

# Daniel Kressner

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8793634/publications.pdf>

Version: 2024-02-01

124  
papers

2,817  
citations

257450

24  
h-index

214800

47  
g-index

125  
all docs

125  
docs citations

125  
times ranked

1646  
citing authors

#	ARTICLE	IF	CITATIONS
1	A literature survey of low-rank tensor approximation techniques. <i>GAMM Mitteilungen</i> , 2013, 36, 53-78.	5.5	403
2	Low-rank tensor completion by Riemannian optimization. <i>BIT Numerical Mathematics</i> , 2014, 54, 447-468.	2.0	185
3	Low-Rank Tensor Krylov Subspace Methods for Parametrized Linear Systems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2011, 32, 1288-1316.	1.4	129
4	Krylov Subspace Methods for Linear Systems with Tensor Product Structure. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2010, 31, 1688-1714.	1.4	122
5	Learning Heat Diffusion Graphs. <i>IEEE Transactions on Signal and Information Processing Over Networks</i> , 2017, 3, 484-499.	2.8	93
6	A block Newton method for nonlinear eigenvalue problems. <i>Numerische Mathematik</i> , 2009, 114, 355-372.	1.9	91
7	Distributed Signal Processing via Chebyshev Polynomial Approximation. <i>IEEE Transactions on Signal and Information Processing Over Networks</i> , 2018, 4, 736-751.	2.8	80
8	Implicit QR algorithms for palindromic and even eigenvalue problems. <i>Numerical Algorithms</i> , 2009, 51, 209-238.	1.9	67
9	Parallel algorithms for tensor completion in the CP format. <i>Parallel Computing</i> , 2016, 57, 222-234.	2.1	57
10	Chebyshev interpolation for nonlinear eigenvalue problems. <i>BIT Numerical Mathematics</i> , 2012, 52, 933-951.	2.0	55
11	Preconditioned Low-Rank Methods for High-Dimensional Elliptic PDE Eigenvalue Problems. <i>Computational Methods in Applied Mathematics</i> , 2011, 11, 363-381.	0.8	54
12	Structured Eigenvalue Condition Numbers. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2006, 28, 1052-1068.	1.4	52
13	Algorithm 941. <i>ACM Transactions on Mathematical Software</i> , 2014, 40, 1-22.	2.9	48
14	Low-Rank Tensor Methods with Subspace Correction for Symmetric Eigenvalue Problems. <i>SIAM Journal of Scientific Computing</i> , 2014, 36, A2346-A2368.	2.8	44
15	Algorithm 953. <i>ACM Transactions on Mathematical Software</i> , 2015, 41, 1-23.	2.9	40
16	Structured Condition Numbers for Invariant Subspaces. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2006, 28, 326-347.	1.4	39
17	A mixed-precision algorithm for the solution of Lyapunov equations on hybrid CPU-GPU platforms. <i>Parallel Computing</i> , 2011, 37, 439-450.	2.1	37
18	A fast algorithm for subspace state-space system identification via exploitation of the displacement structure. <i>Journal of Computational and Applied Mathematics</i> , 2001, 132, 71-81.	2.0	36

#	ARTICLE	IF	CITATIONS
19	Skew-Hamiltonian and Hamiltonian Eigenvalue Problems: Theory, Algorithms and Applications. , 2005, , 3-39.		33
20	Computing periodic deflating subspaces associated with a specified set of eigenvalues. BIT Numerical Mathematics, 2007, 47, 763-791.	2.0	30
21	On the computation of structured singular values and pseudospectra. Systems and Control Letters, 2010, 59, 122-129.	2.3	30
22	Subspace Methods for Computing the Pseudospectral Abscissa and the Stability Radius. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 292-313.	1.4	29
23	Blocked algorithms for the reduction to Hessenberg-triangular form revisited. BIT Numerical Mathematics, 2008, 48, 563-584.	2.0	28
24	On the structured distance to uncontrollability. Systems and Control Letters, 2009, 58, 128-132.	2.3	27
25	Preconditioned Low-rank Riemannian Optimization for Linear Systems with Tensor Product Structure. SIAM Journal of Scientific Computing, 2016, 38, A2018-A2044.	2.8	27
26	Fusion of Digital Elevation Models Using Sparse Representations. Lecture Notes in Computer Science, 2011, , 171-184.	1.3	27
27	Block variants of Hammarling's method for solving Lyapunov equations. ACM Transactions on Mathematical Software, 2008, 34, 1-15.	2.9	25
28	Multishift Variants of the QZ Algorithm with Aggressive Early Deflation. SIAM Journal on Matrix Analysis and Applications, 2007, 29, 199-227.	1.4	24
29	Continuation of eigenvalues and invariant pairs for parameterized nonlinear eigenvalue problems. Numerische Mathematik, 2011, 119, 489-516.	1.9	24
30	Perturbation, extraction and refinement of invariant pairs for matrix polynomials. Linear Algebra and Its Applications, 2011, 435, 514-536.	0.9	23
31	On the Condition of a Complex Eigenvalue under Real Perturbations. BIT Numerical Mathematics, 2004, 44, 209-214.	2.0	22
32	Structured Eigenvalue Problems. GAMM Mitteilungen, 2006, 29, 297-318.	5.5	22
33	Die SLICOT-Toolboxen für MatlabThe SLICOT Toolboxes for Matlab. Automatisierungstechnik, 2010, 58, 15-25.	0.8	22
34	A Novel Parallel QR Algorithm for Hybrid Distributed Memory HPC Systems. SIAM Journal of Scientific Computing, 2010, 32, 2345-2378.	2.8	22
35	Low rank differential equations for Hamiltonian matrix nearness problems. Numerische Mathematik, 2015, 129, 279-319.	1.9	22
36	hm-toolbox: MATLAB Software for HODLR and HSS Matrices. SIAM Journal of Scientific Computing, 2020, 42, C43-C68.	2.8	22

#	ARTICLE	IF	CITATIONS
37	On low-rank approximability of solutions to high-dimensional operator equations and eigenvalue problems. <i>Linear Algebra and Its Applications</i> , 2016, 493, 556-572.	0.9	21
38	Fast Computation of the Matrix Exponential for a Toeplitz Matrix. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2018, 39, 23-47.	1.4	20
39	Structured Hölder Condition Numbers for Multiple Eigenvalues. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2009, 31, 175-201.	1.4	19
40	Memory-efficient Arnoldi algorithms for linearizations of matrix polynomials in Chebyshev basis. <i>Numerical Linear Algebra With Applications</i> , 2014, 21, 569-588.	1.6	19
41	A preconditioned low-rank CG method for parameter-dependent Lyapunov matrix equations. <i>Numerical Linear Algebra With Applications</i> , 2014, 21, 666-684.	1.6	19
42	Truncated low-rank methods for solving general linear matrix equations. <i>Numerical Linear Algebra With Applications</i> , 2015, 22, 564-583.	1.6	19
43	An indefinite variant of LOBPCG for definite matrix pencils. <i>Numerical Algorithms</i> , 2014, 66, 681-703.	1.9	18
44	Generalized eigenvalue problems with specified eigenvalues. <i>IMA Journal of Numerical Analysis</i> , 2014, 34, 480-501.	2.9	18
45	Low-Rank Updates of Matrix Functions. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2018, 39, 539-565.	1.4	17
46	Low-Rank Updates and a Divide-And-Conquer Method for Linear Matrix Equations. <i>SIAM Journal of Scientific Computing</i> , 2019, 41, A848-A876.	2.8	17
47	Algorithm 854. <i>ACM Transactions on Mathematical Software</i> , 2006, 32, 352-373.	2.9	16
48	Condensed forms for the symmetric eigenvalue problem on multi-threaded architectures. <i>Concurrency Computation Practice and Experience</i> , 2011, 23, 694-707.	2.2	16
49	On the eigenvalue decay of solutions to operator Lyapunov equations. <i>Systems and Control Letters</i> , 2014, 73, 42-47.	2.3	16
50	Subspace Acceleration for Large-Scale Parameter-Dependent Hermitian Eigenproblems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2016, 37, 695-718.	1.4	16
51	Recompression of Hadamard Products of Tensors in Tucker Format. <i>SIAM Journal of Scientific Computing</i> , 2017, 39, A1879-A1902.	2.8	16
52	A periodic Krylov-Schur algorithm for large matrix products. <i>Numerische Mathematik</i> , 2006, 103, 461-483.	1.9	14
53	Structured eigenvalue condition numbers and linearizations for matrix polynomials. <i>Linear Algebra and Its Applications</i> , 2011, 435, 2193-2221.	0.9	14
54	Linearization techniques for band structure calculations in absorbing photonic crystals. <i>International Journal for Numerical Methods in Engineering</i> , 2012, 89, 180-191.	2.8	14

#	ARTICLE	IF	CITATIONS
55	Low-Rank Tensor Methods for Communicating Markov Processes. Lecture Notes in Computer Science, 2014, , 25-40.	1.3	14
56	Block algorithms for reordering standard and generalized Schur forms. ACM Transactions on Mathematical Software, 2006, 32, 521-532.	2.9	13
57	On a Perturbation Bound for Invariant Subspaces of Matrices. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 599-618.	1.4	13
58	A Novel Iterative Method To Approximate Structured Singular Values. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 361-386.	1.4	13
59	On Randomized Trace Estimates for Indefinite Matrices with an Application to Determinants. Foundations of Computational Mathematics, 2022, 22, 875-903.	2.5	13
60	The periodic QR algorithm is a disguised QR algorithm. Linear Algebra and Its Applications, 2006, 417, 423-433.	0.9	12
61	A Parallel QZ Algorithm for Distributed Memory HPC Systems. SIAM Journal of Scientific Computing, 2014, 36, C480-C503.	2.8	12
62	Low-Rank Tensor Approximation for Chebyshev Interpolation in Parametric Option Pricing. SIAM Journal on Financial Mathematics, 2020, 11, 897-927.	1.3	12
63	Structure preservation: a challenge in computational control. Future Generation Computer Systems, 2003, 19, 1243-1252.	7.5	11
64	Low-Rank Tensor Approximation for High-Order Correlation Functions of Gaussian Random Fields. SIAM-ASA Journal on Uncertainty Quantification, 2015, 3, 393-416.	2.0	10
65	An Efficient and Reliable Implementation of the Periodic QZ Algorithm. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 183-188.	0.4	9
66	Parallel eigenvalue reordering in real Schur forms. Concurrency Computation Practice and Experience, 2009, 21, 1225-1250.	2.2	9
67	Optimal Image Alignment With Random Projections of Manifolds: Algorithm and Geometric Analysis. IEEE Transactions on Image Processing, 2011, 20, 1543-1557.	9.8	9
68	An Error Analysis of Galerkin Projection Methods for Linear Systems with Tensor Product Structure. SIAM Journal on Numerical Analysis, 2013, 51, 3307-3326.	2.3	9
69	A Krylov Subspace Method for the Approximation of Bivariate Matrix Functions. Springer INdAM Series, 2019, , 197-214.	0.5	9
70	Low-Rank Approximation in the Frobenius Norm by Column and Row Subset Selection. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 1651-1673.	1.4	9
71	Block Algorithms for Orthogonal Symplectic Factorizations. BIT Numerical Mathematics, 2003, 43, 775-790.	2.0	8
72	MATLAB TOOLS FOR SOLVING PERIODIC EIGENVALUE PROBLEMS1 1Supported by the Swedish Foundation for Strategic Research under the Frame Programme Grant A3 02:128.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 169-174.	0.4	8

#	ARTICLE	IF	CITATIONS
73	The Effect of Aggressive Early Deflation on the Convergence of the QR Algorithm. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 805-821.	1.4	8
74	Interpolation-based solution of a nonlinear eigenvalue problem in fluid-structure interaction. Proceedings in Applied Mathematics and Mechanics, 2012, 12, 633-634.	0.2	8
75	Fast Computation of Spectral Projectors of Banded Matrices. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 984-1009.	1.4	8
76	Recursive blocked algorithms for linear systems with Kronecker product structure. Numerical Algorithms, 2020, 84, 1199-1216.	1.9	8
77	On maximum volume submatrices and cross approximation for symmetric semidefinite and diagonally dominant matrices. Linear Algebra and Its Applications, 2020, 593, 251-268.	0.9	8
78	Functional Tucker Approximation Using Chebyshev Interpolation. SIAM Journal of Scientific Computing, 2021, 43, A2190-A2210.	2.8	8
79	Improved Variants of the Hutch++ Algorithm for Trace Estimation. SIAM Journal on Matrix Analysis and Applications, 2022, 43, 1162-1185.	1.4	8
80	Matrices with Hierarchical Low-Rank Structures. Lecture Notes in Mathematics, 2016, , 161-209.	0.2	7
81	New Hamiltonian Eigensolvers with Applications in Control. , 0, , .		6
82	Perturbation Bounds for Isotropic Invariant Subspaces of Skew-Hamiltonian Matrices. SIAM Journal on Matrix Analysis and Applications, 2005, 26, 947-961.	1.4	6
83	Memory-efficient Krylov subspace techniques for solving large-scale Lyapunov equations. , 2008, , .		6
84	Optimally packed chains of bulges in multishift QR algorithms. ACM Transactions on Mathematical Software, 2014, 40, 1-15.	2.9	6
85	Computing Extremal Points of Symplectic Pseudospectra and Solving Symplectic Matrix Nearness Problems. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 1407-1428.	1.4	6
86	Projection methods for large-scale T-Sylvester equations. Mathematics of Computation, 2016, 85, 2427-2455.	2.1	6
87	Subspace Acceleration for the Crawford Number and Related Eigenvalue Optimization Problems. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 961-982.	1.4	6
88	Norm and Trace Estimation with Random Rank-one Vectors. SIAM Journal on Matrix Analysis and Applications, 2021, 42, 202-223.	1.4	6
89	Reordering the Eigenvalues of a Periodic Matrix Pair with Applications in Control. , 2006, , .		6
90	Bivariate matrix functions. Operators and Matrices, 2014, , 449-466.	0.3	6

#	ARTICLE	IF	CITATIONS
91	A parallel Schur method for solving continuous-time algebraic Riccati equations. , 2008, , .		5
92	Reduced Basis Methods: From Low-Rank Matrices to Low-Rank Tensors. SIAM Journal of Scientific Computing, 2016, 38, A2045-A2067.	2.8	5
93	Low-Rank Updates of Matrix Functions II: Rational Krylov Methods. SIAM Journal on Numerical Analysis, 2021, 59, 1325-1347.	2.3	5
94	Accelerating Model Reduction of Large Linear Systems with Graphics Processors. Lecture Notes in Computer Science, 2012, , 88-97.	1.3	5
95	Parallel Variants of the Multishift QZ Algorithm with Advanced Deflation Techniques. , 2007, , 117-126.		5
96	Distance Problems for Linear Dynamical Systems. , 2015, , 559-583.		4
97	Perturbation of Higher-Order Singular Values. SIAM Journal on Applied Algebra and Geometry, 2017, 1, 374-387.	1.4	4
98	Structure-preserving eigenvalue solvers for robust stability and controllability estimates. , 2006, , .		3
99	Optimal similarity registration of volumetric images. , 2011, , .		3
100	A block algorithm for computing antitriangular factorizations of symmetric matrices. Numerical Algorithms, 2016, 71, 41-57.	1.9	3
101	Structure-Preserving Low Multilinear Rank Approximation of Antisymmetric Tensors. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 967-983.	1.4	3
102	Multilevel tensor approximation of PDEs with random data. Stochastics and Partial Differential Equations: Analysis and Computations, 2017, 5, 400-427.	0.9	3
103	A Householder-Based Algorithm for Hessenberg-Triangular Reduction. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 1270-1294.	1.4	3
104	On Aggressive Early Deflation in Parallel Variants of the QR Algorithm. Lecture Notes in Computer Science, 2012, , 1-10.	1.3	3
105	Hierarchical adaptive low-rank format with applications to discretized partial differential equations. Numerical Linear Algebra With Applications, 2022, 29, .	1.6	3
106	Fast global spectral methods for three-dimensional partial differential equations. IMA Journal of Numerical Analysis, 2023, 43, 1519-1542.	2.9	3
107	Reordering the eigenvalues of a periodic matrix pair with applications in control. , 2006, , .		2
108	Finding the distance to instability of a large sparse matrix. , 2006, , .		2

#	ARTICLE	IF	CITATIONS
109	Balancing sparse Hamiltonian eigenproblems. <i>Linear Algebra and Its Applications</i> , 2006, 415, 3-19.	0.9	2
110	Deflation in Krylov subspace methods and distance to uncontrollability. <i>Annali Dell'Universita Di Ferrara</i> , 2007, 53, 309-318.	1.3	2
111	New SLICOT routines based on structured eigensolvers. , 2012, , .		2
112	Nonlinear Eigenvalue Problems with Specified Eigenvalues. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2014, 35, 819-834.	1.4	2
113	Low-rank updates and divide-and-conquer methods for quadratic matrix equations. <i>Numerical Algorithms</i> , 2020, 84, 717-741.	1.9	2
114	Compress-and-restart block Krylov subspace methods for Sylvester matrix equations. <i>Numerical Linear Algebra With Applications</i> , 2021, 28, e2339.	1.6	2
115	A fast spectral divide-and-conquer method for banded matrices. <i>Numerical Linear Algebra With Applications</i> , 2021, 28, e2365.	1.6	2
116	Computing low-rank rightmost eigenpairs of a class of matrix-valued linear operators. <i>Advances in Computational Mathematics</i> , 2021, 47, 1.	1.6	2
117	Computing codimensions and generic canonical forms for generalized matrix products. <i>Electronic Journal of Linear Algebra</i> , 0, 22, .	0.6	2
118	Divide-and-Conquer Methods for Functions of Matrices with Banded or Hierarchical Low-Rank Structure. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2022, 43, 151-177.	1.4	2
119	Finding the Distance to Instability of a Large Sparse Matrix. , 2006, , .		1
120	Continuation Methods for Riemannian Optimization. <i>SIAM Journal on Optimization</i> , 2022, 32, 1069-1093.	2.0	1
121	Preface to the 15th ILAS Conference Proceedings Cancun, Mexico 2008. <i>Linear Algebra and Its Applications</i> , 2010, 432, 1865-1866.	0.9	0
122	7th Workshop on Matrix Equations and Tensor Techniques. <i>Numerical Linear Algebra With Applications</i> , 2018, 25, e2223.	1.6	0
123	Numerical Mathematics and Control. <i>Vietnam Journal of Mathematics</i> , 2020, 48, 615-620.	0.8	0
124	Recent Advances in Dense Linear Algebra: Minisymposium Abstract. <i>Lecture Notes in Computer Science</i> , 2007, , 116-116.	1.3	0