

# Zhong-Zhi Bai

## List of Publications by Year in descending order

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130  
papers

8,420  
citations

53794

45  
h-index

48315

88  
g-index

135  
all docs

135  
docs citations

135  
times ranked

666  
citing authors

#	ARTICLE	IF	CITATIONS
1	Hermitian and Skew-Hermitian Splitting Methods for Non-Hermitian Positive Definite Linear Systems. SIAM Journal on Matrix Analysis and Applications, 2003, 24, 603-626.	1.4	832
2	Preconditioned Hermitian and skew-Hermitian splitting methods for non-Hermitian positive semidefinite linear systems. Numerische Mathematik, 2004, 98, 1-32.	1.9	435
3	Accelerated Hermitian and skew-Hermitian splitting iteration methods for saddle-point problems. IMA Journal of Numerical Analysis, 2007, 27, 1-23.	2.9	335
4	On generalized successive overrelaxation methods for augmented linear systems. Numerische Mathematik, 2005, 102, 1-38.	1.9	326
5	Modulus-based matrix splitting iteration methods for linear complementarity problems. Numerical Linear Algebra With Applications, 2010, 17, 917-933.	1.6	274
6	Block Triangular and Skew-Hermitian Splitting Methods for Positive-Definite Linear Systems. SIAM Journal of Scientific Computing, 2005, 26, 844-863.	2.8	271
7	Modified HSS iteration methods for a class of complex symmetric linear systems. Computing (Vienna/New York), 2010, 87, 93-111.	4.8	265
8	On parameterized inexact Uzawa methods for generalized saddle point problems. Linear Algebra and Its Applications, 2008, 428, 2900-2932.	0.9	245
9	Structured preconditioners for nonsingular matrices of block two-by-two structures. Mathematics of Computation, 2005, 75, 791-816.	2.1	225
10	On preconditioned MHSS iteration methods for complex symmetric linear systems. Numerical Algorithms, 2011, 56, 297-317.	1.9	203
11	Optimal parameters in the HSS-like methods for saddle-point problems. Numerical Linear Algebra With Applications, 2009, 16, 447-479.	1.6	193
12	Preconditioned MHSS iteration methods for a class of block two-by-two linear systems with applications to distributed control problems. IMA Journal of Numerical Analysis, 2013, 33, 343-369.	2.9	173
13	On the Convergence of the Multisplitting Methods for the Linear Complementarity Problem. SIAM Journal on Matrix Analysis and Applications, 1999, 21, 67-78.	1.4	170
14	Convergence properties of preconditioned Hermitian and skew-Hermitian splitting methods for non-Hermitian positive semidefinite matrices. Mathematics of Computation, 2007, 76, 287-299.	2.1	162
15	On inexact hermitian and skew-Hermitian splitting methods for non-Hermitian positive definite linear systems. Linear Algebra and Its Applications, 2008, 428, 413-440.	0.9	158
16	On successive-overrelaxation acceleration of the Hermitian and skew-Hermitian splitting iterations. Numerical Linear Algebra With Applications, 2007, 14, 319-335.	1.6	149
17	Optimal Parameter in Hermitian and Skew-Hermitian Splitting Method for Certain Two-by-Two Block Matrices. SIAM Journal of Scientific Computing, 2006, 28, 583-603.	2.8	147
18	Constraint Preconditioners for Symmetric Indefinite Matrices. SIAM Journal on Matrix Analysis and Applications, 2009, 31, 410-433.	1.4	140

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19	New preconditioners for saddle point problems. Applied Mathematics and Computation, 2006, 172, 762-771.	2.2	130
20	Modulus-based synchronous multisplitting iteration methods for linear complementarity problems. Numerical Linear Algebra With Applications, 2013, 20, 425-439.	1.6	123
21	Modulus-based synchronous two-stage multisplitting iteration methods for linear complementarity problems. Numerical Algorithms, 2013, 62, 59-77.	1.9	116
22	On Greedy Randomized Kaczmarz Method for Solving Large Sparse Linear Systems. SIAM Journal of Scientific Computing, 2018, 40, A592-A606.	2.8	114
23	On semi-convergence of parameterized Uzawa methods for singular saddle point problems. Linear Algebra and Its Applications, 2009, 431, 808-817.	0.9	110
24	On semi-convergence of Hermitian and skew-Hermitian splitting methods for singular linear systems. Computing (Vienna/New York), 2010, 89, 171-197.	4.8	108
25	Matrix multisplitting relaxation methods for linear complementarity problems. International Journal of Computer Mathematics, 1997, 63, 309-326.	1.8	106
26	Motivations and realizations of Krylov subspace methods for large sparse linear systems. Journal of Computational and Applied Mathematics, 2015, 283, 71-78.	2.0	102
27	A unified framework for the construction of various matrix multisplitting iterative methods for large sparse system of linear equations. Computers and Mathematics With Applications, 1996, 32, 51-76.	2.7	101
28	On Inexact Preconditioners for Nonsymmetric Matrices. SIAM Journal of Scientific Computing, 2005, 26, 1710-1724.	2.8	97
29	Matrix Multisplitting Methods with Applications to Linear Complementarity Problems and Parallel Asynchronous Methods. International Journal of Computer Mathematics, 2002, 79, 205-232.	1.8	85
30	Block preconditioners for elliptic PDE-constrained optimization problems. Computing (Vienna/New) 77, 101-110.	4.8	77
31	Iterative orthogonal direction methods for Hermitian minimum norm solutions of two consistent matrix equations. Numerical Linear Algebra With Applications, 2006, 13, 801-823.	1.6	75
32	On preconditioned iteration methods for complex linear systems. Journal of Engineering Mathematics, 2015, 93, 41-60.	1.2	75
33	Restrictive preconditioners for conjugate gradient methods for symmetric positive definite linear systems. Journal of Computational and Applied Mathematics, 2006, 187, 202-226.	2.0	73
34	A Class of Nested Iteration Schemes for Linear Systems with a Coefficient Matrix with a Dominant Positive Definite Symmetric Part. Numerical Algorithms, 2004, 35, 351-372.	1.9	71
35	A globally convergent Newton-GMRES method for large sparse systems of nonlinear equations. Applied Numerical Mathematics, 2007, 57, 235-252.	2.1	69
36	On HSS-based iteration methods for weakly nonlinear systems. Applied Numerical Mathematics, 2009, 59, 2923-2936.	2.1	69

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37	On relaxed greedy randomized Kaczmarz methods for solving large sparse linear systems. Applied Mathematics Letters, 2018, 83, 21-26.	2.7	68
38	Sharp error bounds of some Krylov subspace methods for non-Hermitian linear systems. Applied Mathematics and Computation, 2000, 109, 273-285.	2.2	65
39	Alternately linearized implicit iteration methods for the minimal nonnegative solutions of the nonsymmetric algebraic Riccati equations. Numerical Linear Algebra With Applications, 2006, 13, 655-674.	1.6	65
40	Rotated block triangular preconditioning based on PMHSS. Science China Mathematics, 2013, 56, 2523-2538.	1.7	59
41	The convergence of parallel iteration algorithms for linear complementarity problems. Computers and Mathematics With Applications, 1996, 32, 1-17.	2.7	55
42	Additive block diagonal preconditioning for block two-by-two linear systems of skew-Hamiltonian coefficient matrices. Numerical Algorithms, 2013, 62, 655-675.	1.9	54
43	Block alternating splitting implicit iteration methods for saddle-point problems from time-harmonic eddy current models. Numerical Linear Algebra With Applications, 2012, 19, 914-936.	1.6	53
44	Eigenvalue estimates for saddle point matrices of Hermitian and indefinite leading blocks. Journal of Computational and Applied Mathematics, 2013, 237, 295-306.	2.0	53
45	Sufficient conditions for the convergent splittings of non-Hermitian positive definite matrices. Linear Algebra and Its Applications, 2001, 330, 215-218.	0.9	49
46	Several splittings for non-Hermitian linear systems. Science in China Series A: Mathematics, 2008, 51, 1339-1348.	0.5	47
47	On the convergence of additive and multiplicative splitting iterations for systems of linear equations. Journal of Computational and Applied Mathematics, 2003, 154, 195-214.	2.0	46
48	Preconditioners for nonsymmetric block toeplitz-like-plus-diagonal linear systems. Numerische Mathematik, 2003, 96, 197-220.	1.9	45
49	Splitting iteration methods for non-Hermitian positive definite systems of linear equations. Hokkaido Mathematical Journal, 2007, 36, 801.	0.3	44
50	Regularized HSS iteration methods for saddle-point linear systems. BIT Numerical Mathematics, 2017, 57, 287-311.	2.0	44
51	A Class of Incomplete Orthogonal Factorization Methods. I: Methods and Theories. BIT Numerical Mathematics, 2001, 41, 53-70.	2.0	43
52	Diagonal and Toeplitz splitting iteration methods for diagonal-plus-Toeplitz linear systems from spatial fractional diffusion equations. Numerical Linear Algebra With Applications, 2017, 24, e2093.	1.6	43
53	On greedy randomized coordinate descent methods for solving large linear least-squares problems. Numerical Linear Algebra With Applications, 2019, 26, e2237.	1.6	43
54	On partially randomized extended Kaczmarz method for solving large sparse overdetermined inconsistent linear systems. Linear Algebra and Its Applications, 2019, 578, 225-250.	0.9	42

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55	Skew-Hermitian Triangular Splitting Iteration Methods for Non-Hermitian Positive Definite Linear Systems of Strong Skew-Hermitian Parts. BIT Numerical Mathematics, 2004, 44, 363-386.	2.0	40
56	On convergence rate of the randomized Kaczmarz method. Linear Algebra and Its Applications, 2018, 553, 252-269.	0.9	39
57	Modified Block SSOR Preconditioners for Symmetric Positive Definite Linear Systems. Annals of Operations Research, 2001, 103, 263-282.	4.1	37
58	Fast Iterative Schemes for Nonsymmetric Algebraic Riccati Equations Arising from Transport Theory. SIAM Journal of Scientific Computing, 2008, 30, 804-818.	2.8	34
59	Optimization of extrapolated Cayley transform with non-Hermitian positive definite matrix. Linear Algebra and Its Applications, 2014, 463, 322-339.	0.9	32
60	Block and asynchronous two-stage methods for mildly nonlinear systems. Numerische Mathematik, 1999, 82, 1-20.	1.9	31
61	On SSOR-like preconditioners for non-Hermitian positive definite matrices. Numerical Linear Algebra With Applications, 2016, 23, 37-60.	1.6	30
62	Product-type skew-Hermitian triangular splitting iteration methods for strongly non-Hermitian positive definite linear systems. Journal of Computational and Applied Mathematics, 2009, 232, 3-16.	2.0	29
63	On the Meany inequality with applications to convergence analysis of several row-action iteration methods. Numerische Mathematik, 2013, 124, 215-236.	1.9	29
64	Title is missing!. Numerical Algorithms, 1997, 15, 347-372.	1.9	28
65	Modulus-based iterative methods for constrained Tikhonov regularization. Journal of Computational and Applied Mathematics, 2017, 319, 1-13.	2.0	28
66	On inexact Newton methods based on doubling iteration scheme for non-symmetric algebraic Riccati equations. Numerical Linear Algebra With Applications, 2011, 18, 325-341.	1.6	25
67	Chaotic iterative methods for the linear complementarity problems. Journal of Computational and Applied Mathematics, 1998, 96, 127-138.	2.0	24
68	Convergence conditions for splitting iteration methods for non-Hermitian linear systems. Linear Algebra and Its Applications, 2008, 428, 453-468.	0.9	24
69	On Preconditioned Iterative Methods for Certain Time-Dependent Partial Differential Equations. SIAM Journal on Numerical Analysis, 2009, 47, 1019-1037.	2.3	23
70	On the Numerical Behavior of Matrix Splitting Iteration Methods for Solving Linear Systems. SIAM Journal on Numerical Analysis, 2015, 53, 1716-1737.	2.3	23
71	The monotone convergence of the two-stage iterative method for solving large sparse systems of linear equations. Applied Mathematics Letters, 1997, 10, 113-117.	2.7	22
72	The convergence of the two-stage iterative method for Hermitian positive definite linear systems. Applied Mathematics Letters, 1998, 11, 1-5.	2.7	21

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73	On the convergence of nonstationary multisplitting two-stage iteration methods for hermitian positive definite linear systems. <i>Journal of Computational and Applied Mathematics</i> , 2002, 138, 287-296.	2.0	19
74	Weak-convergence theory of quasi-nonnegative splittings for singular matrices. <i>Applied Numerical Mathematics</i> , 2003, 47, 75-89.	2.1	19
75	A modified damped Newton method for linear complementarity problems. <i>Numerical Algorithms</i> , 2006, 42, 207-228.	1.9	18
76	On nonsingularity of block two-by-two matrices. <i>Linear Algebra and Its Applications</i> , 2013, 439, 2388-2404.	0.9	18
77	On local quadratic convergence of inexact simplified Jacobi–Davidson method. <i>Linear Algebra and Its Applications</i> , 2017, 520, 215-241.	0.9	18
78	Modulus-based multigrid methods for linear complementarity problems. <i>Numerical Linear Algebra With Applications</i> , 2017, 24, e2105.	1.6	18
79	Fast matrix splitting preconditioners for higher dimensional spatial fractional diffusion equations. <i>Journal of Computational Physics</i> , 2020, 404, 109117.	3.8	17
80	A class of parallel nonlinear multisplitting relaxation methods for the large sparse nonlinear complementarity problems. <i>Computers and Mathematics With Applications</i> , 1996, 32, 79-95.	2.7	16
81	Numerical study on incomplete orthogonal factorization preconditioners. <i>Journal of Computational and Applied Mathematics</i> , 2009, 226, 22-41.	2.0	16
82	On sinc discretization and banded preconditioning for linear third-order ordinary differential equations. <i>Numerical Linear Algebra With Applications</i> , 2011, 18, 471-497.	1.6	16
83	On local quadratic convergence of inexact simplified Jacobi–Davidson method for interior eigenpairs of Hermitian eigenproblems. <i>Applied Mathematics Letters</i> , 2017, 72, 23-28.	2.7	16
84	On banded M-splitting iteration methods for solving discretized spatial fractional diffusion equations. <i>BIT Numerical Mathematics</i> , 2019, 59, 1-33.	2.0	16
85	Construction and analysis of structured preconditioners for block two-by-two matrices. <i>Journal of Shanghai University</i> , 2004, 8, 397-405.	0.1	15
86	Two-step waveform relaxation methods for implicit linear initial value problems. <i>Numerical Linear Algebra With Applications</i> , 2005, 12, 293-304.	1.6	15
87	Convergence analysis of two-stage waveform relaxation method for the initial value problems. <i>Applied Mathematics and Computation</i> , 2006, 172, 797-808.	2.2	15
88	On the convergence of parallel chaotic nonlinear multisplitting Newton-type methods. <i>Journal of Computational and Applied Mathematics</i> , 1997, 80, 317-334.	2.0	14
89	On spectral clustering of HSS preconditioner for generalized saddle-point matrices. <i>Linear Algebra and Its Applications</i> , 2018, 555, 285-300.	0.9	14
90	On Greedy Randomized Augmented Kaczmarz Method for Solving Large Sparse Inconsistent Linear Systems. <i>SIAM Journal of Scientific Computing</i> , 2021, 43, A3892-A3911.	2.8	14

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91	A hybrid preconditioner of banded matrix approximation and alternating direction implicit iteration for symmetric Sinc-Galerkin linear systems. <i>Linear Algebra and Its Applications</i> , 2003, 366, 317-335.	0.9	13
92	On order-reducible sinc discretizations and block-diagonal preconditioning methods for linear third-order ordinary differential equations. <i>Numerical Linear Algebra With Applications</i> , 2014, 21, 108-135.	1.6	13
93	Regularized HSS iteration methods for stabilized saddle-point problems. <i>IMA Journal of Numerical Analysis</i> , 2019, 39, 1888-1923.	2.9	13
94	Blockwise matrix multi-splitting multi-parameter block relaxation methods*. <i>International Journal of Computer Mathematics</i> , 1997, 64, 103-118.	1.8	12
95	A class of asynchronous parallel nonlinear accelerated overrelaxation methods for the nonlinear complementarity problems. <i>Journal of Computational and Applied Mathematics</i> , 1998, 93, 35-44.	2.0	12
96	On the convergence of parallel nonstationary multisplitting iteration methods. <i>Journal of Computational and Applied Mathematics</i> , 2003, 159, 1-11.	2.0	12
97	Modified incomplete orthogonal factorization methods using Givens rotations. <i>Computing (Vienna/New York)</i> , 2009, 86, 53-69.	4.8	12
98	On convergence conditions of waveform relaxation methods for linear differential-algebraic equations. <i>Journal of Computational and Applied Mathematics</i> , 2011, 235, 2790-2804.	2.0	12
99	Convergence analysis of the two-stage multisplitting method. <i>Calcolo</i> , 1999, 36, 63-74.	1.1	11
100	Convergence theorems for parallel multisplitting two-stage iterative methods for mildly nonlinear systems. <i>Linear Algebra and Its Applications</i> , 2003, 362, 237-250.	0.9	11
101	Respectively scaled HSS iteration methods for solving discretized spatial fractional diffusion equations. <i>Numerical Linear Algebra With Applications</i> , 2018, 25, e2157.	1.6	11
102	Quasi-HSS iteration methods for non-Hermitian positive definite linear systems of strong skew-Hermitian parts. <i>Numerical Linear Algebra With Applications</i> , 2018, 25, e2116.	1.6	11
103	On convergence rate of the randomized Gauss-Seidel method. <i>Linear Algebra and Its Applications</i> , 2021, 611, 237-252.	0.9	11
104	Optimal rotated block-diagonal preconditioning for discretized optimal control problems constrained with fractional time-dependent diffusive equations. <i>Applied Numerical Mathematics</i> , 2021, 163, 126-146.	2.1	11
105	Alternating splitting waveform relaxation method and its successive overrelaxation acceleration. <i>Computers and Mathematics With Applications</i> , 2005, 49, 157-170.	2.7	10
106	Block-triangular preconditioning methods for linear third-order ordinary differential equations based on reduced-order sinc discretizations. <i>Japan Journal of Industrial and Applied Mathematics</i> , 2013, 30, 511-527.	0.9	9
107	Asynchronous parallel nonlinear multisplitting relaxation methods for large sparse nonlinear complementarity problems. <i>Applied Mathematics and Computation</i> , 1998, 92, 85-100.	2.2	8
108	Asynchronous multisplitting two-stage iterations for systems of weakly nonlinear equations. <i>Journal of Computational and Applied Mathematics</i> , 1998, 93, 13-33.	2.0	8

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109	Asynchronous multisplitting relaxation methods for linear complementarity problems. International Journal of Computer Mathematics, 1999, 70, 519-538.	1.8	8
110	Rigorous convergence analysis of alternating variable minimization with multiplier methods for quadratic programming problems with equality constraints. BIT Numerical Mathematics, 2016, 56, 399-422.	2.0	8
111	On multistep Rayleigh quotient iterations for Hermitian eigenvalue problems. Computers and Mathematics With Applications, 2019, 77, 2396-2406.	2.7	8
112	A class of asynchronous parallel multisplitting blockwise relaxation methods. Parallel Computing, 1999, 25, 681-701.	2.1	7
113	The power method and beyond. Applied Numerical Mathematics, 2021, 164, 29-42.	2.1	7
114	A CLASS OF MULTI-PARAMETER RELAXED PARALLEL MULTISPLITTING METHODS FOR LARGE SPARSE LINEAR COMPLEMENTARITY PROBLEMS. International Journal of Parallel, Emergent and Distributed Systems, 1997, 11, 113-127.	0.4	6
115	Computing eigenpairs of Hermitian matrices in perfect Krylov subspaces. Numerical Algorithms, 2019, 82, 1251-1277.	1.9	5
116	On the comparisons of the multisplitting unsymmetric aor methods for M-matrices. Calcolo, 1995, 32, 207-220.	1.1	4
117	Some properties of the block matrices in the parallel decomposition-type relaxation methods. Applied Numerical Mathematics, 1999, 29, 167-170.	2.1	4
118	On preconditioned and relaxed AVMM methods for quadratic programming problems with equality constraints. Linear Algebra and Its Applications, 2017, 516, 264-285.	0.9	4
119	A class of parallel hybrid two-stage iteration methods for block bordered linear systems. Applied Mathematics and Computation, 1999, 101, 245-267.	2.2	3
120	On approximated ILU and UGS preconditioning methods for linearized discretized steady incompressible Navier-Stokes equations. Numerical Algorithms, 2014, 65, 43-68.	1.9	3
121	On regularized Hermitian splitting iteration methods for solving discretized almost isotropic spatial fractional diffusion equations. Numerical Linear Algebra With Applications, 2020, 27, e2274.	1.6	3
122	A class of asynchronous multisplitting two-stage iterations for large sparse block systems of weakly nonlinear equations. Journal of Computational and Applied Mathematics, 1999, 110, 271-286.	2.0	2
123	Continuous-time accelerated block successive overrelaxation methods for time-dependent Stokes equations. Journal of Computational and Applied Mathematics, 2012, 236, 3265-3285.	2.0	1
124	Focused Section on Matrix Computations. Communications on Applied Mathematics and Computation, 2021, 3, 107-107.	1.7	1
125	Innovative methods and theories in numerical algebra. Numerical Linear Algebra With Applications, 2012, 19, 893-895.	1.6	0
126	Preface to the special issue on "Practical methods and rigorous theories in numerical algebra and scientific computing". Journal of Engineering Mathematics, 2015, 93, 1-2.	1.2	0



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127	Editorial Preface: "Advances in numerical algebra and scientific computing", BIT Numerical Mathematics, 2016, 56, 395-397.	2.0	0
128	Editorial Preface: "Preconditioning and Iterative Methods for Algebraic Systems and Complementarity Problems", East Asian Journal on Applied Mathematics, 2017, 7, i-ii.	0.9	0
129	Editorial: Novel methods and theories in numerical algebra with interdisciplinary applications. Numerical Linear Algebra With Applications, 2018, 25, e2181.	1.6	0
130	On refinement of the generalized Bendixson theorem. Applied Numerical Mathematics, 2021, 164, 125-138.	2.1	0