

# Boris Vexler

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/11697073/publications.pdf>

Version: 2024-02-01

54  
papers

1,725  
citations

257101

24  
h-index

276539

41  
g-index

54  
all docs

54  
docs citations

54  
times ranked

587  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimal control of the convection-diffusion equation using stabilized finite element methods. <i>Numerische Mathematik</i> , 2007, 106, 349-367.	0.9	131
2	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Optimal Control Problems Part I: Problems Without Control Constraints. <i>SIAM Journal on Control and Optimization</i> , 2008, 47, 1150-1177.	1.1	129
3	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Optimal Control Problems Part II: Problems with Control Constraints. <i>SIAM Journal on Control and Optimization</i> , 2008, 47, 1301-1329.	1.1	128
4	Adaptive Space-Time Finite Element Methods for Parabolic Optimization Problems. <i>SIAM Journal on Control and Optimization</i> , 2007, 46, 116-142.	1.1	112
5	Adaptivity with Dynamic Meshes for Space-Time Finite Element Discretizations of Parabolic Equations. <i>SIAM Journal of Scientific Computing</i> , 2008, 30, 369-393.	1.3	103
6	A posteriori error estimation for finite element discretization of parameter identification problems. <i>Numerische Mathematik</i> , 2004, 96, 435-459.	0.9	83
7	Efficient numerical solution of parabolic optimization problems by finite element methods. <i>Optimization Methods and Software</i> , 2007, 22, 813-833.	1.6	63
8	A priori error estimates for space-time finite element discretization of semilinear parabolic optimal control problems. <i>Numerische Mathematik</i> , 2012, 120, 345-386.	0.9	60
9	A posteriori error estimation and adaptivity for elliptic optimal control problems with state constraints. <i>Computational Optimization and Applications</i> , 2009, 44, 3-25.	0.9	57
10	Mesh refinement and numerical sensitivity analysis for parameter calibration of partial differential equations. <i>Journal of Computational Physics</i> , 2005, 206, 95-110.	1.9	51
11	Measure Valued Directional Sparsity for Parabolic Optimal Control Problems. <i>SIAM Journal on Control and Optimization</i> , 2014, 52, 3078-3108.	1.1	49
12	A Priori Error Estimates for Finite Element Discretizations of Parabolic Optimization Problems with Pointwise State Constraints in Time. <i>SIAM Journal on Control and Optimization</i> , 2011, 49, 1961-1997.	1.1	48
13	Optimal Control of the Stokes Equations: A Priori Error Analysis for Finite Element Discretization with Postprocessing. <i>SIAM Journal on Numerical Analysis</i> , 2006, 44, 1903-1920.	1.1	45
14	A priori error estimates for elliptic optimal control problems with a bilinear state equation. <i>Journal of Computational and Applied Mathematics</i> , 2009, 230, 781-802.	1.1	45
15	A Priori Mesh Grading for an Elliptic Problem with Dirac Right-Hand Side. <i>SIAM Journal on Numerical Analysis</i> , 2011, 49, 992-1005.	1.1	41
16	Semismooth Newton Methods for Optimal Control of the Wave Equation with Control Constraints. <i>SIAM Journal on Control and Optimization</i> , 2011, 49, 830-858.	1.1	40
17	A Priori Error Analysis for Discretization of Sparse Elliptic Optimal Control Problems in Measure Space. <i>SIAM Journal on Control and Optimization</i> , 2013, 51, 2788-2808.	1.1	38
18	Efficient computation of the Tikhonov regularization parameter by goal-oriented adaptive discretization. <i>Inverse Problems</i> , 2008, 24, 025025.	1.0	36

#	ARTICLE	IF	CITATIONS
19	Optimal A Priori Error Estimates of Parabolic Optimal Control Problems with Pointwise Control. SIAM Journal on Numerical Analysis, 2013, 51, 2797-2821.	1.1	36
20	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.	1.1	35
21	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.	0.7	33
22	Discrete maximal parabolic regularity for Galerkin finite element methods. Numerische Mathematik, 2017, 135, 923-952.	0.9	31
23	Sparse initial data identification for parabolic PDE and its finite element approximations. Mathematical Control and Related Fields, 2015, 5, 377-399.	0.6	31
24	Finite Element Pointwise Results on Convex Polyhedral Domains. SIAM Journal on Numerical Analysis, 2016, 54, 561-587.	1.1	25
25	Efficient numerical realization of discontinuous Galerkin methods for temporal discretization of parabolic problems. Numerische Mathematik, 2013, 124, 151-182.	0.9	24
26	Pointwise Best Approximation Results for Galerkin Finite Element Solutions of Parabolic Problems. SIAM Journal on Numerical Analysis, 2016, 54, 1365-1384.	1.1	24
27	Optimal Control of the Undamped Linear Wave Equation with Measure Valued Controls. SIAM Journal on Control and Optimization, 2016, 54, 1212-1244.	1.1	23
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.	0.8	21
29	Adaptive discretizations for the choice of a Tikhonov regularization parameter in nonlinear inverse problems. Inverse Problems, 2011, 27, 125008.	1.0	20
30	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.	0.9	17
31	Optimal Control of a Linear Unsteady Fluid-Structure Interaction Problem. Journal of Optimization Theory and Applications, 2016, 170, 1-27.	0.8	17
32	Numerical Sensitivity Analysis for the Quantity of Interest in PDE-Constrained Optimization. SIAM Journal of Scientific Computing, 2007, 29, 22-48.	1.3	14
33	Optimal error estimates for fully discrete Galerkin approximations of semilinear parabolic equations. ESAIM: Mathematical Modelling and Numerical Analysis, 2018, 52, 2307-2325.	0.8	12
34	A Priori Error Estimates for Three Dimensional Parabolic Optimal Control Problems with Pointwise Control. SIAM Journal on Control and Optimization, 2016, 54, 2403-2435.	1.1	11
35	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.	0.8	9
36	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.	1.1	9

#	ARTICLE	IF	CITATIONS
37	Numerical analysis of sparse initial data identification for parabolic problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2020, 54, 1139-1180.	0.8	9
38	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.	0.6	9
39	Adaptive finite element discretization in PDE-based optimization. GAMM Mitteilungen, 2010, 33, 177-193.	2.7	7
40	Third order convergent time discretization for parabolic optimal control problems with control constraints. Computational Optimization and Applications, 2014, 57, 205-240.	0.9	7
41	Discrete Maximal Parabolic Regularity for Galerkin Finite Element Methods for Nonautonomous Parabolic Problems. SIAM Journal on Numerical Analysis, 2018, 56, 2178-2202.	1.1	7
42	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.	0.7	7
43	A Posteriori Error Estimation in PDE-constrained Optimization with Pointwise Inequality Constraints. International Series of Numerical Mathematics, 2012, , 349-373.	1.0	5
44	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.	1.1	4
45	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, , .	1.5	4
46	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.	1.1	3
47	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.	1.1	3
48	A Priori Error Estimates for Space-Time Finite Element Discretization of Parabolic Optimal Control Problems. International Series of Numerical Mathematics, 2012, , 445-466.	1.0	3
49	Adaptive Finite Element Methods for Parameter Identification Problems. Contributions in Mathematical and Computational Sciences, 2013, , 31-54.	0.3	3
50	Adaptive Space-Time Finite Element Methods for Parabolic Optimization Problems. International Series of Numerical Mathematics, 2012, , 319-348.	1.0	2
51	Fully discrete best-approximation-type estimates in $L^2(\cdot; L^2(\cdot; L^2(\cdot)))$ for finite element discretizations of the transient Stokes equations. IMA Journal of Numerical Analysis, 2023, 43, 852-880.	1.5	1
52	On a finite element method for measure-valued optimal control problems governed by the 1D generalized wave equation. Comptes Rendus Mathématique, 2018, 356, 523-531.	0.1	0
53	OPTE special issue on PDE-constrained optimization. Optimization and Engineering, 2021, 22, 1985-1987.	1.3	0
54	Optimal A Priori Error Estimates of Parabolic Optimal Control Problems with a Moving Point Control. Springer INdAM Series, 2017, , 327-356.	0.4	0