Ren-Cang Li

List of Publications by Citations

79 papers	992 citations	16 h-index	27 g-index
80 ext. papers	1,119 ext. citations	1.9 avg, IF	4.81 L-index

#	Paper	IF	Citations
79	On the ADI method for Sylvester equations. *Journal of Computational and Applied Mathematics*, **2009**, 233, 1035-1045	2.4	94
78	Relative Perturbation Theory: II. Eigenspace and Singular Subspace Variations. *SIAM Journal on Matrix Analysis and Applications*, **1998**, 20, 471-492	1.5	81
77	Relative Perturbation Theory: I. Eigenvalue and Singular Value Variations. *SIAM Journal on Matrix Analysis and Applications*, **1998**, 19, 956-982	1.5	71
76	New Perturbation Bounds for the Unitary Polar Factor. *SIAM Journal on Matrix Analysis and Applications*, **1995**, 16, 327-332	1.5	41
75	Minimization Principles for the Linear Response Eigenvalue Problem I: Theory. *SIAM Journal on Matrix Analysis and Applications*, **2012**, 33, 1075-1100	1.5	37
74	A note on eigenvalues of perturbed Hermitian matrices. *Linear Algebra and Its Applications*, **2005**, 395, 183-190	0.9	37
73	Alternating-directional Doubling Algorithm for M-Matrix Algebraic Riccati Equations. *SIAM Journal on Matrix Analysis and Applications*, **2012**, 33, 170-194	1.5	34
72	Minimization Principles for the Linear Response Eigenvalue Problem II: Computation. *SIAM Journal on Matrix Analysis and Applications*, **2013**, 34, 392-416	1.5	34
71	Structure-Preserving Model Reduction Using a Krylov Subspace Projection Formulation. *Communications in Mathematical Sciences*, **2005**, 3, 179-199	1	28
70	Accurate solutions of M-matrix algebraic Riccati equations. *Numerische Mathematik*, **2012**, 120, 671-700	2.2	26
69	Convergence of the block Lanczos method for eigenvalue clusters. *Numerische Mathematik*, **2015**, 131, 83-113	2.2	23
68	Bounding the spectrum of large Hermitian matrices. *Linear Algebra and Its Applications*, **2011**, 435, 480-493	1.9	23
67	On an Eigenvector-Dependent Nonlinear Eigenvalue Problem. *SIAM Journal on Matrix Analysis and Applications*, **2018**, 39, 1360-1382	1.5	23
66	Solving Secular Equations Stably and Efficiently **1993**,		19
65	On perturbations of matrix pencils with real spectra, {a revisit}. *Mathematics of Computation*, **2002**, 72, 715-729	1.6	18
64	Norms of certain matrices with applications to variations of the spectra of matrices and matrix pencils. *Linear Algebra and Its Applications*, **1993**, 182, 199-234	0.9	18
63	Perturbation of Partitioned Hermitian Definite Generalized Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2011**, 32, 642-663	1.5	15

62	A sharp version of Kahan's theorem on clustered eigenvalues. *Linear Algebra and Its Applications*, **1996**, 245, 147-155	0.9	15
61	Convergence analysis of Lanczos-type methods for the linear response eigenvalue problem. *Journal of Computational and Applied Mathematics*, **2013**, 247, 17-33	2.4	14
60	Accurate solutions of M-matrix Sylvester equations. *Numerische Mathematik*, **2012**, 120, 639-670	2.2	14
59	A block variational procedure for the iterative diagonalization of non-Hermitian random-phase approximation matrices. *Journal of Chemical Physics*, **2012**, 136, 034111	3.9	14
58	Krylov type subspace methods for matrix polynomials. *Linear Algebra and Its Applications*, **2006**, 415, 52-81	0.9	14
57	Trace minimization principles for positive semi-definite pencils. *Linear Algebra and Its Applications*, **2013**, 438, 3085-3106	0.9	13
56	A perturbation bound for definite pencils. *Linear Algebra and Its Applications*, **1993**, 179, 191-202	0.9	13
55	On the Generalized Lanczos Trust-Region Method. *SIAM Journal on Optimization*, **2017**, 27, 2110-2142	2	12
54	Rayleigh Quotient Based Optimization Methods for Eigenvalue Problems. *Series in Contemporary Applied Mathematics*, **2015**, 76-108	0	12
53	On perturbations of matrix pencils with real spectra. II. *Mathematics of Computation*, **1996**, 65, 637-646	1.6	12
52	Minimization principles and computation for the generalized linear response eigenvalue problem. *BIT Numerical Mathematics*, **2014**, 54, 31-54	1.7	11
51	Stable solutions of linear systems involving long chain of matrix multiplications. *Linear Algebra and Its Applications*, **2011**, 435, 659-673	0.9	10
50	On Meinardus' examples for the conjugate gradient method. *Mathematics of Computation*, **2008**, 77, 335-352	1.6	10
49	Structured backward error for palindromic polynomial eigenvalue problems. *Numerische Mathematik*, **2010**, 116, 95-122	2.2	9
48	Accuracy of Computed Eigenvectors Via Optimizing a Rayleigh Quotient. *BIT Numerical Mathematics*, **2004**, 44, 585-593	1.7	9
47	Highly accurate doubling algorithms for M-matrix algebraic Riccati equations. *Numerische Mathematik*, **2017**, 135, 733-767	2.2	8
46	Orthogonal canonical correlation analysis and applications. *Optimization Methods and Software*, **2020**, 35, 787-807	1.3	8
45	A Krylov Subspace Method for Large-Scale Second-Order Cone Linear Complementarity Problem. *SIAM Journal of Scientific Computing*, **2015**, 37, A2046-A2075	2.6	8

44	Sharpness in rates of convergence for the symmetric Lanczos method. *Mathematics of Computation* , **2010**, 79, 419-419	1.6	8
43	Analysis of the solution of the Sylvester equation using low-rank ADI with exact shifts. *Systems and Control Letters*, **2010**, 59, 248-257	2.4	8
42	A block Chebyshev-Davidson method for linear response eigenvalue problems. *Advances in Computational Mathematics*, **2016**, 42, 1103-1128	1.6	7
41	Rayleigh--Ritz Approximation For the Linear Response Eigenvalue Problem. *SIAM Journal on Matrix Analysis and Applications*, **2014**, 35, 765-782	1.5	7
40	Analysis of an alignment algorithm for nonlinear dimensionality reduction. *BIT Numerical Mathematics*, **2007**, 47, 873-885	1.7	7
39	Pinchings and Norms of Scaled Triangular Matrices. *Linear and Multilinear Algebra*, **2002**, 50, 15-21	0.7	7
38	Probabilistic Structure Learning for EEG/MEG Source Imaging With Hierarchical Graph Priors. *IEEE Transactions on Medical Imaging*, **2021**, 40, 321-334	11.7	7
37	Cluster-robust accuracy bounds for Ritz subspaces. *Linear Algebra and Its Applications*, **2015**, 480, 11-26	0.9	6
36	Backward perturbation analysis and residual-based error bounds for the linear response eigenvalue problem. *BIT Numerical Mathematics*, **2015**, 55, 869-896	1.7	6
35	The rate of convergence of GMRES on a tridiagonal Toeplitz linear system. *Numerische Mathematik*, **2009**, 112, 267-293	2.2	6
34	Vandermonde matrices with Chebyshev nodes. *Linear Algebra and Its Applications*, **2008**, 428, 1803-1832	0.9	6
33	Structure-Preserving Doubling Algorithms for Nonlinear Matrix Equations **2018**,		6
32	A symmetric structure-preserving QR algorithm for linear response eigenvalue problems. *Linear Algebra and Its Applications*, **2017**, 520, 191-214	0.9	5
31	A new look at the doubling algorithm for a structured palindromic quadratic eigenvalue problem. *Numerical Linear Algebra With Applications*, **2015**, 22, 393-409	1.6	5
30	Highly accurate doubling algorithm for quadratic matrix equation from quasi-birth-and-death process. *Linear Algebra and Its Applications*, **2019**, 583, 1-45	0.9	5
29	Extensions of Wielandt's min-max principles for positive semi-definite pencils. *Linear and Multilinear Algebra*, **2014**, 62, 1032-1048	0.7	5
28	Convergence of CG and GMRES on a tridiagonal Toeplitz linear system. *BIT Numerical Mathematics*, **2007**, 47, 577-599	1.7	5
27	On the variation of the spectra of matrix pencils. *Linear Algebra and Its Applications*, **1990**, 139, 147-164	0.9	5

26	An Efficient Numerical Method for the Symmetric Positive Definite Second-Order Cone Linear Complementarity Problem. *Journal of Scientific Computing*, **2019**, 79, 1608-1629	2.3	4
25	Locally optimal and heavy ball GMRES methods. *Japan Journal of Industrial and Applied Mathematics* , **2016**, 33, 471-499	0.6	4
24	THE HYPERBOLIC QUADRATIC EIGENVALUE PROBLEM. *Forum of Mathematics, Sigma*, **2015**, 3,	1.4	4
23	The rate of convergence of GMRES on a tridiagonal toeplitz linear system. II. *Linear Algebra and Its Applications*, **2009**, 431, 2425-2436	0.9	4
22	A Self-consistent-field Iteration for Orthogonal CCA. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, **2020**, PP,	13.3	4
21	A new two-phase structure-preserving doubling algorithm for critically singular M-matrix algebraic Riccati equations. *Numerical Linear Algebra With Applications*, **2016**, 23, 291-313	1.6	4
20	Monotonicity of unitarily invariant norms. *Linear Algebra and Its Applications*, **2015**, 466, 254-266	0.9	3
19	A Fast Algorithm For Fast Train Palindromic Quadratic Eigenvalue Problems. *SIAM Journal of Scientific Computing*, **2016**, 38, A3410-A3429	2.6	3
18	Perturbation of multiple eigenvalues of Hermitian matrices. *Linear Algebra and Its Applications*, **2012**, 437, 202-213	0.9	3
17	Simultaneous Similarity Reductions for a Pair of Matrices to Condensed Forms. *Communications in Mathematics and Statistics*, **2014**, 2, 139-153	0.5	3
16	Eigenvalues of symmetrizable matrices. *BIT Numerical Mathematics*, **1998**, 38, 1-11	1.7	3
15	A Nonlinear QR Algorithm for Banded Nonlinear Eigenvalue Problems. *ACM Transactions on Mathematical Software*, **2016**, 43, 1-19	2.3	3
14	Accurate Numerical Solution for Shifted M-Matrix Algebraic Riccati Equations. *Journal of Scientific Computing*, **2020**, 84, 1	2.3	2
13	Self-Corrective Iterations (SCI) for generalized diagonally dominant matrices. *Journal of Computational and Applied Mathematics*, **2016**, 302, 285-300	2.4	2
12	Error bounds for approximate deflating subspaces for linear response eigenvalue problems. *Linear Algebra and Its Applications*, **2017**, 528, 273-289	0.9	2
11	Accurate numerical solution for structured M-matrix algebraic Riccati equations. *Journal of Computational and Applied Mathematics*, **2021**, 396, 113614	2.4	2
10	Deflating irreducible singular M-matrix algebraic Riccati equations. *Numerical Algebra, Control and Optimization*, **2013**, 3, 491-518	1.7	1
9	Perturbation theory for Hermitian quadratic eigenvalue problem □damped and simultaneously diagonalizable systems. *Applied Mathematics and Computation*, **2020**, 371, 124921	2.7	1

8	. *IEEE Transactions on Big Data*, **2020**, 1-1	3.2	1
7	Sharp Estimation of Convergence Rate for Self-Consistent Field Iteration to Solve Eigenvector-Dependent Nonlinear Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2022**, 43, 301-327	1.5	0
6	A self-consistent-field iteration for MAXBET with an application to multi-view feature extraction. *Advances in Computational Mathematics*, **2022**, 48, 1	1.6	0
5	Perturbation analysis for matrix joint block diagonalization. *Linear Algebra and Its Applications*, **2019** , 581, 163-197	0.9	
4	Recent Progress in Linear Response Eigenvalue Problems. *Lecture Notes in Computational Science and Engineering*, **2017**, 287-304	0.3	
3	Structured backward error for palindromic polynomial eigenvalue problems, II: Approximate eigentriplets. *Frontiers of Mathematics in China*, **2018**, 13, 1397-1426	0.8	
2	On an eigenvector-dependent nonlinear eigenvalue problem from the perspective of relative perturbation theory. *Journal of Computational and Applied Mathematics*, **2021**, 395, 113596	2.4	
1	A least squares approach for saddle point problems. *Japan Journal of Industrial and Applied Mathematics*,1	0.6	