

Georg Stadler

List of Publications by Year in descending order

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31
papers

1,838
citations

471061

17
h-index

500791

28
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all docs

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docs citations

31
times ranked

1281
citing authors

#	ARTICLE	IF	CITATIONS
1	Robust Multigrid Techniques for Augmented Lagrangian Preconditioning of Incompressible Stokes Equations with Extreme Viscosity Variations. <i>SIAM Journal of Scientific Computing</i> , 2023, 45, S27-S53.	1.3	2
2	Single-stage gradient-based stellarator coil design: stochastic optimization. <i>Nuclear Fusion</i> , 2022, 62, 076034.	1.6	14
3	Dynamics of the abrupt change in Pacific Plate motion around 50 million years ago. <i>Nature Geoscience</i> , 2022, 15, 74-78.	5.4	17
4	Simultaneous inference of plate boundary stresses and mantle rheology using adjoints: large-scale 2-D models. <i>Geophysical Journal International</i> , 2022, 231, 597-614.	1.0	2
5	Direct computation of magnetic surfaces in Boozer coordinates and coil optimization for quasisymmetry. <i>Journal of Plasma Physics</i> , 2022, 88, .	0.7	8
6	Optimal Design of Large-scale Bayesian Linear Inverse Problems Under Reducible Model Uncertainty: Good to Know What You Don't Know. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2021, 9, 163-184.	1.1	8
7	Hierarchical Matrix Approximations of Hessians Arising in Inverse Problems Governed by PDEs. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A3397-A3426.	1.3	9
8	Advanced Newton Methods for Geodynamical Models of Stokes Flow With Viscoplastic Rheologies. <i>Geochemistry, Geophysics, Geosystems</i> , 2020, 21, e2020GC009059.	1.0	7
9	Optimal experimental design under irreducible uncertainty for linear inverse problems governed by PDEs. <i>Inverse Problems</i> , 2020, 36, 075007.	1.0	11
10	Bayesian approach to inverse scattering with topological priors. <i>Inverse Problems</i> , 2020, 36, 105001.	1.0	9
11	A comparative study of structural similarity and regularization for joint inverse problems governed by PDEs. <i>Inverse Problems</i> , 2019, 35, 024003.	1.0	14
12	Mitigating the influence of the boundary on PDE-based covariance operators. <i>Inverse Problems and Imaging</i> , 2018, 12, 1083-1102.	0.6	38
13	Weighted BFBT Preconditioner for Stokes Flow Problems with Highly Heterogeneous Viscosity. <i>SIAM Journal of Scientific Computing</i> , 2017, 39, S272-S297.	1.3	21
14	A Fast and Scalable Method for A-Optimal Design of Experiments for Infinite-dimensional Bayesian Nonlinear Inverse Problems. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, A243-A272.	1.3	85
15	An extreme-scale implicit solver for complex PDEs. , 2015, , .		96
16	Solution of Nonlinear Stokes Equations Discretized By High-Order Finite Elements on Nonconforming and Anisotropic Meshes, with Application to Ice Sheet Dynamics. <i>SIAM Journal of Scientific Computing</i> , 2015, 37, B804-B833.	1.3	32
17	Scalable and efficient algorithms for the propagation of uncertainty from data through inference to prediction for large-scale problems, with application to flow of the Antarctic ice sheet. <i>Journal of Computational Physics</i> , 2015, 296, 348-368.	1.9	100
18	Discretely Exact Derivatives for Hyperbolic PDE-Constrained Optimization Problems Discretized by the Discontinuous Galerkin Method. <i>Journal of Scientific Computing</i> , 2015, 63, 138-162.	1.1	22

#	ARTICLE	IF	CITATIONS
19	Optimal initial conditions for coupling ice sheet models to Earth system models. <i>Journal of Geophysical Research F: Earth Surface</i> , 2014, 119, 1894-1917.	1.0	52
20	A-Optimal Design of Experiments for Infinite-Dimensional Bayesian Linear Inverse Problems with Regularized ℓ_0 -Sparsification. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, A2122-A2148.	1.3	85
21	A Computational Framework for Infinite-Dimensional Bayesian Inverse Problems, Part II: Stochastic Newton MCMC with Application to Ice Sheet Flow Inverse Problems. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, A1525-A1555.	1.3	145
22	Joint inversion in coupled quasi-static poroelasticity. <i>Journal of Geophysical Research: Solid Earth</i> , 2014, 119, 1425-1445.	1.4	20
23	A Computational Framework for Infinite-Dimensional Bayesian Inverse Problems Part I: The Linearized Case, with Application to Global Seismic Inversion. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, A2494-A2523.	1.3	245
24	Parallel geometric-algebraic multigrid on unstructured forests of octrees. , 2012, , .		33
25	An inexact Gauss-Newton method for inversion of basal sliding and rheology parameters in a nonlinear Stokes ice sheet model. <i>Journal of Glaciology</i> , 2012, 58, 889-903.	1.1	80
26	Extreme-scale UQ for Bayesian inverse problems governed by PDEs. , 2012, , .		39
27	Multi-scale dynamics and rheology of mantle flow with plates. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	65
28	Slab stress and strain rate as constraints on global mantle flow. <i>Geophysical Research Letters</i> , 2010, 37, .	1.5	31
29	The Dynamics of Plate Tectonics and Mantle Flow: From Local to Global Scales. <i>Science</i> , 2010, 329, 1033-1038.	6.0	284
30	Elliptic optimal control problems with L^1 -control cost and applications for the placement of control devices. <i>Computational Optimization and Applications</i> , 2009, 44, 159-181.	0.9	170
31	Parallel scalable adjoint-based adaptive solution of variable-viscosity Stokes flow problems. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2009, 198, 1691-1700.	3.4	94