Fredi Trltzsch

List of Publications by Year in Descending Order

60 papers	1,812 citations	21 h-index	42 g-index
66 ext. papers	1,996 ext. citations	1.4 avg, IF	5.45 L-index

#	Paper	IF	Citations
60	Sparse optimal control of a phase field system with singular potentials arising in the modeling of tumor growth. *ESAIM - Control, Optimisation and Calculus of Variations*, **2021**, 27, S26	1	2
59	Unstructured Space-Time Finite Element Methods for Optimal Control of Parabolic Equations. *SIAM Journal of Scientific Computing*, **2021**, 43, A744-A771	2.6	4
58	Sparse optimal control for a semilinear heat equation with mixed control-state constraints ─ regularity of Lagrange multipliers. *ESAIM - Control, Optimisation and Calculus of Variations*, **2021**, 27, 2	1	1
57	First and second order optimality conditions for the control of Fokker-Planck equations. *ESAIM - Control, Optimisation and Calculus of Variations*, **2021**, 27, 15	1	1
56	Exponential Stability for the Schlögl System by Pyragas Feedback. *Vietnam Journal of Mathematics*, **2020**, 48, 769-790	0.5	1
55	State-constrained semilinear elliptic optimization problems with unrestricted sparse controls. *Mathematical Control and Related Fields*, **2020**, 10, 527-546	1.5	2
54	Optimal time delays in a class of reaction-diffusion equations. *Optimization*, **2019**, 68, 255-278	1.2	1
53	Optimal Control of Semiconductor Melts by Traveling Magnetic Fields. *Vietnam Journal of Mathematics*, **2019**, 47, 793-812	0.5	
52	Optimal control of a class of reaction─diffusion systems. *Computational Optimization and Applications*, **2018**, 70, 677-707	1.4	6
51	On the switching behavior of sparse optimal controls for the one-dimensional heat equation. *Mathematical Control and Related Fields*, **2018**, 8, 135-153	1.5	2
50	Measure Control of a Semilinear Parabolic Equation with a Nonlocal Time Delay. *SIAM Journal on Control and Optimization*, **2018**, 56, 4434-4460	1.9	
49	Optimal control of low-frequency electromagnetic fields in multiply connected conductors. *Optimization*, **2016**, 65, 1651-1673	1.2	6
48	Second-Order Optimality Conditions for Weak and Strong Local Solutions of Parabolic Optimal Control Problems. *Vietnam Journal of Mathematics*, **2016**, 44, 181-202	0.5	16
47	Analytical, Optimal, and Sparse Optimal Control of Traveling Wave Solutions to Reaction-Diffusion Systems. *Understanding Complex Systems*, **2016**, 189-210	0.4	10
46	Optimization of nonlocal time-delayed feedback controllers. *Computational Optimization and Applications*, **2016**, 64, 265-294	1.4	10
45	Second Order Optimality Conditions and Their Role in PDE Control. *Deutsche Mathematiker Vereinigung Jahresbericht*, **2015**, 117, 3-44	2.2	41
44	Second Order and Stability Analysis for Optimal Sparse Control of the FitzHugh--Nagumo Equation. *SIAM Journal on Control and Optimization*, **2015**, 53, 2168-2202	1.9	30

43	An adaptive numerical method for semi-infinite elliptic control problems based on error estimates. *Optimization Methods and Software*, **2015**, 30, 492-515	1.3	3
42	Boundary feedback stabilization of the Schlögl system. *Automatica*, **2015**, 51, 192-199	5.7	13
41	Optimal control of magnetic fields in flow measurement. *Discrete and Continuous Dynamical Systems - Series S*, **2015**, 8, 579-605	2.8	9
40	Second-Order and Stability Analysis for State-Constrained Elliptic Optimal Control Problems with Sparse Controls. *SIAM Journal on Control and Optimization*, **2014**, 52, 1010-1033	1.9	11
39	On some optimal control problems for electrical circuits. *International Journal of Circuit Theory and Applications*, **2014**, 42, 808-830	2	5
38	Proper orthogonal decomposition in sparse optimal control of some reaction diffusion equations using model predictive control. *Proceedings in Applied Mathematics and Mechanics*, **2014**, 14, 883-884	0.2	3
37	A coupled Maxwell integrodifferential model for magnetization processes. *Mathematische Nachrichten*, **2014**, 287, 432-452	0.8	11
36	On Two Optimal Control Problems for Magnetic Fields. *Computational Methods in Applied Mathematics*, **2014**, 14, 555-573	1.2	18
35	On the optimal control of the Schlögl-model. *Computational Optimization and Applications*, **2013**, 56, 153-185	1.4	41
34	Sparse Optimal Control of the Schlögl and FitzHugh–Nagumo Systems. *Computational Methods in Applied Mathematics*, **2013**, 13, 415-442	1.2	44
33	A posteriori error estimation for semilinear parabolic optimal control problems with application to model reduction by POD. *ESAIM: Mathematical Modelling and Numerical Analysis*, **2013**, 47, 555-581	1.8	21
32	Second Order Analysis for Optimal Control Problems: Improving Results Expected From Abstract Theory. *SIAM Journal on Optimization*, **2012**, 22, 261-279	2	42
31	A general theorem on error estimates with application to a quasilinear elliptic optimal control problem. *Computational Optimization and Applications*, **2012**, 53, 173-206	1.4	23
30	Numerical Analysis of State-constrained Optimal Control Problems for PDEs. *International Series of Numerical Mathematics*, **2012**, 467-482	0.4	3
29	Optimal Control of Three-Dimensional State-Constrained Induction Heating Problems with Nonlocal Radiation Effects. *SIAM Journal on Control and Optimization*, **2011**, 49, 1707-1736	1.9	21
28	Some aspects of reachability for parabolic boundary control problems with control constraints. *Computational Optimization and Applications*, **2011**, 50, 75-110	1.4	16
27	On linear-quadratic elliptic control problems of semi-infinite type. *Applicable Analysis*, **2011**, 90, 1047-1078	0.8	13
26	Numerical analysis of some optimal control problems governed by a class of quasilinear elliptic equations. *ESAIM - Control, Optimisation and Calculus of Variations*, **2011**, 17, 771-800	1	11

25	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
24	Recent advances in the analysis of pointwise state-constrained elliptic optimal control problems. *ESAIM - Control, Optimisation and Calculus of Variations*, **2010**, 16, 581-600	1	16
23	Discrete concepts versus error analysis in PDE-constrained optimization. *GAMM Mitteilungen*, **2010**, 33, 148-162	1.8	23
22	Error estimates for the finite element discretization of semi-infinite elliptic optimal control problems. *Discussiones Mathematicae: Differential Inclusions, Control and Optimization*, **2010**, 30, 221	1	6
21	Optimal Control of Partial Differential Equations. *Graduate Studies in Mathematics*, **2010**,	3.5	388
20	Supplementary results on partial differential equations. *Graduate Studies in Mathematics*, **2010**, 355-383	3.5	71
19	On regularization methods for the numerical solution of parabolic control problems with pointwise state constraints. *ESAIM - Control, Optimisation and Calculus of Variations*, **2009**, 15, 426-453	1	18
18	A regularization method for the numerical solution of elliptic boundary control problems with pointwise state constraints. *Computational Optimization and Applications*, **2009**, 42, 43-66	1.4	24
17	First- and Second-Order Optimality Conditions for a Class of Optimal Control Problems with Quasilinear Elliptic Equations. *SIAM Journal on Control and Optimization*, **2009**, 48, 688-718	1.9	41
16	Sufficient Second-Order Optimality Conditions for Semilinear Control Problems with Pointwise State Constraints. *SIAM Journal on Optimization*, **2008**, 19, 616-643	2	75
15	The convergence of an interior point method for an elliptic control problem with mixed control-state constraints. *Computational Optimization and Applications*, **2008**, 39, 183-218	1.4	28
14	Second-order sufficient optimality conditions for the optimal control of Navier-Stokes equations. *ESAIM - Control, Optimisation and Calculus of Variations*, **2006**, 12, 93-119	1	48
13	Optimal Control of PDEs with Regularized Pointwise State Constraints. *Computational Optimization and Applications*, **2006**, 33, 209-228	1.4	77
12	Regular Lagrange Multipliers for Control Problems with Mixed Pointwise Control-State Constraints. *SIAM Journal on Optimization*, **2005**, 15, 616-634	2	46
11	Error Estimates for the Numerical Approximation of Boundary Semilinear Elliptic Control Problems. *Computational Optimization and Applications*, **2005**, 31, 193-219	1.4	81
10	Optimale Steuerung partieller Differentialgleichungen **2005**,		88
9	On convergence of a receding horizon method for parabolic boundary control. *Optimization Methods and Software*, **2004**, 19, 201-216	1.3	3
8	On an Augmented Lagrangian SQP Method for a Class of Optimal Control Problems in Banach Spaces. *Computational Optimization and Applications*, **2002**, 22, 369-398	1.4	7

7	Error Estimates for the Numerical Approximation of a Semilinear Elliptic Control Problem. *Computational Optimization and Applications*, **2002**, 23, 201-229	1.4	164
6	SUFFICIENT SECOND ORDER OPTIMALITY CONDITIONS FOR A STATE-CONSTRAINED OPTIMAL CONTROL PROBLEM OF A WEAKLY SINGULAR INTEGRAL EQUATION. *Numerical Functional Analysis and Optimization*, **2002**, 23, 173-193	1	3
5	Second-Order Necessary and Sufficient Optimality Conditions for Optimization Problems and Applications to Control Theory. *SIAM Journal on Optimization*, **2002**, 13, 406-431	2	54
4	Sufficient Optimality in a Parabolic Control Problem. *Applied Optimization*, **2002**, 305-316		2
3	The SQP method for control constrained optimal control of the Burgers equation. *ESAIM - Control, Optimisation and Calculus of Variations*, **2001**, 6, 649-674	1	19
2	Second Order Sufficient Optimality Conditions for Some State-constrained Control Problems of Semilinear Elliptic Equations. *SIAM Journal on Control and Optimization*, **2000**, 38, 1369-1391	1.9	51
1	Optimal Control of Semilinear Parabolic Equations with State-Constraints of Bottleneck Type. *ESAIM - Control, Optimisation and Calculus of Variations*, **1999**, 4, 595-608	1	12