

Roland Herzog

List of Publications by Year in descending order

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84
papers

1,254
citations

430442

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395343

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docs citations

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times ranked

763
citing authors

#	ARTICLE	IF	CITATIONS
1	Error estimation for second-order $\langle \text{scp} \rangle$ partial differential equations $\langle / \text{scp} \rangle$ in nonvariational form. Numerical Methods for Partial Differential Equations, 2021, 37, 2190-2221.	2.0	2
2	Fenchel Duality Theory and a Primal-Dual Algorithm on Riemannian Manifolds. Foundations of Computational Mathematics, 2021, 21, 1465-1504.	1.5	7
3	Optimal Sensor Placement for Thermo-Elastic Coupled Machine Models. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000255.	0.2	1
4	An extension of the strain transfer principle for fiber reinforced materials. Computational Mechanics, 2021, 67, 1453-1463.	2.2	0
5	Planning of Measurement Series for Thermodynamic Properties Based on Optimal Experimental Design. International Journal of Thermophysics, 2021, 42, 1.	1.0	2
6	Dimensionally Consistent Preconditioning for Saddle-Point Problems. Computational Methods in Applied Mathematics, 2021, 21, 593-607.	0.4	2
7	Optimal sensor placement for stochastic sources in machine tools. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	0
8	Modeling of directional uncertainty using moments of the angular central Gaussian. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	1
9	Discrete total variation of the normal vector field as shape prior with applications in geometric inverse problems. Inverse Problems, 2020, 36, 054003.	1.0	2
10	First and Second Order Shape Optimization Based on Restricted Mesh Deformations. SIAM Journal of Scientific Computing, 2020, 42, A1200-A1225.	1.3	15
11	Total variation of the normal vector field as shape prior. Inverse Problems, 2020, 36, 054004.	1.0	2
12	Comparison of model order reduction methods for optimal sensor placement for thermo-elastic models. Engineering Optimization, 2019, 51, 465-483.	1.5	10
13	Fast iterative solvers for an optimal transport problem. Advances in Computational Mathematics, 2019, 45, 495-517.	0.8	6
14	Intrinsic Formulation of KKT Conditions and Constraint Qualifications on Smooth Manifolds. SIAM Journal on Optimization, 2019, 29, 2423-2444.	1.2	22
15	Geometry Processing Problems Using the Total Variation of the Normal Vector Field. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900189.	0.2	0
16	Shape optimization: what to do first, optimize or discretize?. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900067.	0.2	1
17	Optimum Experimental Design for Interface Identification Problems. SIAM Journal of Scientific Computing, 2019, 41, A3498-A3523.	1.3	0
18	Discrete Total Variation with Finite Elements and Applications to Imaging. Journal of Mathematical Imaging and Vision, 2019, 61, 411-431.	0.8	24

#	ARTICLE	IF	CITATIONS
19	fiberGen: An introductory tool for FFT-based material homogenization. Journal of Open Source Software, 2019, 4, 1027.	2.0	3
20	Analysis and an Interior-Point Approach for TV Image Reconstruction Problems on Smooth Surfaces. SIAM Journal on Imaging Sciences, 2018, 11, 889-922.	1.3	7
21	Preface of the Guest Editors. GAMM Mitteilungen, 2018, 40, 156-156.	2.7	0
22	Optimal control of an elastic crane-trolley-load system - a case study for optimal control of coupled ODE-PDE systems. Mathematical and Computer Modelling of Dynamical Systems, 2018, 24, 182-206.	1.4	13
23	An Optimal Control Problem for a Rotating Elastic Crane-Trolley-Load System. IFAC-PapersOnLine, 2018, 51, 272-277.	0.5	7
24	2. Improving Policies For Hamiltonâ€“Jacobiâ€“Bellman Equations By Postprocessing. , 2018, , 25-42.		2
25	Optimum Experimental Design by Shape Optimization of Specimens in Linear Elasticity. SIAM Journal on Applied Mathematics, 2018, 78, 1553-1576.	0.8	6
26	Optimal sensor placement for joint parameter and state estimation problems in large-scale dynamical systems with applications to thermo-mechanics. Optimization and Engineering, 2018, 19, 591-627.	1.3	19
27	Optimal control of a system of reaction-diffusion equations modeling the wine fermentation process. Optimal Control Applications and Methods, 2017, 38, 112-132.	1.3	10
28	Analysis of Spatio-Temporally Sparse Optimal Control Problems of Semilinear Parabolic Equations. ESAIM - Control, Optimisation and Calculus of Variations, 2017, 23, 263-295.	0.7	30
29	A conjugate direction method for linear systems in Banach spaces. Journal of Inverse and Ill-Posed Problems, 2017, 25, 553-572.	0.5	3
30	Parameter identification for short fiberâ€“reinforced plastics using optimal experimental design. International Journal for Numerical Methods in Engineering, 2017, 110, 703-725.	1.5	9
31	A fiber orientation-adapted integration scheme for computing the hyperelastic Tucker average for short fiber reinforced composites. Computational Mechanics, 2017, 60, 595-611.	2.2	18
32	Existence of solutions of a thermoviscoplastic model and associated optimal control problems. Nonlinear Analysis: Real World Applications, 2017, 35, 75-101.	0.9	8
33	Topology Optimization for Injection Molding of Short Fiber-Reinforced Plastics. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 337-338.	0.2	1
34	A Modified Implementation of MINRES to Monitor Residual Subvector Norms for Block Systems. SIAM Journal of Scientific Computing, 2017, 39, A2645-A2663.	1.3	5
35	Optimal Control Problems in Finite-Strain Elasticity by Inner Pressure and Fiber Tension. Frontiers in Applied Mathematics and Statistics, 2016, 2, .	0.7	8
36	Preconditioned Solution of State Gradient Constrained Elliptic Optimal Control Problems. SIAM Journal on Numerical Analysis, 2016, 54, 688-718.	1.1	3

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37	Simulation-based Correction Approach for Thermo-elastic Workpiece Deformations During Milling Processes. <i>Procedia CIRP</i> , 2016, 46, 103-106.	1.0	2
38	A model order reduction method for computational homogenization at finite strains on regular grids using hyperelastic laminates to approximate interfaces. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2016, 309, 476-496.	3.4	17
39	Optimal Control of Static Elastoplasticity in Primal Formulation. <i>SIAM Journal on Control and Optimization</i> , 2016, 54, 3016-3039.	1.1	8
40	Optimal Experimental Design to Identify the Average Stress-Strain Response in Short Fiber-Reinforced Plastics. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2016, 16, 673-674.	0.2	2
41	Computational homogenization of elasticity on a staggered grid. <i>International Journal for Numerical Methods in Engineering</i> , 2016, 105, 693-720.	1.5	156
42	Towards Topology Optimization in Quasi-Static Elastoplasticity. <i>IFAC-PapersOnLine</i> , 2015, 48, 627-628.	0.5	0
43	Annular and sectorial sparsity in optimal control of elliptic equations. <i>Computational Optimization and Applications</i> , 2015, 62, 157-180.	0.9	9
44	Sequentially optimal sensor placement in thermoelastic models for real time applications. <i>Optimization and Engineering</i> , 2015, 16, 737-766.	1.3	11
45	Superlinear Convergence of Krylov Subspace Methods for Self-Adjoint Problems in Hilbert Space. <i>SIAM Journal on Numerical Analysis</i> , 2015, 53, 1304-1324.	1.1	15
46	Introduction to the special issue for EUCCO 2013. <i>Computational Optimization and Applications</i> , 2015, 62, 1-3.	0.9	2
47	Scalability of a FETI-DP Method for Optimal Control Problems. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 837-838.	0.2	0
48	Optimal Control of Large Deformation Elasticity by Fiber Tension. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 879-880.	0.2	0
49	Comparison of Two Suboptimal Sensor Placement Strategies in Thermo-Elastic Models. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2014, 14, 881-882.	0.2	1
50	OPTPDE: A Collection of Problems in PDE-Constrained Optimization. <i>International Series of Numerical Mathematics</i> , 2014, , 539-543.	1.0	4
51	FETI-DP Methods for Optimal Control Problems. <i>Lecture Notes in Computational Science and Engineering</i> , 2014, , 387-395.	0.1	1
52	Optimal Control of Elastoplastic Processes: Analysis, Algorithms, Numerical Analysis and Applications. <i>International Series of Numerical Mathematics</i> , 2014, , 27-41.	1.0	3
53	Primal-dual methods for the computation of trading regions under proportional transaction costs. <i>Mathematical Methods of Operations Research</i> , 2013, 77, 101-130.	0.4	8
54	B- and Strong Stationarity for Optimal Control of Static Plasticity with Hardening. <i>SIAM Journal on Optimization</i> , 2013, 23, 321-352.	1.2	39

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55	Directional Sparsity in Optimal Control of Partial Differential Equations. SIAM Journal on Control and Optimization, 2012, 50, 943-963.	1.1	78
56	C-Stationarity for Optimal Control of Static Plasticity with Linear Kinematic Hardening. SIAM Journal on Control and Optimization, 2012, 50, 3052-3082.	1.1	24
57	Optimality Conditions and Error Analysis of Semilinear Elliptic Control Problems with L^1 Cost Functional. SIAM Journal on Optimization, 2012, 22, 795-820.	1.2	76
58	Weak lower semi-continuity of the optimal value function and applications to worst-case robust optimal control problems. Optimization, 2012, 61, 685-697.	1.0	6
59	Approximation of sparse controls in semilinear equations by piecewise linear functions. Numerische Mathematik, 2012, 122, 645-669.	0.9	34
60	Implementation of an X-FEM Solver for the Classical Two-Phase Stefan Problem. Journal of Scientific Computing, 2012, 52, 271-293.	1.1	17
61	Approximation of Sparse Controls in Semilinear Elliptic Equations. Lecture Notes in Computer Science, 2012, , 16-27.	1.0	1
62	Optimal Control of the Classical Two-Phase Stefan Problem in Level Set Formulation. SIAM Journal of Scientific Computing, 2011, 33, 342-363.	1.3	37
63	A robustification approach in unconstrained quadratic optimization. Mathematical Programming, 2011, 128, 231-252.	1.6	3
64	Optimal control of static plasticity with linear kinematic hardening. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2011, 91, 777-794.	0.9	12
65	Existence and regularity of the plastic multiplier in static and quasistatic plasticity. GAMM Mitteilungen, 2011, 34, 39-44.	2.7	6
66	Integrability of displacement and stresses in linear and nonlinear elasticity with mixed boundary conditions. Journal of Mathematical Analysis and Applications, 2011, 382, 802-813.	0.5	46
67	Algorithms for PDE-constrained optimization. GAMM Mitteilungen, 2010, 33, 163-176.	2.7	90
68	Lipschitz stability for elliptic optimal control problems with mixed control-state constraints. Optimization, 2010, 59, 833-849.	1.0	17
69	Preconditioned Conjugate Gradient Method for Optimal Control Problems with Control and State Constraints. SIAM Journal on Matrix Analysis and Applications, 2010, 31, 2291-2317.	0.7	83
70	Sensitivity analysis and the adjoint update strategy for an optimal control problem with mixed control-state constraints. Computational Optimization and Applications, 2009, 44, 57-81.	0.9	1
71	Modelling of a magnetohydrodynamics free surface problem arising in Czochralski crystal growth. Mathematical and Computer Modelling of Dynamical Systems, 2009, 15, 163-175.	1.4	4
72	On the interplay between interior point approximation and parametric sensitivities in optimal control. Journal of Mathematical Analysis and Applications, 2008, 337, 771-793.	0.5	1

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73	State-constrained optimal control of the three-dimensional stationary Navier–Stokes equations. <i>Journal of Mathematical Analysis and Applications</i> , 2008, 343, 257-272.	0.5	37
74	Update strategies for perturbed nonsmooth equations. <i>Optimization Methods and Software</i> , 2008, 23, 321-343.	1.6	4
75	Numerical Sensitivity Analysis for the Quantity of Interest in PDE–Constrained Optimization. <i>SIAM Journal of Scientific Computing</i> , 2007, 29, 22-48.	1.3	14
76	Quantitative stability analysis of optimal solutions in PDE-constrained optimization. <i>Journal of Computational and Applied Mathematics</i> , 2007, 206, 908-926.	1.1	3
77	Optimal Control for a Stationary MHD System in Velocity–Current Formulation. <i>SIAM Journal on Control and Optimization</i> , 2006, 45, 1822-1845.	1.1	26
78	Parametric Sensitivity Analysis of Perturbed PDE Optimal Control Problems with State and Control Constraints. <i>Journal of Optimization Theory and Applications</i> , 2006, 131, 17-35.	0.8	7
79	Lipschitz Stability of Solutions to Some State-Constrained Elliptic Optimal Control Problems. <i>Zeitschrift Fur Analysis Und Ihre Anwendung</i> , 2006, 25, 435-455.	0.8	8
80	Numerical simulation of segmentation cracking in thermal barrier coatings by means of cohesive zone elements. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005, 412, 241-251.	2.6	27
81	Differential Stability of Control-Constrained Optimal Control Problems for the Navier-Stokes Equations. <i>Numerical Functional Analysis and Optimization</i> , 2005, 26, 829-850.	0.6	2
82	Evaluating Gradients in Optimal Control: Continuous Adjoints Versus Automatic Differentiation. <i>Journal of Optimization Theory and Applications</i> , 2004, 122, 63-86.	0.8	31
83	Parametric sensitivity analysis in optimal control of a reaction-diffusion system – part II: practical methods and examples. <i>Optimization Methods and Software</i> , 2004, 19, 217-242.	1.6	14
84	Parametric sensitivities for optimal control problems using automatic differentiation. <i>Optimal Control Applications and Methods</i> , 2003, 24, 297-314.	1.3	15