Maya G Neytcheva

List of Publications by Year
in descending order

48 papers	782 citations	516561 16 h-index	526166 27 g-index
52 all docs	52 docs citations	52 times ranked	350 citing authors

#	Article	IF	Citations
1	A comparison of iterative methods to solve complex valued linear algebraic systems. Numerical Algorithms, 2014, 66, 811-841.	1.1	106
2	Comparison of preconditioned Krylov subspace iteration methods for PDE-constrained optimization problems. Numerical Algorithms, 2016, 73, 631-663.	1.1	60
3	Algebraic multilevel iteration method for Stieltjes matrices. Numerical Linear Algebra With Applications, 1994, 1, 213-236.	0.9	57
4	Eigenvalue estimates for preconditioned saddle point matrices. Numerical Linear Algebra With Applications, 2006, 13, 339-360.	0.9	57
5	Preconditioning methods for linear systems arising in constrained optimization problems. Numerical Linear Algebra With Applications, 2003, 10, 3-31.	0.9	54
6	Preconditioning of Boundary Value Problems Using Elementwise Schur Complements. SIAM Journal on Matrix Analysis and Applications, 2009, 31, 767-789.	0.7	41
7	Efficient Preconditioners for Large Scale Binary Cahn-Hilliard Models. Computational Methods in Applied Mathematics, 2012, 12, 1-22.	0.4	34
8	Numerical and computational efficiency of solvers for two-phase problems. Computers and Mathematics With Applications, 2013, 65, 301-314.	1.4	28
9	Efficient numerical solution of discrete multi-component Cahnâ€"Hilliard systems. Computers and Mathematics With Applications, 2014, 67, 106-121.	1.4	26
10	A robust structured preconditioner for time-harmonic parabolic optimal control problems. Numerical Algorithms, 2018, 79, 575-596.	1.1	26
11	Comparison of preconditioned Krylov subspace iteration methods for PDE-constrained optimization problems. Numerical Algorithms, 2017, 74, 19-37.	1.1	25
12	Uniform estimate of the constant in the strengthened CBS inequality for anisotropic non-conforming FEM systems. Numerical Linear Algebra With Applications, 2004, 11, 309-326.	0.9	24
13	A preconditioner for optimal control problems, constrained by Stokes equation with a time-harmonic control. Journal of Computational and Applied Mathematics, 2017, 310, 5-18.	1.1	23
14	Spectral analysis of coupled PDEs and of their Schur complements via Generalized Locally Toeplitz sequences in 2D. Computer Methods in Applied Mechanics and Engineering, 2016, 309, 74-105.	3.4	22
15	On element-by-element Schur complement approximations. Linear Algebra and Its Applications, 2011, 434, 2308-2324.	0.4	19
16	On an augmented Lagrangian-based preconditioning of Oseen type problems. BIT Numerical Mathematics, 2011, 51, 865-888.	1.0	18
17	On Preconditioning of Incompressible Non-Newtonian Flow Problems. Journal of Computational Mathematics, 2015, 33, 33-58.	0.2	18
18	A general approach to analyse preconditioners for twoâ€"byâ€"two block matrices. Numerical Linear Algebra With Applications, 2013, 20, 723-742.	0.9	16

#	Article	IF	Citations
19	NUMERICAL SOLUTION OF THE TIME-DEPENDENT NAVIER–STOKES EQUATION FOR VARIABLE DENSITY–VARIABLE VISCOSITY. PART I. Mathematical Modelling and Analysis, 2015, 20, 232-260.	0.7	13
20	Schwarz methods for discrete elliptic and parabolic problems with an application to nuclear waste repository modelling. Mathematics and Computers in Simulation, 2007, 76, 18-27.	2.4	11
21	Scalable algorithms for the solution of Navier's equations of elasticity. Journal of Computational and Applied Mathematics, 1995, 63, 149-178.	1.1	10
22	An efficient preconditioning method for state box-constrained optimal control problems. Journal of Numerical Mathematics, 2018, 26, 185-207.	1.8	9
23	PARALLEL SOLUTION METHODS AND PRECONDITIONERS FOR EVOLUTION EQUATIONS. Mathematical Modelling and Analysis, 2018, 23, 287-308.	0.7	9
24	Element-by-Element Schur Complement Approximations for General Nonsymmetric Matrices of Two-by-Two Block Form. Lecture Notes in Computer Science, 2010, , 108-115.	1.0	8
25	Function-based block multigrid strategy for a two-dimensional linear elasticity-type problem. Computers and Mathematics With Applications, 2017, 74, 1015-1028.	1.4	7
26	Experience in implementing the Algebraic Multilevel Iteration method on a SIMD-type computer. Applied Numerical Mathematics, 1995, 19, 71-90.	1.2	5
27	Numerical and computational aspects of some block-preconditioners for saddle point systems. Parallel Computing, 2015, 49, 164-178.	1.3	5
28	Numerical simulations of glacial rebound using preconditioned iterative solution methods. Applications of Mathematics, 2005, 50, 183-201.	0.9	4
29	Preconditioning the Incompressible Navier-Stokes Equations with Variable Viscosity. Journal of Computational Mathematics, 2012, 30, 461-482.	0.2	4
30	Parallel Implementation of the Sherman-Morrison Matrix Inverse Algorithm. Lecture Notes in Computer Science, 2013, , 206-219.	1.0	4
31	Preconditioning of Indefinite and Almost Singular Finite Element Elliptic Equations. SIAM Journal of Scientific Computing, 1998, 19, 1471-1485.	1.3	3
32	Algebraic preconditioning versus direct solvers for dense linear systems as arising in crack propagation problems. Communications in Numerical Methods in Engineering, 2004, 21, 73-81.	1.3	3
33	New Algorithms for Evaluating the Log-Likelihood Function Derivatives in the AI-REML Method. Communications in Statistics Part B: Simulation and Computation, 2009, 38, 1348-1364.	0.6	3
34	Finite-element based sparse approximate inverses for block-factorized preconditioners. Advances in Computational Mathematics, 2011, 35, 323-355.	0.8	3
35	Aggregation-Based Multilevel Preconditioning of Non-conforming FEM Elasticity Problems. Lecture Notes in Computer Science, 2006, , 847-856.	1.0	3
36	CPU and GPU Performance of Large Scale Numerical Simulations in Geophysics. Lecture Notes in Computer Science, 2014, , 12-23.	1.0	3

#	Article	IF	Citations
37	AN ITERATIVE SOLUTION METHOD FOR SCHUR COMPLEMENT SYSTEMS WITH INEXACT INNER SOLVER. , 1999, , .		3
38	Preconditioning Methods for Linear Systems with Saddle Point Matrices. Lecture Notes in Computer Science, 2002, , 784-793.	1.0	2
39	An Agglomerate Multilevel Preconditioner for Linear Isostasy Saddle Point Problems. Lecture Notes in Computer Science, 2006, , 113-120.	1.0	2
40	Robust AMLI methods for parabolic Crouzeixâ€"Raviart FEM systems. Journal of Computational and Applied Mathematics, 2010, 235, 380-390.	1.1	1
41	Preconditioning of iterative methods â€•theory and applications. Numerical Linear Algebra With Applications, 2015, 22, 901-902.	0.9	1
42	Cellâ€byâ€cell approximate Schur complement technique in preconditioning of meshfree discretized piezoelectric equations. Numerical Linear Algebra With Applications, 2021, 28, e2362.	0.9	1
43	Robust Preconditioners for Saddle Point Problems. Lecture Notes in Computer Science, 2003, , 158-166.	1.0	1
44	Multidimensional Performance and Scalability Analysis for Diverse Applications Based on System Monitoring Data. Lecture Notes in Computer Science, 2018, , 417-431.	1.0	1
45	Schur Complement Matrix and Its (Elementwise) Approximation: A Spectral Analysis Based on GLT Sequences. Lecture Notes in Computer Science, 2015, , 419-426.	1.0	1
46	PDE-Constrained Optimization: Optimal control with L 1-Regularization, State and Control Box Constraints. Lecture Notes in Computational Science and Engineering, 2021, , 323-331.	0.1	1
47	Editorial: Novel methods and theories in numerical algebra with interdisciplinary applications. Numerical Linear Algebra With Applications, 2018, 25, e2181.	0.9	0
48	On a Schur Complement Approach for Solving Two-Level Finite Element Systems. Lecture Notes in Computer Science, 2001, , 113-121.	1.0	0