analysis*, **2020**, 58, 1531-1555	2.4	2
8	Global and Interior Pointwise best Approximation Results for the Gradient of Galerkin Solutions for Parabolic Problems. *SIAM Journal on Numerical Analysis*, **2017**, 55, 2025-2049	2.4	2
7	Adaptive Space-Time Finite Element Methods for Parabolic Optimization Problems. *International Series of Numerical Mathematics*, **2012**, 319-348	0.4	2
6	Adaptive Finite Element Methods for Parameter Identification Problems. *Contributions in Mathematical and Computational Sciences*, **2013**, 31-54		2
5	Optimal finite element error estimates for an optimal control problem governed by the wave equation with controls of bounded variation. *IMA Journal of Numerical Analysis*, **2020**,	1.8	2
4	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Time-Optimal Control Problems. *SIAM Journal on Control and Optimization*, **2019**, 57, 129-162	1.9	2
3	On a finite element method for measure-valued optimal control problems governed by the 1D generalized wave equation. *Comptes Rendus Mathematique*, **2018**, 356, 523-531	0.4	
2	Optimal A Priori Error Estimates of Parabolic Optimal Control Problems with a Moving Point Control. *Springer INdAM Series*, **2017**, 327-356	0.4	
1	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Optimal Control Problems. *International Series of Numerical Mathematics*, **2012**, 445-466	0.4	