

Thomas Richter

List of Publications by Year in descending order

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79
papers

1,185
citations

394286

19
h-index

434063

31
g-index

85
all docs

85
docs citations

85
times ranked

748
citing authors

#	ARTICLE	IF	CITATIONS
1	An unfitted Eulerian finite element method for the time-dependent Stokes problem on moving domains. IMA Journal of Numerical Analysis, 2022, 42, 2505-2544.	1.5	13
2	A neural network multigrid solver for the Navier-Stokes equations. Journal of Computational Physics, 2022, 460, 110983.	1.9	15
3	An averaging scheme for the efficient approximation of time-periodic flow problems. Computers and Fluids, 2021, 214, 104769.	1.3	6
4	Parallel time-stepping for fluid-structure interactions. Mathematical Modelling of Natural Phenomena, 2021, 16, 20.	0.9	3
5	Falling balls in a viscous fluid with contact: Comparing numerical simulations with experimental data. Physics of Fluids, 2021, 33, .	1.6	17
6	A Finite Element/Neural Network Framework for Modeling Suspensions of Non-spherical Particles. Vietnam Journal of Mathematics, 2021, 49, 207-235.	0.4	3
7	Adaptive time-step control for a monolithic multirate scheme coupling the heat and wave equation. BIT Numerical Mathematics, 2021, 61, 1367-1396.	1.0	5
8	Error Estimation and Adaptivity for Differential Equations with Multiple Scales in Time. Computational Methods in Applied Mathematics, 2021, 21, 841-861.	0.4	2
9	LocModFE: Locally modified finite elements for approximating interface problems in deal.II. Software Impacts, 2021, 8, 100070.	0.8	3
10	Settling of spherical particles in the transitional regime. International Journal of Multiphase Flow, 2021, 138, 103589.	1.6	9
11	Using a deep neural network to predict the motion of underresolved triangular rigid bodies in an incompressible flow. International Journal for Numerical Methods in Fluids, 2021, 93, 3364-3383.	0.9	3
12	Steady azimuthal flow field induced by a rotating sphere near a rigid disk or inside a gap between two coaxially positioned rigid disks. Physics of Fluids, 2021, 33, 082011.	1.6	6
13	On the Impact of Fluid Structure Interaction in Blood Flow Simulations. Vietnam Journal of Mathematics, 2021, 49, 169-187.	0.4	10
14	Simulating Linear Kinematic Features in Viscous-Plastic Sea Ice Models on Quadrilateral and Triangular Grids With Different Variable Staggering. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002523.	1.3	18
15	The Candy Wrapper Problem: A Temporal Multiscale Approach for PDE/PDE Systems. Lecture Notes in Computational Science and Engineering, 2021, , 17-33.	0.1	1
16	On temporal homogenization in the numerical simulation of atherosclerotic plaque growth. Proceedings in Applied Mathematics and Mechanics, 2021, 21, .	0.2	2
17	Finite Element Error Estimates on Geometrically Perturbed Domains. Journal of Scientific Computing, 2020, 84, 1.	1.1	0
18	Low-rank linear fluid-structure interaction discretizations. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 2020, 100, e201900205.	0.9	3

#	ARTICLE	IF	CITATIONS
19	A goal oriented error estimator and mesh adaptivity for sea ice simulations. <i>Ocean Modelling</i> , 2020, 154, 101684.	1.0	3
20	Axisymmetric Stokes flow due to a point-force singularity acting between two coaxially positioned rigid no-slip disks. <i>Journal of Fluid Mechanics</i> , 2020, 904, .	1.4	6
21	Second Order Pressure Estimates for the Crank–Nicolson Discretization of the Incompressible Navier–Stokes Equations. <i>SIAM Journal on Numerical Analysis</i> , 2020, 58, 375-409.	1.1	6
22	A Parallel Newton Multigrid Framework for Monolithic Fluid-Structure Interactions. <i>Journal of Scientific Computing</i> , 2020, 82, 1.	1.1	20
23	A Newton multigrid framework for optimal control of fluid–structure interactions. <i>Optimization and Engineering</i> , 2020, , 1.	1.3	9
24	Efficient Approximation of Flow Problems With Multiple Scales in Time. <i>Multiscale Modeling and Simulation</i> , 2020, 18, 942-969.	0.6	13
25	Numerical benchmarking of fluid-rigid body interactions. <i>Computers and Fluids</i> , 2019, 193, 104290.	1.3	1
26	Quasi-random discrete ordinates method for neutron transport problems. <i>Annals of Nuclear Energy</i> , 2019, 133, 275-282.	0.9	4
27	Linear Low–Rank Parameter–Dependent Fluid–Structure Interaction Discretization in 2D. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2018, 18, e201800178.	0.2	0
28	An Optimization Framework for the Computation of Time-Periodic Solutions of Partial Differential Equations. <i>Vietnam Journal of Mathematics</i> , 2018, 46, 949-966.	0.4	5
29	Post-Turing tissue pattern formation: Advent of mechanochemistry. <i>PLoS Computational Biology</i> , 2018, 14, e1006259.	1.5	46
30	A modified global Newton solver for viscous-plastic sea ice models. <i>Ocean Modelling</i> , 2017, 116, 96-107.	1.0	23
31	An ALE approach to mechano–chemical processes in fluid–structure interactions. <i>International Journal for Numerical Methods in Fluids</i> , 2017, 84, 199-220.	0.9	12
32	A second order time-stepping scheme for parabolic interface problems with moving interfaces. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2017, 51, 1539-1560.	0.8	14
33	Error Estimation and Adaptivity. <i>Lecture Notes in Computational Science and Engineering</i> , 2017, , 307-353.	0.1	0
34	Linear Solvers for Fluid-structure Interactions. <i>Lecture Notes in Computational Science and Engineering</i> , 2017, , 281-305.	0.1	0
35	Mechano-Chemical Fluid-structure Interactions and Active Materials. <i>Lecture Notes in Computational Science and Engineering</i> , 2017, , 371-386.	0.1	0
36	Coupled Fluid-structure Interactions. <i>Lecture Notes in Computational Science and Engineering</i> , 2017, , 79-115.	0.1	2

#	ARTICLE	IF	CITATIONS
37	Discretization. Lecture Notes in Computational Science and Engineering, 2017, , 117-199.	0.1	0
38	Fully Eulerian Formulation for Fluid-structure Interactions. Lecture Notes in Computational Science and Engineering, 2017, , 255-279.	0.1	0
39	Optimization with Fluid-structure Interactions. Lecture Notes in Computational Science and Engineering, 2017, , 357-369.	0.1	0
40	Fluid-structure Interaction with Contact. Lecture Notes in Computational Science and Engineering, 2017, , 399-416.	0.1	0
41	ALE Formulation for Fluid-structure Interactions. Lecture Notes in Computational Science and Engineering, 2017, , 203-254.	0.1	0
42	Non-stationary Dynamics and Coupled Oscillations. Lecture Notes in Computational Science and Engineering, 2017, , 387-397.	0.1	0
43	A finite element multigrid-framework to solve the sea ice momentum equation. Journal of Computational Physics, 2017, 348, 847-861.	1.9	5
44	3. An accurate Eulerian approach for fluid-structure interactions. , 2017, , 69-126.		3
45	Fluid-structure Interactions. Lecture Notes in Computational Science and Engineering, 2017, , .	0.1	81
46	2. The locally adapted parametric finite element method for interface problems on triangular meshes. , 2017, , 41-68.		3
47	Beyond Turing: mechanochemical pattern formation in biological tissues. Biology Direct, 2016, 11, 22.	1.9	26
48	Long-term simulation of large deformation, mechano-chemical fluid-structure interactions in ALE and fully Eulerian coordinates. Journal of Computational Physics, 2016, 321, 874-891.	1.9	31
49	Mathematical modeling and simulation of the evolution of plaques in blood vessels. Journal of Mathematical Biology, 2016, 72, 973-996.	0.8	34
50	A monolithic geometric multigrid solver for fluid-structure interactions in ALE formulation. International Journal for Numerical Methods in Engineering, 2015, 104, 372-390.	1.5	37
51	A posteriori error estimation for the fractional step theta discretization of the incompressible Navier-Stokes equations. Computer Methods in Applied Mechanics and Engineering, 2015, 288, 45-59.	3.4	23
52	Variational localizations of the dual weighted residual estimator. Journal of Computational and Applied Mathematics, 2015, 279, 192-208.	1.1	67
53	Eulerian Techniques for Fluid-Structure Interactions: Part II Applications. Lecture Notes in Computational Science and Engineering, 2015, , 755-762.	0.1	7
54	On Time Discretizations of Fluid-Structure Interactions. Contributions in Mathematical and Computational Sciences, 2015, , 377-400.	0.3	15

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55	A Locally Modified Parametric Finite Element Method for Interface Problems. SIAM Journal on Numerical Analysis, 2014, 52, 2315-2334.	1.1	43
56	Goal-Oriented Error Estimation for the Fractional Step Theta Scheme. Computational Methods in Applied Mathematics, 2014, 14, 203-230.	0.4	19
57	Towards a complete numerical description of lubricant film dynamics in ball bearings. Computational Mechanics, 2014, 53, 239-255.	2.2	11
58	Efficient numerical realization of discontinuous Galerkin methods for temporal discretization of parabolic problems. Numerische Mathematik, 2013, 124, 151-182.	0.9	24
59	Modeling and Computing of Deformation Dynamics of Inhomogeneous Biological Surfaces. SIAM Journal on Applied Mathematics, 2013, 73, 1768-1792.	0.8	23
60	Optimal Control and Parameter Estimation for Stationary Fluid-Structure Interaction Problems. SIAM Journal of Scientific Computing, 2013, 35, B1085-B1104.	1.3	20
61	A Fully Eulerian formulation for fluid-structure-interaction problems. Journal of Computational Physics, 2013, 233, 227-240.	1.9	78
62	Fluid Structure Interactions in Eulerian Coordinates. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 827-830.	0.2	1
63	Goal-oriented error estimation for fluid-structure interaction problems. Computer Methods in Applied Mechanics and Engineering, 2012, 223-224, 28-42.	3.4	52
64	Sorting Mechanisms and Communication in Phase-Separating Coupled Monolayers. Journal of Physical Chemistry B, 2011, 115, 11739-11745.	1.2	9
65	An Adaptive Finite Element Method for Fluid-Structure Interaction Problems Based on a Fully Eulerian Formulation. Lecture Notes in Computational Science and Engineering, 2011, , 159-191.	0.1	5
66	Optimal Microstructures Drag Reducing Mechanism of Riblets. Journal of Mathematical Fluid Mechanics, 2011, 13, 429-447.	0.4	10
67	Parallel multigrid method for finite element simulations of complex flow problems on locally refined meshes. Numerical Linear Algebra With Applications, 2011, 18, 615-636.	0.9	9
68	Implementation of REDIM reduced chemistry to model an axisymmetric laminar diffusion methane-air flame. Combustion Theory and Modelling, 2011, 15, 299-323.	1.0	8
69	A posteriori error estimation and anisotropy detection with the dual-weighted residual method. International Journal for Numerical Methods in Fluids, 2010, 62, 90-118.	0.9	31
70	Finite elements for fluid-structure interaction in ALE and fully Eulerian coordinates. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 2633-2642.	3.4	101
71	Fluid-Structure Interactions in ALE and Fully Eulerian Coordinates. Proceedings in Applied Mathematics and Mechanics, 2010, 10, 487-488.	0.2	1
72	A Study of Shark Skin and Its Drag Reducing Mechanism. , 2009, , 271-285.		6

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73	An adaptive homotopy multi-grid method for molecule orientations of high dimensional liquid crystals. Journal of Computational Physics, 2007, 225, 2069-2082.	1.9	4
74	Mesh and Model Adaptivity for Flow Problems. , 2007, , 47-75.		4
75	Solving Multidimensional Reactive Flow Problems with Adaptive Finite Elements. , 2007, , 93-112.		5
76	Parallel Multigrid on Locally Refined Meshes. , 2007, , 77-92.		4
77	Solutions of 3D Navier-Stokes benchmark problems with adaptive finite elements. Computers and Fluids, 2006, 35, 372-392.	1.3	67
78	Stabilized finite elements for 3D reactive flows. International Journal for Numerical Methods in Fluids, 2006, 51, 981-999.	0.9	20
79	Local Projection Stabilization for the Stokes System on Anisotropic Quadrilateral Meshes. , 2006, , 770-778.		6