Nicholas J Higham

List of Publications by Year in Descending Order

187 papers	9,468 citations	48 h-index	92 g-index
205 ext. papers	11,092 ext. citations	2 avg, IF	6.99 L-index

#	Paper	IF	Citations
187	Performance impact of precision reduction in sparse linear systems solvers.. *PeerJ Computer Science*, **2022**, 8, e778	2.7	1
186	Arbitrary Precision Algorithms for Computing the Matrix Cosine and its Fréchet Derivative. *SIAM Journal on Matrix Analysis and Applications*, **2022**, 43, 233-256	1.5	0
185	Stochastic rounding: implementation, error analysis and applications.. *Royal Society Open Science*, **2022**, 9, 211631	3.3	2
184	Optimizing and Factorizing the Wilson Matrix. *American Mathematical Monthly*, **2022**, 129, 454-465	0.3	
183	A survey of numerical linear algebra methods utilizing mixed-precision arithmetic. *International Journal of High Performance Computing Applications*, **2021**, 35, 344-369	1.8	13
182	A Set of Batched Basic Linear Algebra Subprograms and LAPACK Routines. *ACM Transactions on Mathematical Software*, **2021**, 47, 1-23	2.3	3
181	Generating Extreme-Scale Matrices With Specified Singular Values or Condition Number. *SIAM Journal of Scientific Computing*, **2021**, 43, A663-A684	2.6	2
180	Stochastic Rounding and Its Probabilistic Backward Error Analysis. *SIAM Journal of Scientific Computing*, **2021**, 43, A566-A585	2.6	6
179	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	1.5	2
178	Numerical behavior of NVIDIA tensor cores. *PeerJ Computer Science*, **2021**, 7, e330	2.7	8
177	Integer matrix factorisations, superalgebras and the quadratic form obstruction. *Linear Algebra and Its Applications*, **2021**, 622, 250-267	0.9	3
176	Random Matrices Generating Large Growth in LU Factorization with Pivoting. *SIAM Journal on Matrix Analysis and Applications*, **2021**, 42, 185-201	1.5	1
175	Exploiting Lower Precision Arithmetic in Solving Symmetric Positive Definite Linear Systems and Least Squares Problems. *SIAM Journal of Scientific Computing*, **2021**, 43, A258-A277	2.6	4
174	A Multiprecision Derivative-Free Schur--Parlett Algorithm for Computing Matrix Functions. *SIAM Journal on Matrix Analysis and Applications*, **2021**, 42, 1401-1422	1.5	2
173	Mixed Precision Block Fused Multiply-Add: Error Analysis and Application to GPU Tensor Cores. *SIAM Journal of Scientific Computing*, **2020**, 42, C124-C141	2.6	17
172	A Class of Fast and Accurate Summation Algorithms. *SIAM Journal of Scientific Computing*, **2020**, 42, A1541-A1557	2.6	14
171	Numerical algorithms for high-performance computational science. *Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences*, **2020**, 378, 20190066	3	6

170	Three-Precision GMRES-Based Iterative Refinement for Least Squares Problems. *SIAM Journal of Scientific Computing*, **2020**, 42, A4063-A4083	2.6	4
169	Mixed-precision iterative refinement using tensor cores on GPUs to accelerate solution of linear systems. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2020**, 476, 20200110	2.4	10
168	Accurately computing the log-sum-exp and softmax functions. *IMA Journal of Numerical Analysis*, **2020**,	1.8	13
167	Sharper Probabilistic Backward Error Analysis for Basic Linear Algebra Kernels with Random Data. *SIAM Journal of Scientific Computing*, **2020**, 42, A3427-A3446	2.6	5
166	A New Approach to Probabilistic Rounding Error Analysis. *SIAM Journal of Scientific Computing*, **2019**, 41, A2815-A2835	2.6	29
165	An Arbitrary Precision Scaling and Squaring Algorithm for the Matrix Exponential. *SIAM Journal on Matrix Analysis and Applications*, **2019**, 40, 1233-1256	1.5	4
164	A New Preconditioner that Exploits Low-Rank Approximations to Factorization Error. *SIAM Journal of Scientific Computing*, **2019**, 41, A59-A82	2.6	9
163	Simulating Low Precision Floating-Point Arithmetic. *SIAM Journal of Scientific Computing*, **2019**, 41, C585-C602	2.6	21
162	Squeezing a Matrix into Half Precision, with an Application to Solving Linear Systems. *SIAM Journal of Scientific Computing*, **2019**, 41, A2536-A2551	2.6	22
161	Adaptive precision in block-Jacobi preconditioning for iterative sparse linear system solvers. *Concurrency Computation Practice and Experience*, **2019**, 31, e4460	1.4	23
160	Explicit solutions to correlation matrix completion problems, with an application to risk management and insurance. *Royal Society Open Science*, **2018**, 5, 172348	3.3	3
159	Multiprecision Algorithms for Computing the Matrix Logarithm. *SIAM Journal on Matrix Analysis and Applications*, **2018**, 39, 472-491	1.5	10
158	Accelerating the Solution of Linear Systems by Iterative Refinement in Three Precisions. *SIAM Journal of Scientific Computing*, **2018**, 40, A817-A847	2.6	66
157	Harnessing GPU Tensor Cores for Fast FP16 Arithmetic to Speed up Mixed-Precision Iterative Refinement Solvers **2018**,		54
156	Computing the Wave-Kernel Matrix Functions. *SIAM Journal of Scientific Computing*, **2018**, 40, A4060-A4082	2.6	5
155	Computing the Action of Trigonometric and Hyperbolic Matrix Functions. *SIAM Journal of Scientific Computing*, **2017**, 39, A613-A627	2.6	7
154	The Design and Performance of Batched BLAS on Modern High-Performance Computing Systems. *Procedia Computer Science*, **2017**, 108, 495-504	1.6	32
153	Optimized Batched Linear Algebra for Modern Architectures. *Lecture Notes in Computer Science*, **2017**, 511-522	0.9	3

152	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	2.6	46
151	Matrix Inverse Trigonometric and Inverse Hyperbolic Functions: Theory and Algorithms. *SIAM Journal on Matrix Analysis and Applications*, **2016**, 37, 1453-1477	1.5	5
150	Ranking the Importance of Nuclear Reactions for Activation and Transmutation Events. *Nuclear Science and Engineering*, **2016**, 184, 561-574	1.2	2
149	Matching exponential-based and resolvent-based centrality measures. *Journal of Complex Networks* , **2016**, 4, 157-176	1.7	15
148	Testing Matrix Function Algorithms Using Identities. *ACM Transactions on Mathematical Software*, **2016**, 42, 1-15	2.3	2
147	MATLAB Guide, Third Edition **2016**,		31
146	UManSysProp v1.0: an online and open-source facility for molecular property prediction and atmospheric aerosol calculations. *Geoscientific Model Development*, **2016**, 9, 899-914	6.3	54
145	Estimating the Largest Elements of a Matrix. *SIAM Journal of Scientific Computing*, **2016**, 38, C584-C601	2.6	4
144	An algorithm to compute the polar decomposition of a 3 □3 matrix. *Numerical Algorithms*, **2016**, 73, 349-369	2.1	9
143	Anderson acceleration of the alternating projections method for computing the nearest correlation matrix. *Numerical Algorithms*, **2016**, 72, 1021-1042	2.1	23
142	Restoring Definiteness via Shrinking, with an Application to Correlation Matrices with a Fixed Block. *SIAM Review*, **2016**, 58, 245-263	7.4	12
141	Bounds for the Distance to the Nearest Correlation Matrix. *SIAM Journal on Matrix Analysis and Applications*, **2016**, 37, 1088-1102	1.5	3
140	New Algorithms for Computing the Matrix Sine and Cosine Separately or Simultaneously. *SIAM Journal of Scientific Computing*, **2015**, 37, A456-A487	2.6	24
139	An Algorithm for the Matrix Lambert W Function. *SIAM Journal on Matrix Analysis and Applications*, **2015**, 36, 669-685	1.5	11
138	Matrix Functions: A Short Course. *Series in Contemporary Applied Mathematics*, **2015**, 1-27	0	
137	Numerical conditioning **2014**, 37-40		1
136	Detecting the causes of ill-conditioning in structural finite element models. *Computers and Structures*, **2014**, 133, 79-89	4.5	19
135	The Matrix Unwinding Function, with an Application to Computing the Matrix Exponential. *SIAM Journal on Matrix Analysis and Applications*, **2014**, 35, 88-109	1.5	11

134	Performance analysis of asynchronous Jacobi's method implemented in MPI, SHMEM and OpenMP. *International Journal of High Performance Computing Applications*, **2014**, 28, 97-111	1.8	19
133	Higher Order Fréchet Derivatives of Matrix Functions and the Level-2 Condition Number. *SIAM Journal on Matrix Analysis and Applications*, **2014**, 35, 1019-1037	1.5	12
132	Estimating the Condition Number of the Fréchet Derivative of a Matrix Function. *SIAM Journal of Scientific Computing*, **2014**, 36, C617-C634	2.6	3
131	Covariance structure regularization via entropy loss function. *Computational Statistics and Data Analysis*, **2014**, 72, 315-327	1.6	20
130	NLEVP. *ACM Transactions on Mathematical Software*, **2013**, 39, 1-28	2.3	138
129	An Improved Schur--Padé Algorithm for Fractional Powers of a Matrix and Their Fréchet Derivatives. *SIAM Journal on Matrix Analysis and Applications*, **2013**, 34, 1341-1360	1.5	38
128	Computing the Fréchet Derivative of the Matrix Logarithm and Estimating the Condition Number. *SIAM Journal of Scientific Computing*, **2013**, 35, C394-C410	2.6	37
127	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	2.6	40
126	Reducing the influence of tiny normwise relative errors on performance profiles. *ACM Transactions on Mathematical Software*, **2013**, 39, 1-11	2.3	8
125	Blocked Schur Algorithms for Computing the Matrix Square Root. *Lecture Notes in Computer Science* , **2013**, 171-182	0.9	15
124	Functions of Matrices. *Discrete Mathematics and Its Applications*, **2013**, 279-293		
123	Backward Stability of Iterations for Computing the Polar Decomposition. *SIAM Journal on Matrix Analysis and Applications*, **2012**, 33, 460-479	1.5	13
122	Improved Inverse Scaling and Squaring Algorithms for the Matrix Logarithm. *SIAM Journal of Scientific Computing*, **2012**, 34, C153-C169	2.6	44
121	Computing the Action of the Matrix Exponential, with an Application to Exponential Integrators. *SIAM Journal of Scientific Computing*, **2011**, 33, 488-511	2.6	238
120	A Schur–Padé Algorithm for Fractional Powers of a Matrix. *SIAM Journal on Matrix Analysis and Applications*, **2011**, 32, 1056-1078	1.5	43
119	Gaussian elimination. *Wiley Interdisciplinary Reviews: Computational Statistics*, **2011**, 3, 230-238	1.4	18
118	A framework for analyzing nonlinear eigenproblems and parametrized linear systems. *Linear Algebra and Its Applications*, **2011**, 435, 623-640	0.9	22
117	On pth roots of stochastic matrices. *Linear Algebra and Its Applications*, **2011**, 435, 448-463	0.9	32

116	Computing matrix functions. *Acta Numerica*, **2010**, 19, 159-208	15.1	57
115	A New Scaling and Squaring Algorithm for the Matrix Exponential. *SIAM Journal on Matrix Analysis and Applications*, **2010**, 31, 970-989	1.5	160
114	A preconditioned Newton algorithm for the nearest correlation matrix. *IMA Journal of Numerical Analysis*, **2010**, 30, 94-107	1.8	43
113	The Canonical Generalized Polar Decomposition. *SIAM Journal on Matrix Analysis and Applications*, **2010**, 31, 2163-2180	1.5	17
112	Computing a Nearest Correlation Matrix with Factor Structure. *SIAM Journal on Matrix Analysis and Applications*, **2010**, 31, 2603-2622	1.5	23
111	An Improved Arc Algorithm for Detecting Definite Hermitian Pairs. *SIAM Journal on Matrix Analysis and Applications*, **2010**, 31, 1131-1151	1.5	20
110	The complex step approximation to the Fr□het derivative of a matrix function. *Numerical Algorithms*, **2010**, 53, 133-148	2.1	36
109	Developing a High-Performance Computing/Numerical Analysis Roadmap. *International Journal of High Performance Computing Applications*, **2009**, 23, 423-426	1.8	0
108	Cholesky factorization. *Wiley Interdisciplinary Reviews: Computational Statistics*, **2009**, 1, 251-254	1.4	62
107	The Scaling and Squaring Method for the Matrix Exponential Revisited. *SIAM Review*, **2009**, 51, 747-764	7.4	114
106	Definite Matrix Polynomials and their Linearization by Definite Pencils. *SIAM Journal on Matrix Analysis and Applications*, **2009**, 31, 478-502	1.5	22
105	Detecting and Solving Hyperbolic Quadratic Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **2009**, 30, 1593-1613	1.5	20
104	Computing the Fr□het Derivative of the Matrix Exponential, with an Application to Condition Number Estimation. *SIAM Journal on Matrix Analysis and Applications*, **2009**, 30, 1639-1657	1.5	47
103	Computing $A^alpha, log(A)$, and Related Matrix Functions by Contour Integrals. *SIAM Journal on Numerical Analysis*, **2008**, 46, 2505-2523	2.4	109
102	Backward Error of Polynomial Eigenproblems Solved by Linearization. *SIAM Journal on Matrix Analysis and Applications*, **2008**, 29, 1218-1241	1.5	60
101	Scaling, sensitivity and stability in the numerical solution of quadratic eigenvalue problems. *International Journal for Numerical Methods in Engineering*, **2008**, 73, 344-360	2.4	36
100	Functions of Matrices **2008**,		745
99	The solution of s exp(s) = a is not always the lambert w function of a **2007**,		7

98	Iterative Solution of a Nonsymmetric Algebraic Riccati Equation. *SIAM Journal on Matrix Analysis and Applications*, **2007**, 29, 396-412	1.5	61
97	Symmetric Linearizations for Matrix Polynomials. *SIAM Journal on Matrix Analysis and Applications*, **2007**, 29, 143-159	1.5	67
96	The Conditioning of Linearizations of Matrix Polynomials. *SIAM Journal on Matrix Analysis and Applications*, **2006**, 28, 1005-1028	1.5	69
95	A Schur□Newton Method for the Matrix lowercase{boldmathp}th Root and its Inverse. *SIAM Journal on Matrix Analysis and Applications*, **2006**, 28, 788-804	1.5	48
94	LAPACK-Style Codes for Pivoted Cholesky and QR Updating **2006**, 137-146		4
93	Functions Preserving Matrix Groups and Iterations for the Matrix Square Root. *SIAM Journal on Matrix Analysis and Applications*, **2005**, 26, 849-877	1.5	36
92	The Scaling and Squaring Method for the Matrix Exponential Revisited. *SIAM Journal on Matrix Analysis and Applications*, **2005**, 26, 1179-1193	1.5	331
91	Algorithms for the matrix pth root. *Numerical Algorithms*, **2005**, 39, 349-378	2.1	60
90	Efficient algorithms for the matrix cosine and sine. *Numerical Algorithms*, **2005**, 40, 383-400	2.1	34
89	Computing f(A)b for Matrix Functions f **2005**, 15-24		11
88	Matlab Guide **2005**,		92
87	The sensitivity of computational control problems. *IEEE Control Systems*, **2004**, 24, 28-43	2.9	24
86	The numerical stability of barycentric Lagrange interpolation. *IMA Journal of Numerical Analysis*, **2004**, 24, 547-556	1.8	169
85	Computing the Polar Decomposition and the Matrix Sign Decomposition in Matrix Groups. *SIAM Journal on Matrix Analysis and Applications*, **2004**, 25, 1178-1192	1.5	26
84	Computing the Matrix Cosine. *Numerical Algorithms*, **2003**, 34, 13-26	2.1	23
83	The Equality Constrained Indefinite Least Squares Problem: Theory and Algorithms. *BIT Numerical Mathematics*, **2003**, 43, 505-517	1.7	11
82	Bounds for eigenvalues of matrix polynomials. *Linear Algebra and Its Applications*, **2003**, 358, 5-22	0.9	54
81	Solving the Indefinite Least Squares Problem by Hyperbolic QR Factorization. *SIAM Journal on Matrix Analysis and Applications*, **2003**, 24, 914-931	1.5	35

80	A Schur-Parlett Algorithm for Computing Matrix Functions. *SIAM Journal on Matrix Analysis and Applications*, **2003**, 25, 464-485	1.5	93
79	J-Orthogonal Matrices: Properties and Generation. *SIAM Review*, **2003**, 45, 504-519	7.4	64
78	More on pseudospectra for polynomial eigenvalue problems and applications in control theory. *Linear Algebra and Its Applications*, **2002**, 351-352, 435-453	0.9	33
77	Detecting a definite Hermitian pair and a hyperbolic or elliptic quadratic eigenvalue problem, and associated nearness problems. *Linear Algebra and Its Applications*, **2002**, 351-352, 455-474	0.9	42
76	Computing the nearest correlation matrix--a problem from finance. *IMA Journal of Numerical Analysis*, **2002**, 22, 329-343	1.8	488
75	Accuracy and Stability of Numerical Algorithms **2002**,		1132
74	Structured Pseudospectra for Polynomial Eigenvalue Problems, with Applications. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 23, 187-208	1.5	87
73	Solving a Quadratic Matrix Equation by Newton's Method with Exact Line Searches. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 23, 303-316	1.5	56
72	Analysis of the Cholesky Method with Iterative Refinement for Solving the Symmetric Definite Generalized Eigenproblem. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 23, 472-493	1.5	20
71	Approximating the Logarithm of a Matrix to Specified Accuracy. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 22, 1112-1125	1.5	85
70	Evaluating Pad Approximants of the Matrix Logarithm. *SIAM Journal on Matrix Analysis and Applications*, **2001**, 22, 1126-1135	1.5	33
69	Parallel Implementation of a Block Algorithm for Matrix 1-Norm Estimation. *Lecture Notes in Computer Science*, **2001**, 568-577	0.9	
68	QR factorization with complete pivoting and accurate computation of the SVD. *Linear Algebra and Its Applications*, **2000**, 309, 153-174	0.9	20
67	Numerically Stable Generation of Correlation Matrices and Their Factors. *BIT Numerical Mathematics*, **2000**, 40, 640-651	1.7	61
66	A Block Algorithm for Matrix 1-Norm Estimation, with an Application to 1-Norm Pseudospectra. *SIAM Journal on Matrix Analysis and Applications*, **2000**, 21, 1185-1201	1.5	107
65	Numerical analysis of a quadratic matrix equation. *IMA Journal of Numerical Analysis*, **2000**, 20, 499-519	1.8	87
64	Stability of block LDLT factorization of a symmetric tridiagonal matrix. *Linear Algebra and Its Applications*, **1999**, 287, 181-189	0.9	15
63	The nearest definite pair for the Hermitian generalized eigenvalue problem. *Linear Algebra and Its Applications*, **1999**, 302-303, 63-76	0.9	13

62	Accuracy and Stability of the Null Space Method for Solving the Equality Constrained Least Squares Problem. *BIT Numerical Mathematics*, **1999**, 39, 34-50	1.7	26
61	Backward Error Bounds for Constrained Least Squares Problems. *BIT Numerical Mathematics*, **1999**, 39, 210-227	1.7	12
60	Row-Wise Backward Stable Elimination Methods for the Equality Constrained Least Squares Problem. *SIAM Journal on Matrix Analysis and Applications*, **1999**, 21, 313-326	1.5	21
59	Notes on Accuracy and Stability of Algorithms in Numerical Linear Algebra. *Springer Series in Computational Mathematics*, **1999**, 47-82	0.9	
58	Modifying the inertia of matrices arising in optimization. *Linear Algebra and Its Applications*, **1998**, 275-276, 261-279	0.9	18
57	A Modified Cholesky Algorithm Based on a Symmetric Indefinite Factorization. *SIAM Journal on Matrix Analysis and Applications*, **1998**, 19, 1097-1110	1.5	57
56	Structured Backward Error and Condition of Generalized Eigenvalue Problems. *SIAM Journal on Matrix Analysis and Applications*, **1998**, 20, 493-512	1.5	77
55	Factorizing complex symmetric matrices with positive definite real and imaginary parts. *Mathematics of Computation*, **1998**, 67, 1591-1600	1.6	28
54	Handbook of Writing for the Mathematical Sciences, Second Edition **1998**,		13
53	Iterative refinement for linear systems and LAPACK. *IMA Journal of Numerical Analysis*, **1997**, 17, 495-509	1.8	25
52	Stability of the Diagonal Pivoting Method with Partial Pivoting. *SIAM Journal on Matrix Analysis and Applications*, **1997**, 18, 52-65	1.5	33
51	Stable iterations for the matrix square root. *Numerical Algorithms*, **1997**, 15, 227-242	2.1	109
50	Stable iterations for the matrix square root **1997**, 15, 227		1
49	Testing linear algebra software. *IFIP Advances in Information and Communication Technology*, **1997**, 109-124	0.5	1
48	Computing the field of values and pseudospectra using the Lanczos method with continuation. *BIT Numerical Mathematics*, **1996**, 36, 422-440	1.7	35
47	Stability of Parallel Triangular System Solvers. *SIAM Journal of Scientific Computing*, **1995**, 16, 400-413	2.6	13
46	Matrix Powers in Finite Precision Arithmetic. *SIAM Journal on Matrix Analysis and Applications*, **1995**, 16, 343-358	1.5	13
45	Stability of block LU factorization. *Numerical Linear Algebra With Applications*, **1995**, 2, 173-190	1.6	59

44	The matrix sign decomposition and its relation to the polar decomposition. *Linear Algebra and Its Applications*, **1994**, 212-213, 3-20	0.9	41
43	A parallel algorithm for computing the polar decomposition. *Parallel Computing*, **1994**, 20, 1161-1173	1	22
42	Stability of the Partitioned Inverse Method for Parallel Solution of Sparse Triangular Systems. *SIAM Journal of Scientific Computing*, **1994**, 15, 139-148	2.6	7
41	A survey of componentwise perturbation theory in numerical linear algebra. *Proceedings of Symposia in Applied Mathematics*, **1994**, 49-77		33
40	Optimization by Direct Search in Matrix Computations. *SIAM Journal on Matrix Analysis and Applications*, **1993**, 14, 317-333	1.5	35
39	Improved Error Bounds for Underdetermined System Solvers. *SIAM Journal on Matrix Analysis and Applications*, **1993**, 14, 1-14	1.5	31
38	The Accuracy of Floating Point Summation. *SIAM Journal of Scientific Computing*, **1993**, 14, 783-799	2.6	142
37	Finite precision behavior of stationary iteration for solving singular systems. *Linear Algebra and Its Applications*, **1993**, 192, 165-186	0.9	19
36	Perturbation theory and backward error forAXXB=C. *BIT Numerical Mathematics*, **1993**, 33, 124-136	1.7	69
35	Componentwise Error Analysis for Stationary Iterative Methods. *The IMA Volumes in Mathematics and Its Applications*, **1993**, 29-46	0.5	4
34	Stability of block algorithms with fast level-3 BLAS. *ACM Transactions on Mathematical Software*, **1992**, 18, 274-291	2.3	43
33	Stability of Methods for Matrix Inversion. *IMA Journal of Numerical Analysis*, **1992**, 12, 1-19	1.8	45
32	Stability of a Method for Multiplying Complex Matrices with Three Real Matrix Multiplications. *SIAM Journal on Matrix Analysis and Applications*, **1992**, 13, 681-687	1.5	16
31	Backward Error and Condition of Structured Linear Systems. *SIAM Journal on Matrix Analysis and Applications*, **1992**, 13, 162-175	1.5	85
30	Componentwise perturbation theory for linear systems with multiple right-hand sides. *Linear Algebra and Its Applications*, **1992**, 174, 111-129	0.9	18
29	Estimating the matrixp-norm. *Numerische Mathematik*, **1992**, 62, 539-555	2.2	33
28	Iterative refinement enhances the stability ofQR factorization methods for solving linear equations. *BIT Numerical Mathematics*, **1991**, 31, 447-468	1.7	32
27	Algorithm 694. *ACM Transactions on Mathematical Software*, **1991**, 17, 289-305	2.3	44

26	Applications of Matrix Theory. *Mathematical Gazette*, **1990**, 74, 202	0.1	
25	Matrix computations. *Linear Algebra and Its Applications*, **1990**, 141, 289-292	0.9	0
24	Exploiting fast matrix multiplication within the level 3 BLAS. *ACM Transactions on Mathematical Software*, **1990**, 16, 352-368	2.3	67
23	Experience with a Matrix Norm Estimator. *SIAM Journal on Scientific and Statistical Computing*, **1990**, 11, 804-809		33
22	Fast Polar Decomposition of an Arbitrary Matrix. *SIAM Journal on Scientific and Statistical Computing*, **1990**, 11, 648-655		44
21	Bounding the Error in Gaussian Eimination for Tridiagonal Systems. *SIAM Journal on Matrix Analysis and Applications*, **1990**, 11, 521-530	1.5	27
20	Stability Analysis of Algorithms for Solving Confluent Vandermonde-Like Systems. *SIAM Journal on Matrix Analysis and Applications*, **1990**, 11, 23-41	1.5	50
19	Computing error bounds for regression problems. *Contemporary Mathematics*, **1990**, 195-208	1.6	10
18	Algorithm 674. *ACM Transactions on Mathematical Software*, **1989**, 15, 168	2.3	4
17	The Accuracy of Solutions to Triangular Systems. *SIAM Journal on Numerical Analysis*, **1989**, 26, 1252-1265	2.4	38
16	Large Growth Factors in Gaussian Elimination with Pivoting. *SIAM Journal on Matrix Analysis and Applications*, **1989**, 10, 155-164	1.5	47
15	The symmetric procrustes problem. *BIT Numerical Mathematics*, **1988**, 28, 133-143	1.7	46
14	Computing a nearest symmetric positive semidefinite matrix. *Linear Algebra and Its Applications*, **1988**, 103, 103-118	0.9	402
13	Fast Solution of Vandermonde-Like Systems Involving Orthogonal Polynomials. *IMA Journal of Numerical Analysis*, **1988**, 8, 473-486	1.8	50
12	FORTRAN codes for estimating the one-norm of a real or complex matrix, with applications to condition estimation. *ACM Transactions on Mathematical Software*, **1988**, 14, 381-396	2.3	112
11	A Survey of Condition Number Estimation for Triangular Matrices. *SIAM Review*, **1987**, 29, 575-596	7.4	111
10	Error analysis of the Björck-Pereyra algorithms for solving Vandermonde systems. *Numerische Mathematik*, **1987**, 50, 613-632	2.2	67
9	Computing real square roots of a real matrix. *Linear Algebra and Its Applications*, **1987**, 88-89, 405-430	0.9	129

8	Newton's Method for the Matrix Square Root. *Mathematics of Computation*, **1986**, 46, 537	1.6	24
7	Newton's method for the matrix square root. *Mathematics of Computation*, **1986**, 46, 537-537	1.6	59
6	Computing the Polar Decomposition with Applications. *SIAM Journal on Scientific and Statistical Computing*, **1986**, 7, 1160-1174		246
5	Efficient Algorithms for Computing the Condition Number of a Tridiagonal Matrix. *SIAM Journal on Scientific and Statistical Computing*, **1986**, 7, 150-165		33
4	Explicit Solutions to Correlation Matrix Completion Problems, with an Application to Risk Management and Insurance. *SSRN Electronic Journal*,	1	1
3	Matrix Depot: an extensible test matrix collection for Julia. *PeerJ Computer Science*,2, e58	2.7	7
2	Solving block low-rank linear systems by LU factorization is numerically stable. *IMA Journal of Numerical Analysis*,	1.8	2
1	Anymatrix: an extensible MATLAB matrix collection. *Numerical Algorithms*,1	2.1	1