Winnifried Wollner

List of Publications by Year
in descending order

89	2,775	218381	182168
papers	citations	26 h-index	51 g-index

93	93	93	1251
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A primal-dual active set method and predictor-corrector mesh adaptivity for computing fracture propagation using a phase-field approach. Computer Methods in Applied Mechanics and Engineering, 2015, 290, 466-495.	3.4	288
2	Pressure and fluid-driven fracture propagation in porous media using an adaptive finite element phase field model. Computer Methods in Applied Mechanics and Engineering, 2016, 305, 111-132.	3.4	242
3	An augmented-Lagrangian method for the phase-field approach for pressurized fractures. Computer Methods in Applied Mechanics and Engineering, 2014, 271, 69-85.	3.4	226
4	A Phase-Field Method for Propagating Fluid-Filled Fractures Coupled to a Surrounding Porous Medium. Multiscale Modeling and Simulation, 2015, 13, 367-398.	0.6	187
5	Fluid-structure interactions using different mesh motion techniques. Computers and Structures, 2011, 89, 1456-1467.	2.4	112
6	Modified Newton methods for solving fully monolithic phase-field quasi-static brittle fracture propagation. Computer Methods in Applied Mechanics and Engineering, 2017, 325, 577-611.	3.4	112
7	A quasi-static phase-field approach to pressurized fractures. Nonlinearity, 2015, 28, 1371-1399.	0.6	101
8	Iterative coupling of flow, geomechanics and adaptive phase-field fracture including level-set crack width approaches. Journal of Computational and Applied Mathematics, 2017, 314, 40-60.	1.1	85
9	Adaptive Finite Elements for Elliptic Optimization Problems with Control Constraints. SIAM Journal on Control and Optimization, 2008, 47, 509-534.	1.1	81
10	Phase-field modeling of proppant-filled fractures in a poroelastic medium. Computer Methods in Applied Mechanics and Engineering, 2016, 312, 509-541.	3.4	72
11	Variational localizations of the dual weighted residual estimator. Journal of Computational and Applied Mathematics, 2015, 279, 192-208.	1.1	67
12	An adaptive globalâ€“local approach for phase-field modeling of anisotropic brittle fracture. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112744.	3.4	66
13	Goal functional evaluations for phase-field fracture using PU-based DWR mesh adaptivity. Computational Mechanics, 2016, 57, 1017-1035.	2.2	58
14	An Error-Oriented Newton/Inexact Augmented Lagrangian Approach for Fully Monolithic Phase-Field Fracture Propagation. SIAM Journal of Scientific Computing, 2017, 39, B589-B617.	1.3	53
15	A comparative review of peridynamics and phase-field models for engineering fracture mechanics. Computational Mechanics, 2022, 69, 1259-1293.	2.2	51
16	A globalâ€“local approach for hydraulic phase-field fracture in poroelastic media. Computers and Mathematics With Applications, 2021, 91, 99-121.	1.4	49
17	Flapping and contact FSI computations with the fluidâ€“solid interface-tracking/interface-capturing technique and mesh adaptivity. Computational Mechanics, 2014, 53, 29-43.	2.2	46
18	Phase-Field Modeling of Two Phase Fluid Filled Fractures in a Poroelastic Medium. Multiscale Modeling and Simulation, 2018, 16, 1542-1580.	0.6	44

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19	IPACS: Integrated Phase-Field Advanced Crack Propagation Simulator. An adaptive, parallel, physics-based-discretization phase-field framework for fracture propagation in porous media. Computer Methods in Applied Mechanics and Engineering, 2020, 367, 113124.	3.4	38
20	A Selection of Benchmark Problems in Solid Mechanics and Applied Mathematics. Archives of Computational Methods in Engineering, 2021, 28, 713-751.	6.0	36
21	A posteriori error estimates for a finite element discretization of interior point methods for an elliptic optimization problem with state constraints. Computational Optimization and Applications, 2010, 47, 133-159.	0.9	31
22	Coupling fluidâ€“structure interaction with phase-field fracture. Journal of Computational Physics, 2016, 327, 67-96.	1.9	30
23	Parallel solution, adaptivity, computational convergence, and openâ€source code of 2d and 3d pressurized phaseâ€field fracture problems. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800353.	0.2	30
24	A phase-field description for pressurized and non-isothermal propagating fractures. Computer Methods in Applied Mechanics and Engineering, 2019, 351, 860-890.	3.4	29
25	The Length of the Primal-Dual Path in Moreau--Yosida-Based Path-Following Methods for State Constrained Optimal Control. SIAM Journal on Optimization, 2014, 24, 108-126.	1.2	27
26	Modeling fluid injection in fractures with a reservoir simulator coupled to a boundary element method. Computational Geosciences, 2014, 18, 613-624.	1.2	27
27	Adaptive time-step control for nonlinear fluidâ€“structure interaction. Journal of Computational Physics, 2018, 366, 448-477.	1.9	27
28	Adaptive finite element solution of eigenvalue problems: Balancing of discretization and iteration error. Journal of Numerical Mathematics, 2010, 18, .	1.8	26
29	Adaptive Optimal Control of the Obstacle Problem. SIAM Journal of Scientific Computing, 2015, 37, A918-A945.	1.3	25
30	Initialization of phase-field fracture propagation in porous media using probability maps of fracture networks.. Mechanics Research Communications, 2017, 80, 16-23.	1.0	25
31	Bayesian inversion for unified ductile phase-field fracture. Computational Mechanics, 2021, 68, 943-980.	2.2	23
32	An Optimal Control Problem Governed by a Regularized Phase-Field Fracture Propagation Model. SIAM Journal on Control and Optimization, 2017, 55, 2271-2288.	1.1	22
33	Barrier Methods for Optimal Control Problems with Convex Nonlinear Gradient State Constraints. SIAM Journal on Optimization, 2011, 21, 269-286.	1.2	21
34	A phase-field model for fractures in nearly incompressible solids. Computational Mechanics, 2020, 65, 61-78.	2.2	21
35	Finite-Rank ADI Iteration for Operator Lyapunov Equations. SIAM Journal on Control and Optimization, 2013, 51, 4084-4117.	1.1	20
36	A Stochastic Gradient Method With Mesh Refinement for PDE-Constrained Optimization Under Uncertainty. SIAM Journal of Scientific Computing, 2020, 42, A2750-A2772.	1.3	20

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37	A priori error estimates for optimal control problems with pointwise constraints on the gradient of the state. Numerische Mathematik, 2011, 118, 587-600.	0.9	19
38	A Partition-of-Unity Dual-Weighted Residual Approach for Multi-Objective Goal Functional Error Estimation Applied to Elliptic Problems. Computational Methods in Applied Mathematics, 2017, 17, 575-599.	0.4	19
39	Mesh adaptivity for quasiâ€static phaseâ€field fractures based on a residualâ€type a posteriori error estimator. GAMM Mitteilungen, 2020, 43, e202000003.	2.7	19
40	The damped Crankâ€“Nicolson time-marching scheme for the adaptive solution of the Blackâ€“Scholes equation. Journal of Computational Finance, 2015, 18, 1-37.	0.3	19
41	On the pressure approximation in nonstationary incompressible flow simulations on dynamically varying spatial meshes. International Journal for Numerical Methods in Fluids, 2012, 69, 1045-1064.	0.9	18
42	An iterative staggered scheme for phase field brittle fracture propagation with stabilizing parameters. Computer Methods in Applied Mechanics and Engineering, 2020, 361, 112752.	3.4	18
43	OptimalL²velocity error estimate for a modified pressure-robust Crouzeixâ€“Raviart Stokes element. IMA Journal of Numerical Analysis, 2017, 37, 354-374.	1.5	15
44	pfm-cracks: A parallel-adaptive framework for phase-field fracture propagation. Software Impacts, 2020, 6, 100045.	0.8	14
45	An Optimal Control Problem Governed by a Regularized Phase-Field Fracture Propagation Model. Part II: The Regularization Limit. SIAM Journal on Control and Optimization, 2019, 57, 1672-1690.	1.1	13
46	Bayesian inversion for anisotropic hydraulic phase-field fracture. Computer Methods in Applied Mechanics and Engineering, 2021, 386, 114118.	3.4	13
47	A priori error estimates for the finite element discretization of optimal distributed control problems governed by the biharmonic operator. Calcolo, 2013, 50, 165-193.	0.6	10
48	Numerical Methods for Power-Law Diffusion Problems. SIAM Journal of Scientific Computing, 2017, 39, A681-A710.	1.3	10
49	Optimization with nonstationary, nonlinear monolithic fluidâ€structure interaction. International Journal for Numerical Methods in Engineering, 2021, 122, 5430-5449.	1.5	10
50	Goal-Oriented Mesh Adaptivity for Fluid-Structure Interaction with Application to Heart-Valve Settings. Archive of Mechanical Engineering, 2012, 59, 73-99.	0.7	9
51	Optimal Control of Elliptic Equations with Pointwise Constraints on the Gradient of the State in Nonsmooth Polygonal Domains. SIAM Journal on Control and Optimization, 2012, 50, 2117-2129.	1.1	7
52	Optimal control of the temperature in a catalytic converter. Computers and Mathematics With Applications, 2014, 67, 1521-1544.	1.4	7
53	A decomposition method for MINLPs with Lipschitz continuous nonlinearities. Mathematical Programming, 2019, 178, 449-483.	1.6	7
54	Higher regularity for solutions to elliptic systems in divergence form subject to mixed boundary conditions. Annali Di Matematica Pura Ed Applicata, 2019, 198, 1227-1241.	0.5	7

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55	A priori error estimates for a linearized fracture control problem. Optimization and Engineering, 2021, 22, 2127-2149.	1.3	7
56	A phase-field multirate scheme with stabilized iterative coupling for pressure driven fracture propagation in porous media. Computers and Mathematics With Applications, 2021, 91, 176-191.	1.4	7
57	Computational Aspects of Pseudospectra in Hydrodynamic Stability Analysis. Journal of Mathematical Fluid Mechanics, 2012, 14, 661-692.	0.4	6
58	On the Differentiability of Fluidâ€“Structure Interaction Problems with Respect to the Problem Data. Journal of Mathematical Fluid Mechanics, 2019, 21, 1.	0.4	6
59	A Priori Error Estimates for a Finite Element Discretization of Parabolic Optimization Problems with Pointwise Constraints in Time on Mean Values of the Gradient of the State. SIAM Journal on Control and Optimization, 2015, 53, 745-770.	1.1	5
60	An Optimization Framework for the Computation of Time-Periodic Solutions of Partial Differential Equations. Vietnam Journal of Mathematics, 2018, 46, 949-966.	0.4	5
61	Duality based error estimation in the presence of discontinuities. Applied Numerical Mathematics, 2019, 144, 83-99.	1.2	5
62	Quasi-best approximation in optimization with PDE constraints. Inverse Problems, 2020, 36, 014004.	1.0	5
63	A Posteriori Error Estimation in PDE-constrained Optimization with Pointwise Inequality Constraints. International Series of Numerical Mathematics, 2012, , 349-373.	1.0	5
64	A Posteriori Estimator for the Adaptive Solution of a Quasi-Static Fracture Phase-Field Model with Irreversibility Constraints. SIAM Journal of Scientific Computing, 2022, 44, B479-B505.	1.3	5
65	Goal-Oriented Adaptivity for Optimization of Elliptic Systems subject to Pointwise Inequality Constraints: Application to Free Material Optimization. Proceedings in Applied Mathematics and Mechanics, 2010, 10, 669-672.	0.2	4
66	OPTPDE: A Collection of Problems in PDE-Constrained Optimization. International Series of Numerical Mathematics, 2014, , 539-543.	1.0	4
67	Dual-weighted residual adaptivity for phase-field fracture propagation. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 619-620.	0.2	3
68	A conjugate direction method for linear systems in Banach spaces. Journal of Inverse and Ill-Posed Problems, 2017, 25, 553-572.	0.5	3
69	Multiple goalâ€oriented error estimates applied to 3d nonâ€linear problems. Proceedings in Applied Mathematics and Mechanics, 2018, 18, e201800048.	0.2	3
70	Multigoal-oriented optimal control problems with nonlinear PDE constraints. Computers and Mathematics With Applications, 2020, 79, 3001-3026.	1.4	3
71	Finite element methods for one dimensional elliptic distributed optimal control problems with pointwise constraints on the derivative of the state. Optimization and Engineering, 2020, , 1.	1.3	3
72	A mixed phase-field fracture model for crack propagation in punctured EPDM strips. Theoretical and Applied Fracture Mechanics, 2021, 115, 103076.	2.1	3

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73	Dynamic and Weighted Stabilizations of the L-scheme Applied to a Phase-Field Model for Fracture Propagation. Lecture Notes in Computational Science and Engineering, 2021, , 1177-1184.	0.1	3
74	Adaptive FEM for PDE Constrained Optimization with Pointwise Constraints on the Gradient of the State. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10873-10874.	0.2	2
75	A priori $$L^2$$ L 2 -discretization error estimates for the state in elliptic optimization problems with pointwise inequality state constraints. Numerische Mathematik, 2018, 138, 273-299.	0.9	2
76	A Priori Error Estimates for State-Constrained Semilinear Parabolic Optimal Control Problems. Journal of Optimization Theory and Applications, 2018, 178, 317-348.	0.8	2
77	Mesh adaptivity and error estimates applied to a regularized p â€Laplacian constrainted optimal control problem for multiple quantities of interest. Proceedings in Applied Mathematics and Mechanics, 2019, 19, e201900231.	0.2	2
78	Parallel Matrix-Free Higher-Order Finite Element Solvers for Phase-Field Fracture Problems. Mathematical and Computational Applications, 2020, 25, 40.	0.7	2
79	Crack path comparisons of a mixed phaseâ€field fracture model and experiments in punctured EPDM strips. Proceedings in Applied Mathematics and Mechanics, 2021, 20, e202000335.	0.2	2
80	Dual-Weighted Residual A Posteriori Error Estimates for a Penalized Phase-Field Slit Discontinuity Problem. Computational Methods in Applied Mathematics, 2021, 21, 693-707.	0.4	2
81	A Priori Error Estimates for Optimal Control Problems with Constraints on the Gradient of the State on Nonsmooth Polygonal Domains. International Series of Numerical Mathematics, 2013, , 193-215.	1.0	2
82	Optimality Conditions for Convex Stochastic Optimization Problems in Banach Spaces with Almost Sure State Constraints. SIAM Journal on Optimization, 2021, 31, 2455-2480.	1.2	2
83	The cost of not knowing enough: mixed-integer optimization with implicit Lipschitz nonlinearities. Optimization Letters, 2022, 16, 1355-1372.	0.9	2
84	Optimal Control for Phase-Field Fracture: Algorithmic Concepts and Computations. , 2022, , 247-255.		2
85	A One Dimensional Elliptic Distributed Optimal Control Problem with Pointwise Derivative Constraints. Numerical Functional Analysis and Optimization, 2020, 41, 1549-1563.	0.6	1
86	Discontinuous and Enriched Galerkin Methods for Phase-Field Fracture Propagation in Elasticity. Lecture Notes in Computational Science and Engineering, 2016, , 195-203.	0.1	1
87	Schurâ€type preconditioning of a phaseâ€field fracture model in mixed form. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	1
88	Iterative solution of operator Lyapunov equations arising in heat transfer. , 2013, , .		0
89	A priori error estimates for nonstationary optimal control problems with gradient state constraints. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 611-612.	0.2	0