

# Nicholas J Higham

## List of Publications by Year in descending order

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184  
papers

13,071  
citations

34100

52  
h-index

45310

90  
g-index

205  
all docs

205  
docs citations

205  
times ranked

6757  
citing authors

#	ARTICLE	IF	CITATIONS
1	Computing the nearest correlation matrix—a problem from finance. <i>IMA Journal of Numerical Analysis</i> , 2002, 22, 329-343.	2.9	643
2	Computing a nearest symmetric positive semidefinite matrix. <i>Linear Algebra and Its Applications</i> , 1988, 103, 103-118.	0.9	516
3	The Scaling and Squaring Method for the Matrix Exponential Revisited. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2005, 26, 1179-1193.	1.4	429
4	Computing the Polar Decomposition with Applications. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1986, 7, 1160-1174.	1.5	326
5	Computing the Action of the Matrix Exponential, with an Application to Exponential Integrators. <i>SIAM Journal of Scientific Computing</i> , 2011, 33, 488-511.	2.8	321
6	The numerical stability of barycentric Lagrange interpolation. <i>IMA Journal of Numerical Analysis</i> , 2004, 24, 547-556.	2.9	242
7	A New Scaling and Squaring Algorithm for the Matrix Exponential. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2010, 31, 970-989.	1.4	215
8	The Accuracy of Floating Point Summation. <i>SIAM Journal of Scientific Computing</i> , 1993, 14, 783-799.	2.8	186
9	NLEVP. <i>ACM Transactions on Mathematical Software</i> , 2013, 39, 1-28.	2.9	177
10	Computing real square roots of a real matrix. <i>Linear Algebra and Its Applications</i> , 1987, 88-89, 405-430.	0.9	151
11	Stable iterations for the matrix square root. <i>Numerical Algorithms</i> , 1997, 15, 227-242.	1.9	147
12	A Survey of Condition Number Estimation for Triangular Matrices. <i>SIAM Review</i> , 1987, 29, 575-596.	8.4	143
13	FORTTRAN codes for estimating the one-norm of a real or complex matrix, with applications to condition estimation. <i>ACM Transactions on Mathematical Software</i> , 1988, 14, 381-396.	2.9	140
14	The Scaling and Squaring Method for the Matrix Exponential Revisited. <i>SIAM Review</i> , 2009, 51, 747-764.	8.4	133
15	Numerical analysis of a quadratic matrix equation. <i>IMA Journal of Numerical Analysis</i> , 2000, 20, 499-519.	2.9	131
16	Computing $A^\alpha$ , $\log(A)$ , and Related Matrix Functions by Contour Integrals. <i>SIAM Journal on Numerical Analysis</i> , 2008, 46, 2505-2523.	2.3	129
17	A Block Algorithm for Matrix 1-Norm Estimation, with an Application to 1-Norm Pseudospectra. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2000, 21, 1185-1201.	1.4	120
18	A Schur-Parlett Algorithm for Computing Matrix Functions. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2003, 25, 464-485.	1.4	114

#	ARTICLE	IF	CITATIONS
19	Structured Pseudospectra for Polynomial Eigenvalue Problems, with Applications. SIAM Journal on Matrix Analysis and Applications, 2001, 23, 187-208.	1.4	113
20	Accelerating the Solution of Linear Systems by Iterative Refinement in Three Precisions. SIAM Journal of Scientific Computing, 2018, 40, A817-A847.	2.8	109
21	Harnessing GPU Tensor Cores for Fast FP16 Arithmetic to Speed up Mixed-Precision Iterative Refinement Solvers. , 2018, , .		104
22	Backward Error and Condition of Structured Linear Systems. SIAM Journal on Matrix Analysis and Applications, 1992, 13, 162-175.	1.4	103
23	Cholesky factorization. Wiley Interdisciplinary Reviews: Computational Statistics, 2009, 1, 251-254.	3.9	101
24	Approximating the Logarithm of a Matrix to Specified Accuracy. SIAM Journal on Matrix Analysis and Applications, 2001, 22, 1112-1125.	1.4	100
25	Solving a Quadratic Matrix Equation by Newton's Method with Exact Line Searches. SIAM Journal on Matrix Analysis and Applications, 2001, 23, 303-316.	1.4	96
26	Symmetric Linearizations for Matrix Polynomials. SIAM Journal on Matrix Analysis and Applications, 2007, 29, 143-159.	1.4	93
27	Structured Backward Error and Condition of Generalized Eigenvalue Problems. SIAM Journal on Matrix Analysis and Applications, 1998, 20, 493-512.	1.4	91
28	Exploiting fast matrix multiplication within the level 3 BLAS. ACM Transactions on Mathematical Software, 1990, 16, 352-368.	2.9	88
29	Numerically Stable Generation of Correlation Matrices and Their Factors. BIT Numerical Mathematics, 2000, 40, 640-651.	2.0	85
30	The Conditioning of Linearizations of Matrix Polynomials. SIAM Journal on Matrix Analysis and Applications, 2006, 28, 1005-1028.	1.4	83
31	J-Orthogonal Matrices: Properties and Generation. SIAM Review, 2003, 45, 504-519.	8.4	82
32	Perturbation theory and backward error for $AX \approx XB=C$ . BIT Numerical Mathematics, 1993, 33, 124-136.	2.0	80
33	Error analysis of the Björck-Pereyra algorithms for solving Vandermonde systems. Numerische Mathematik, 1987, 50, 613-632.	1.9	79
34	UManSysProp v1.0: an online and open-source facility for molecular property prediction and atmospheric aerosol calculations. Geoscientific Model Development, 2016, 9, 899-914.	3.6	78
35	Bounds for eigenvalues of matrix polynomials. Linear Algebra and Its Applications, 2003, 358, 5-22.	0.9	76
36	A Modified Cholesky Algorithm Based on a Symmetric Indefinite Factorization. SIAM Journal on Matrix Analysis and Applications, 1998, 19, 1097-1110.	1.4	75

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37	Iterative Solution of a Nonsymmetric Algebraic Riccati Equation. SIAM Journal on Matrix Analysis and Applications, 2007, 29, 396-412.	1.4	75
38	Backward Error of Polynomial Eigenproblems Solved by Linearization. SIAM Journal on Matrix Analysis and Applications, 2008, 29, 1218-1241.	1.4	73
39	Computing matrix functions. Acta Numerica, 2010, 19, 159-208.	10.7	72
40	Algorithms for the matrix pth root. Numerical Algorithms, 2005, 39, 349-378.	1.9	71
41	A New Analysis of Iterative Refinement and Its Application to Accurate Solution of Ill-Conditioned Sparse Linear Systems. SIAM Journal of Scientific Computing, 2017, 39, A2834-A2856.	2.8	70
42	Newton's method for the matrix square root. Mathematics of Computation, 1986, 46, 537-549.	2.1	66
43	Fast Solution of Vandermonde-Like Systems Involving Orthogonal Polynomials. IMA Journal of Numerical Analysis, 1988, 8, 473-486.	2.9	66
44	Stability of blockLU factorization. Numerical Linear Algebra With Applications, 1995, 2, 173-190.	1.6	65
45	Fast Polar Decomposition of an Arbitrary Matrix. SIAM Journal on Scientific and Statistical Computing, 1990, 11, 648-655.	1.5	63
46	Stability Analysis of Algorithms for Solving Confluent Vandermonde-Like Systems. SIAM Journal on Matrix Analysis and Applications, 1990, 11, 23-41.	1.4	62
47	Stable and Efficient Spectral Divide and Conquer Algorithms for the Symmetric Eigenvalue Decomposition and the SVD. SIAM Journal of Scientific Computing, 2013, 35, A1325-A1349.	2.8	62
48	A survey of numerical linear algebra methods utilizing mixed-precision arithmetic. International Journal of High Performance Computing Applications, 2021, 35, 344-369.	3.7	61
49	A Schur's Newton Method for the Matrix $p$ th Root and its Inverse. SIAM Journal on Matrix Analysis and Applications, 2006, 28, 788-804.	1.4	60
50	A preconditioned Newton algorithm for the nearest correlation matrix. IMA Journal of Numerical Analysis, 2010, 30, 94-107.	2.9	60
51	Improved Inverse Scaling and Squaring Algorithms for the Matrix Logarithm. SIAM Journal of Scientific Computing, 2012, 34, C153-C169.	2.8	60
52	The symmetric procrustes problem. BIT Numerical Mathematics, 1988, 28, 133-143.	2.0	58
53	Large Growth Factors in Gaussian Elimination with Pivoting. SIAM Journal on Matrix Analysis and Applications, 1989, 10, 155-164.	1.4	58
54	Computing the Fréchet Derivative of the Matrix Exponential, with an Application to Condition Number Estimation. SIAM Journal on Matrix Analysis and Applications, 2009, 30, 1639-1657.	1.4	57

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55	The matrix sign decomposition and its relation to the polar decomposition. <i>Linear Algebra and Its Applications</i> , 1994, 212-213, 3-20.	0.9	56
56	Stability of Methods for Matrix Inversion. <i>IMA Journal of Numerical Analysis</i> , 1992, 12, 1-19.	2.9	54
57	Algorithm 694. <i>ACM Transactions on Mathematical Software</i> , 1991, 17, 289-305.	2.9	53
58	Detecting a definite Hermitian pair and a hyperbolic or elliptic quadratic eigenvalue problem, and associated nearness problems. <i>Linear Algebra and Its Applications</i> , 2002, 351-352, 455-474.	0.9	53
59	Newton's Method for the Matrix Square Root. <i>Mathematics of Computation</i> , 1986, 46, 537.	2.1	50
60	The Accuracy of Solutions to Triangular Systems. <i>SIAM Journal on Numerical Analysis</i> , 1989, 26, 1252-1265.	2.3	50
61	The Design and Performance of Batched BLAS on Modern High-Performance Computing Systems. <i>Procedia Computer Science</i> , 2017, 108, 495-504.	2.0	50
62	A New Approach to Probabilistic Rounding Error Analysis. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A2815-A2835.	2.8	50
63	A Schur- $\text{Pad}\hat{\circ}$ Algorithm for Fractional Powers of a Matrix. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2011, 32, 1056-1078.	1.4	49
64	Stability of block algorithms with fast level-3 BLAS. <i>ACM Transactions on Mathematical Software</i> , 1992, 18, 274-291.	2.9	46
65	Optimization by Direct Search in Matrix Computations. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1993, 14, 317-333.	1.4	46
66	Solving the Indefinite Least Squares Problem by Hyperbolic QR Factorization. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2003, 24, 914-931.	1.4	46
67	An Improved Schur- $\text{Pad}\hat{\circ}$ Algorithm for Fractional Powers of a Matrix and Their Fréchet Derivatives. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2013, 34, 1341-1360.	1.4	46
68	Functions Preserving Matrix Groups and Iterations for the Matrix Square Root. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2005, 26, 849-877.	1.4	44
69	Estimating the matrix $p$ -norm. <i>Numerische Mathematik</i> , 1992, 62, 539-555.	1.9	43
70	Computing the Fréchet Derivative of the Matrix Logarithm and Estimating the Condition Number. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, C394-C410.	2.8	43
71	More on pseudospectra for polynomial eigenvalue problems and applications in control theory. <i>Linear Algebra and Its Applications</i> , 2002, 351-352, 435-453.	0.9	42
72	Iterative refinement enhances the stability of QR factorization methods for solving linear equations. <i>BIT Numerical Mathematics</i> , 1991, 31, 447-468.	2.0	41

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73	Improved Error Bounds for Underdetermined System Solvers. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1993, 14, 1-14.	1.4	41
74	Scaling, sensitivity and stability in the numerical solution of quadratic eigenvalue problems. <i>International Journal for Numerical Methods in Engineering</i> , 2008, 73, 344-360.	2.8	41
75	The complex step approximation to the Fréchet derivative of a matrix function. <i>Numerical Algorithms</i> , 2010, 53, 133-148.	1.9	41
76	On pth roots of stochastic matrices. <i>Linear Algebra and Its Applications</i> , 2011, 435, 448-463.	0.9	41
77	Adaptive precision in block-Jacobi preconditioning for iterative sparse linear system solvers. <i>Concurrency Computation Practice and Experience</i> , 2019, 31, e4460.	2.2	41
78	Efficient Algorithms for Computing the Condition Number of a Tridiagonal Matrix. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1986, 7, 150-165.	1.5	40
79	Simulating Low Precision Floating-Point Arithmetic. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, C585-C602.	2.8	39
80	Squeezing a Matrix into Half Precision, with an Application to Solving Linear Systems. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A2536-A2551.	2.8	39
81	Stability of the Diagonal Pivoting Method with Partial Pivoting. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1997, 18, 52-65.	1.4	38
82	Evaluating Padé Approximants of the Matrix Logarithm. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2001, 22, 1126-1135.	1.4	37
83	Efficient algorithms for the matrix cosine and sine. <i>Numerical Algorithms</i> , 2005, 40, 383-400.	1.9	37
84	Experience with a Matrix Norm Estimator. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1990, 11, 804-809.	1.5	36
85	Computing the field of values and pseudospectra using the Lanczos method with continuation. <i>BIT Numerical Mathematics</i> , 1996, 36, 422-440.	2.0	36
86	Anderson acceleration of the alternating projections method for computing the nearest correlation matrix. <i>Numerical Algorithms</i> , 2016, 72, 1021-1042.	1.9	35
87	Title is missing!. <i>BIT Numerical Mathematics</i> , 1999, 39, 34-50.	2.0	34
88	Accurately computing the log-sum-exp and softmax functions. <i>IMA Journal of Numerical Analysis</i> , 2021, 41, 2311-2330.	2.9	34
89	Bounding the Error in Gaussian Elimination for Tridiagonal Systems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1990, 11, 521-530.	1.4	33
90	Factorizing complex symmetric matrices with positive definite real and imaginary parts. <i>Mathematics of Computation</i> , 1998, 67, 1591-1600.	2.1	33

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91	QR factorization with complete pivoting and accurate computation of the SVD. <i>Linear Algebra and Its Applications</i> , 2000, 309, 153-174.	0.9	30
92	Computing the Polar Decomposition and the Matrix Sign Decomposition in Matrix Groups. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2004, 25, 1178-1192.	1.4	30
93	Stability of a Method for Multiplying Complex Matrices with Three Real Matrix Multiplications. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1992, 13, 681-687.	1.4	29
94	A parallel algorithm for computing the polar decomposition. <i>Parallel Computing</i> , 1994, 20, 1161-1173.	2.1	29
95	Iterative refinement for linear systems and LAPACK. <i>IMA Journal of Numerical Analysis</i> , 1997, 17, 495-509.	2.9	29
96	Mixed Precision Block Fused Multiply-Add: Error Analysis and Application to GPU Tensor Cores. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, C124-C141.	2.8	29
97	Mixed precision algorithms in numerical linear algebra. <i>Acta Numerica</i> , 2022, 31, 347-414.	10.7	29
98	Gaussian elimination. <i>Wiley Interdisciplinary Reviews: Computational Statistics</i> , 2011, 3, 230-238.	3.9	28
99	Covariance structure regularization via entropy loss function. <i>Computational Statistics and Data Analysis</i> , 2014, 72, 315-327.	1.2	28
100	Blocked Schur Algorithms for Computing the Matrix Square Root. <i>Lecture Notes in Computer Science</i> , 2013, , 171-182.	1.3	28
101	Definite Matrix Polynomials and their Linearization by Definite Pencils. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2009, 31, 478-502.	1.4	27
102	Computing a Nearest Correlation Matrix with Factor Structure. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2010, 31, 2603-2622.	1.4	27
103	New Algorithms for Computing the Matrix Sine and Cosine Separately or Simultaneously. <i>SIAM Journal of Scientific Computing</i> , 2015, 37, A456-A487.	2.8	27
104	The sensitivity of computational control problems. <i>IEEE Control Systems</i> , 2004, 24, 28-43.	0.8	26
105	Stochastic Rounding and Its Probabilistic Backward Error Analysis. <i>SIAM Journal of Scientific Computing</i> , 2021, 43, A566-A585.	2.8	26
106	Mixed-precision iterative refinement using tensor cores on GPUs to accelerate solution of linear systems. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2020, 476, 20200110.	2.1	26
107	Computing the Matrix Cosine. <i>Numerical Algorithms</i> , 2003, 34, 13-26.	1.9	25
108	The Canonical Generalized Polar Decomposition. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2010, 31, 2163-2180.	1.4	25

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109	A framework for analyzing nonlinear eigenproblems and parametrized linear systems. <i>Linear Algebra and Its Applications</i> , 2011, 435, 623-640.	0.9	25
110	Modifying the inertia of matrices arising in optimization. <i>Linear Algebra and Its Applications</i> , 1998, 275-276, 261-279.	0.9	24
111	Row-Wise Backward Stable Elimination Methods for the Equality Constrained Least Squares Problem. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1999, 21, 313-326.	1.4	24
112	An Improved Arc Algorithm for Detecting Definite Hermitian Pairs. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2010, 31, 1131-1151.	1.4	24
113	Componentwise perturbation theory for linear systems with multiple right-hand sides. <i>Linear Algebra and Its Applications</i> , 1992, 174, 111-129.	0.9	23
114	Detecting and Solving Hyperbolic Quadratic Eigenvalue Problems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2009, 30, 1593-1613.	1.4	23
115	Detecting the causes of ill-conditioning in structural finite element models. <i>Computers and Structures</i> , 2014, 133, 79-89.	4.4	23
116	Analysis of the Cholesky Method with Iterative Refinement for Solving the Symmetric Definite Generalized Eigenproblem. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2001, 23, 472-493.	1.4	22
117	A Class of Fast and Accurate Summation Algorithms. <i>SIAM Journal of Scientific Computing</i> , 2020, 42, A1541-A1557.	2.8	22
118	Finite precision behavior of stationary iteration for solving singular systems. <i>Linear Algebra and Its Applications</i> , 1993, 192, 165-186.	0.9	21
119	Performance analysis of asynchronous Jacobi's method implemented in MPI, SHMEM and OpenMP. <i>International Journal of High Performance Computing Applications</i> , 2014, 28, 97-111.	3.7	21
120	Backward Stability of Iterations for Computing the Polar Decomposition. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2012, 33, 460-479.	1.4	20
121	Matching exponential-based and resolvent-based centrality measures. <i>Journal of Complex Networks</i> , 2016, 4, 157-176.	1.8	20
122	Numerical behavior of NVIDIA tensor cores. <i>PeerJ Computer Science</i> , 2021, 7, e330.	4.5	19
123	Matrix Powers in Finite Precision Arithmetic. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1995, 16, 343-358.	1.4	18
124	Stability of Parallel Triangular System Solvers. <i>SIAM Journal of Scientific Computing</i> , 1995, 16, 400-413.	2.8	17
125	An Algorithm for the Matrix Lambert $W$ Function. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2015, 36, 669-685.	1.4	17
126	A New Preconditioner that Exploits Low-Rank Approximations to Factorization Error. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A59-A82.	2.8	17



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127	Three-Precision GMRES-Based Iterative Refinement for Least Squares Problems. SIAM Journal of Scientific Computing, 2020, 42, A4063-A4083.	2.8	17
128	Stochastic rounding: implementation, error analysis and applications. Royal Society Open Science, 2022, 9, 211631.	2.4	17
129	Stability of block LDLT factorization of a symmetric tridiagonal matrix. Linear Algebra and Its Applications, 1999, 287, 181-189.	0.9	16
130	Higher Order Fréchet Derivatives of Matrix Functions and the Level-2 Condition Number. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 1019-1037.	1.4	16
131	Multiprecision Algorithms for Computing the Matrix Logarithm. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 472-491.	1.4	16
132	A Set of Batched Basic Linear Algebra Subprograms and LAPACK Routines. ACM Transactions on Mathematical Software, 2021, 47, 1-23.	2.9	16
133	The nearest definite pair for the Hermitian generalized eigenvalue problem. Linear Algebra and Its Applications, 1999, 302-303, 63-76.	0.9	15
134	Backward Error Bounds for Constrained Least Squares Problems. BIT Numerical Mathematics, 1999, 39, 210-227.	2.0	15
135	Restoring Definiteness via Shrinking, with an Application to Correlation Matrices with a Fixed Block. SIAM Review, 2016, 58, 245-263.	8.4	15
136	Numerical algorithms for high-performance computational science. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190066.	3.4	15
137	The Equality Constrained Indefinite Least Squares Problem: Theory and Algorithms. BIT Numerical Mathematics, 2003, 43, 505-517.	2.0	14
138	An algorithm to compute the polar decomposition of a $3 \times 3$ matrix. Numerical Algorithms, 2016, 73, 349-369.	1.9	14
139	Sharper Probabilistic Backward Error Analysis for Basic Linear Algebra Kernels with Random Data. SIAM Journal of Scientific Computing, 2020, 42, A3427-A3446.	2.8	14
140	Exploiting Lower Precision Arithmetic in Solving Symmetric Positive Definite Linear Systems and Least Squares Problems. SIAM Journal of Scientific Computing, 2021, 43, A258-A277.	2.8	14
141	The Matrix Unwinding Function, with an Application to Computing the Matrix Exponential. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 88-109.	1.4	13
142	An Arbitrary Precision Scaling and Squaring Algorithm for the Matrix Exponential. SIAM Journal on Matrix Analysis and Applications, 2019, 40, 1233-1256.	1.4	13
143	Computing $f(A)b$ for Matrix Functions $f$ . , 2005, , 15-24.		12
144	Stability of the Partitioned Inverse Method for Parallel Solution of Sparse Triangular Systems. SIAM Journal of Scientific Computing, 1994, 15, 139-148.	2.8	11

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145	The solution of $\exp(x) = a$ is not always the Lambert $W$ function of $a$ . , 2007, , .		11
146	Reducing the influence of tiny normwise relative errors on performance profiles. ACM Transactions on Mathematical Software, 2013, 39, 1-11.	2.9	9
147	Computing the Action of Trigonometric and Hyperbolic Matrix Functions. SIAM Journal of Scientific Computing, 2017, 39, A613-A627.	2.8	9
148	Algorithm 674. ACM Transactions on Mathematical Software, 1989, 15, 168.	2.9	8
149	Computing the Wave-Kernel Matrix Functions. SIAM Journal of Scientific Computing, 2018, 40, A4060-A4082.	2.8	8
150	Componentwise Error Analysis for Stationary Iterative Methods. The IMA Volumes in Mathematics and Its Applications, 1993, , 29-46.	0.5	8
151	Matrix Depot: an extensible test matrix collection for Julia. PeerJ Computer Science, 0, 2, e58.	4.5	8
152	Anymatrix: an extensible MATLAB matrix collection. Numerical Algorithms, 2022, 90, 1175-1196.	1.9	8
153	Estimating the Largest Elements of a Matrix. SIAM Journal of Scientific Computing, 2016, 38, C584-C601.	2.8	7
154	Matrix Inverse Trigonometric and Inverse Hyperbolic Functions: Theory and Algorithms. SIAM Journal on Matrix Analysis and Applications, 2016, 37, 1453-1477.	1.4	6
155	Optimized Batched Linear Algebra for Modern Architectures. Lecture Notes in Computer Science, 2017, , 511-522.	1.3	6
156	Explicit solutions to correlation matrix completion problems, with an application to risk management and insurance. Royal Society Open Science, 2018, 5, 172348.	2.4	6
157	Solving block low-rank linear systems by LU factorization is numerically stable. IMA Journal of Numerical Analysis, 2022, 42, 951-980.	2.9	6
158	Random Matrices Generating Large Growth in LU Factorization with Pivoting. SIAM Journal on Matrix Analysis and Applications, 2021, 42, 185-201.	1.4	6
159	A Multiprecision Derivative-Free Schur-Parlett Algorithm for Computing Matrix Functions. SIAM Journal on Matrix Analysis and Applications, 2021, 42, 1401-1422.	1.4	5
160	Bounds for the Distance to the Nearest Correlation Matrix. SIAM Journal on Matrix Analysis and Applications, 2016, 37, 1088-1102.	1.4	4
161	Testing Matrix Function Algorithms Using Identities. ACM Transactions on Mathematical Software, 2016, 42, 1-15.	2.9	4
162	Generating Extreme-Scale Matrices With Specified Singular Values or Condition Number. SIAM Journal of Scientific Computing, 2021, 43, A663-A684.	2.8	4

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163	LAPACK-Style Codes for Pivoted Cholesky and QR Updating. , 2006, , 137-146.		4
164	Estimating the Condition Number of the Fréchet Derivative of a Matrix Function. SIAM Journal of Scientific Computing, 2014, 36, C617-C634.	2.8	3
165	Matrices with Tunable Infinity-Norm Condition Number and No Need for Pivoting in LU Factorization. SIAM Journal on Matrix Analysis and Applications, 2021, 42, 417-435.	1.4	3
166	Integer matrix factorisations, superalgebras and the quadratic form obstruction. Linear Algebra and Its Applications, 2021, 622, 250-267.	0.9	3
167	Performance impact of precision reduction in sparse linear systems solvers. PeerJ Computer Science, 2022, 8, e778.	4.5	3
168	Arbitrary Precision Algorithms for Computing the Matrix Cosine and its Fréchet Derivative. SIAM Journal on Matrix Analysis and Applications, 2022, 43, 233-256.	1.4	3
169	Ranking the Importance of Nuclear Reactions for Activation and Transmutation Events. Nuclear Science and Engineering, 2016, 184, 561-574.	1.1	2
170	Testing linear algebra software. IFIP Advances in Information and Communication Technology, 1997, , 109-124.	0.7	2
171	Matrix computations. Linear Algebra and Its Applications, 1990, 141, 289-292.	0.9	1
172	Inverse Eigenvalue Problems: Theory, Algorithms, and Applications . By M OODY T. C HU & G ENE H. G OLUB . Oxford University Press, 2005. 387 pp. ISBN 0-19-856664-6. £60.00. Journal of Fluid Mechanics, 2006, 556, 442.	3.4	1
173	Developing a High-Performance Computing/Numerical Analysis Roadmap. International Journal of High Performance Computing Applications, 2009, 23, 423-426.	3.7	1
174	Matrix Functions: A Short Course. Series in Contemporary Applied Mathematics, 2015, , 1-27.	0.8	1
175	Stable iterations for the matrix square root. , 1997, 15, 227.		1
176	New Directions in Numerical Computation. Notices of the American Mathematical Society, 2016, 63, 398-400.	0.2	1
177	Explicit Solutions to Correlation Matrix Completion Problems, with an Application to Risk Management and Insurance. SSRN Electronic Journal, 0, , .	0.4	1
178	Notes on Accuracy and Stability of Algorithms in Numerical Linear Algebra. Springer Series in Computational Mathematics, 1999, , 47-82.	0.2	1
179	Applications of Matrix Theory. Mathematical Gazette, 1990, 74, 202.	0.0	0
180	Dedication to Pete Stewart on the occasion of his 70th birthday. Linear Algebra and Its Applications, 2011, 435, 421.	0.9	0

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181	Matrix Functions: Computation. , 2015, , 863-865.		0
182	Parallel Implementation of a Block Algorithm for Matrix 1-Norm Estimation. Lecture Notes in Computer Science, 2001, , 568-577.	1.3	0
183	Functions of Matrices. Discrete Mathematics and Its Applications, 2013, , 279-293.	0.1	0
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