

Benjamin Stamm

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8796556/publications.pdf>

Version: 2024-02-01

69
papers

1,862
citations

331259

21
h-index

276539

41
g-index

72
all docs

72
docs citations

72
times ranked

1348
citing authors

#	ARTICLE	IF	CITATIONS
1	Certified Reduced Basis Methods for Parametrized Partial Differential Equations. SpringerBriefs in Mathematics, 2016, , .	0.2	355
2	Tinker-HP: a massively parallel molecular dynamics package for multiscale simulations of large complex systems with advanced point dipole polarizable force fields. Chemical Science, 2018, 9, 956-972.	3.7	190
3	Efficient greedy algorithms for high-dimensional parameter spaces with applications to empirical interpolation and reduced basis methods. ESAIM: Mathematical Modelling and Numerical Analysis, 2014, 48, 259-283.	0.8	82
4	Fast Domain Decomposition Algorithm for Continuum Solvation Models: Energy and First Derivatives. Journal of Chemical Theory and Computation, 2013, 9, 3637-3648.	2.3	81
5	Scalable Evaluation of Polarization Energy and Associated Forces in Polarizable Molecular Dynamics: I. Toward Massively Parallel Direct Space Computations. Journal of Chemical Theory and Computation, 2014, 10, 1638-1651.	2.3	76
6	Domain decomposition for implicit solvation models. Journal of Chemical Physics, 2013, 139, 054111.	1.2	68
7	Locally Adaptive Greedy Approximations for Anisotropic Parameter Reduced Basis Spaces. SIAM Journal of Scientific Computing, 2013, 35, A2417-A2441.	1.3	55
8	The reduced basis method for the electric field integral equation. Journal of Computational Physics, 2011, 230, 5532-5555.	1.9	54
9	Parameter multi-domain $\hat{\epsilon}^{\text{hp}}$ empirical interpolation. International Journal for Numerical Methods in Engineering, 2012, 90, 412-428.	1.5	53
10	Scalable Evaluation of Polarization Energy and Associated Forces in Polarizable Molecular Dynamics: II. Toward Massively Parallel Computations Using Smooth Particle Mesh Ewald. Journal of Chemical Theory and Computation, 2015, 11, 2589-2599.	2.3	53
11	Quantum, classical, and hybrid QM/MM calculations in solution: General implementation of the ddCOSMO linear scaling strategy. Journal of Chemical Physics, 2014, 141, 184108.	1.2	47
12	Achieving Linear Scaling in Computational Cost for a Fully Polarizable MM/Continuum Embedding. Journal of Chemical Theory and Computation, 2015, 11, 694-704.	2.3	45
13	Polarizable Molecular Dynamics in a Polarizable Continuum Solvent. Journal of Chemical Theory and Computation, 2015, 11, 623-634.	2.3	45
14	Truncated Conjugate Gradient: An Optimal Strategy for the Analytical Evaluation of the Many-Body Polarization Energy and Forces in Molecular Simulations. Journal of Chemical Theory and Computation, 2017, 13, 180-190.	2.3	34
15	A reduced basis method for electromagnetic scattering by multiple particles in three dimensions. Journal of Computational Physics, 2012, 231, 7756-7779.	1.9	32
16	Quantum Calculations in Solution for Large to Very Large Molecules: A New Linear Scaling QM/Continuum Approach. Journal of Physical Chemistry Letters, 2014, 5, 953-958.	2.1	32
17	Model Order Reduction for Problems with Large Convection Effects. Computational Methods in Applied Sciences (Springer), 2019, , 131-150.	0.1	30
18	An integral equation approach to calculate electrostatic interactions in many-body dielectric systems. Journal of Computational Physics, 2018, 371, 712-731.	1.9	28

#	ARTICLE	IF	CITATIONS
19	Interior Penalty Continuous and Discontinuous Finite Element Approximations of Hyperbolic Equations. <i>Journal of Scientific Computing</i> , 2010, 43, 293-312.	1.1	24
20	Guaranteed and Robust a Posteriori Bounds for Laplace Eigenvalues and Eigenvectors: Conforming Approximations. <i>SIAM Journal on Numerical Analysis</i> , 2017, 55, 2228-2254.	1.1	24
21	â„ž-Optimal discontinuous Galerkin methods for linear elliptic problems. <i>Mathematics of Computation</i> , 2010, 79, 2117-2133.	1.1	23
22	Mathematical analysis and calculation of molecular surfaces. <i>Journal of Computational Physics</i> , 2016, 322, 760-782.	1.9	22
23	Certified Reduced Basis Method for the Electric Field Integral Equation. <i>SIAM Journal of Scientific Computing</i> , 2012, 34, A1777-A1799.	1.3	21
24	A new discretization for the polarizable continuum model within the domain decomposition paradigm. <i>Journal of Chemical Physics</i> , 2016, 144, 054101.	1.2	19
25	Guaranteed and robust a posteriori bounds for Laplace eigenvalues and eigenvectors: a unified framework. <i>Numerische Mathematik</i> , 2018, 140, 1033-1079.	0.9	19
26	The effect of like-charge attraction on aerosol growth in the atmosphere of Titan. <i>Icarus</i> , 2017, 291, 245-253.	1.1	18
27	Low Order Discontinuous Galerkin Methods for Second Order Elliptic Problems. <i>SIAM Journal on Numerical Analysis</i> , 2009, 47, 508-533.	1.1	17
28	How to make continuum solvation incredibly fast in a few simple steps: A practical guide to the domain decomposition paradigm for the conductorâ€like screening model. <i>International Journal of Quantum Chemistry</i> , 2019, 119, e25669.	1.0	17
29	Minimal Stabilization for Discontinuous Galerkin Finite Element Methods for Hyperbolic Problems. <i>Journal of Scientific Computing</i> , 2007, 33, 183-208.	1.1	16
30	A perturbation-method-based a posteriori estimator for the planewave discretization of nonlinear SchrÅdinger equations. <i>Comptes Rendus Mathematique</i> , 2014, 352, 941-946.	0.1	16
31	Meshing molecular surfaces based on analytical implicit representation. <i>Journal of Molecular Graphics and Modelling</i> , 2017, 71, 200-210.	1.3	14
32	Gradient flow finite element discretizations with energy-based adaptivity for the Gross-Pitaevskii equation. <i>Journal of Computational Physics</i> , 2021, 436, 110165.	1.9	14
33	A Domain Decomposition Method for the Poisson–Boltzmann Solvation Models. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, B320-B350.	1.3	13
34	A perturbation-method-based post-processing for the planewave discretization of Kohnâ€Sham models. <i>Journal of Computational Physics</i> , 2016, 307, 446-459.	1.9	11
35	Dynamic simulations of many-body electrostatic self-assembly. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2018, 376, 20170143.	1.6	11
36	Quantum Calculations in Solution of Energies, Structures, and Properties with a Domain Decomposition Polarizable Continuum Model. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 6061-6073.	2.3	11

#	ARTICLE	IF	CITATIONS
37	An approximation strategy to compute accurate initial density matrices for repeated self-consistent field calculations at different geometries. <i>Molecular Physics</i> , 2020, 118, e1779834.	0.8	11
38	An embedded corrector problem to approximate the homogenized coefficients of an elliptic equation. <i>Comptes Rendus Mathematique</i> , 2015, 353, 801-806.	0.1	10
39	Guaranteed a posteriori bounds for eigenvalues and eigenvectors: Multiplicities and clusters. <i>Mathematics of Computation</i> , 2020, 89, 2563-2611.	1.1	10
40	Grassmann Extrapolation of Density Matrices for Born- ϵ -Oppenheimer Molecular Dynamics. <i>Journal of Chemical Theory and Computation</i> , 2021, 17, 6965-6973.	2.3	10
41	Computation of forces arising from the polarizable continuum model within the domain-decomposition paradigm. <i>Journal of Chemical Physics</i> , 2017, 147, 224108.	1.2	9
42	A coherent derivation of the Ewald summation for arbitrary orders of multipoles: The self-terms. <i>Journal of Chemical Physics</i> , 2018, 149, 124103.	1.2	9
43	Theoretical analysis of screened many-body electrostatic interactions between charged polarizable particles. <i>Journal of Chemical Physics</i> , 2019, 150, 044901.	1.2	9
44	The symmetric discontinuous Galerkin method does not need stabilization in 1D for polynomial orders. <i>Comptes Rendus Mathematique</i> , 2007, 345, 599-602.	0.1	8
45	BUBBLE STABILIZED DISCONTINUOUS GALERKIN METHOD FOR STOKES' PROBLEM. <i>Mathematical Models and Methods in Applied Sciences</i> , 2010, 20, 297-313.	1.7	8
46	A domain decomposition method for the polarizable continuum model based on the solvent excluded surface. <i>Mathematical Models and Methods in Applied Sciences</i> , 2018, 28, 1233-1266.	1.7	8
47	Data-driven classification of elementary rearrangement events in silica glass. <i>Scripta Materialia</i> , 2021, 205, 114179.	2.6	8
48	Symmetric and non-symmetric discontinuous Galerkin methods stabilized using bubble enrichment. <i>Comptes Rendus Mathematique</i> , 2008, 346, 103-106.	0.1	7
49	Bubble stabilized discontinuous Galerkin method for parabolic and elliptic problems. <i>Numerische Mathematik</i> , 2010, 116, 213-241.	0.9	7
50	An integral equation formulation of the N -body dielectric spheres problem. Part I: numerical analysis. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2021, 55, S65-S102.	0.8	7
51	On the Scalability of the Schwarz Method. <i>SMAI Journal of Computational Mathematics</i> , 0, 6, 33-68.	0.0	7
52	A posteriori error estimates for discontinuous Galerkin methods using non-polynomial basis functions Part I: Second order linear PDE. <i>ESAIM: Mathematical Modelling and Numerical Analysis</i> , 2016, 50, 1193-1222.	0.8	6
53	Subdiffusive-Brownian crossover in membrane proteins: a Generalized Langevin Equation-based approach. <i>Biophysical Journal</i> , 2021, 120, 4722-4737.	0.2	6
54	An embedded corrector problem for homogenization. Part II: Algorithms and discretization. <i>Journal of Computational Physics</i> , 2020, 407, 109254.	1.9	5

#	ARTICLE	IF	CITATIONS
55	Comparison of Some Reduced Representation Approximations. , 2014, , 67-100.		5
56	Surrogate models for quantum spin systems based on reduced-order modeling. Physical Review E, 2022, 105, 045303.	0.8	5
57	<i>A posteriori</i> error estimates for discontinuous Galerkin methods using non-polynomial basis functions. Part II: Eigenvalue problems. ESAIM: Mathematical Modelling and Numerical Analysis, 2017, 51, 1733-1753.	0.8	4
58	The influence of surface charge on the coalescence of ice and dust particles in the mesosphere and lower thermosphere. Atmospheric Chemistry and Physics, 2021, 21, 8735-8745.	1.9	4
59	A discontinuous Galerkin method for shock capturing using a mixed high-order and sub-grid low-order approximation space. Journal of Computational Physics, 2022, 449, 110765.	1.9	4
60	An Embedded Corrector Problem for Homogenization. Part I: Theory. Multiscale Modeling and Simulation, 2020, 18, 1179-1209.	0.6	3
61	Post-processing of the planewave approximation of Schrödinger equations. Part I: linear operators. IMA Journal of Numerical Analysis, 2021, 41, 2423-2455.	1.5	3
62	A boundary-partition-based Voronoi diagram of d-dimensional balls: definition, properties, and applications. Advances in Computational Mathematics, 2020, 46, 1.	0.8	3
63	An integral equation formulation of the <i>N</i> -body dielectric spheres problem. Part II: complexity analysis. ESAIM: Mathematical Modelling and Numerical Analysis, 2021, 55, S625-S651.	0.8	3
64	Bubble stabilized discontinuous Galerkin methods on conforming and non-conforming meshes. Calcolo, 2011, 48, 189-209.	0.6	1
65	<i>A posteriori</i> estimates for the Bubble Stabilized Discontinuous Galerkin Method. Journal of Computational and Applied Mathematics, 2011, 235, 4309-4324.	1.1	1
66	Certified Error Control. SpringerBriefs in Mathematics, 2016, , 45-66.	0.2	1
67	Analysis of the Schwarz Domain Decomposition Method for the Conductor-like Screening Continuum Model. SIAM Journal on Numerical Analysis, 2021, 59, 769-796.	1.1	0
68	The Empirical Interpolation Method. SpringerBriefs in Mathematics, 2016, , 67-85.	0.2	0
69	Multi-center decomposition of molecular densities: a mathematical perspective. Journal of Chemical Physics, 2022, 156, 164107.	1.2	0