

Daniel B Szyld

List of Publications by Year in descending order

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104
papers

3,023
citations

186265

28
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182427

51
g-index

109
all docs

109
docs citations

109
times ranked

1211
citing authors

#	ARTICLE	IF	CITATIONS
1	Asynchronous Richardson iterations: theory and practice. Numerical Algorithms, 2021, 87, 1635-1651.	1.9	4
2	Numerical solution of singular Lyapunov equations. Numerical Linear Algebra With Applications, 2021, 28, e2381.	1.6	1
3	Synchronous and asynchronous optimized Schwarz methods for one-way subdivision of bounded domains. Numerical Linear Algebra With Applications, 2020, 27, e2279.	1.6	3
4	Block Krylov Subspace Methods for Functions of Matrices II: Modified Block FOM. SIAM Journal on Matrix Analysis and Applications, 2020, 41, 804-837.	1.4	9
5	Scalable Asynchronous Domain Decomposition Solvers. SIAM Journal of Scientific Computing, 2020, 42, C384-C409.	2.8	8
6	Dynamic jamming of dense suspensions under tilted impact. Physical Review Fluids, 2019, 4, .	2.5	12
7	Convergence of Asynchronous Optimized Schwarz Methods in the Plane. Lecture Notes in Computational Science and Engineering, 2018, , 333-341.	0.3	3
8	GMRES with multiple preconditioners. SeMA Journal, 2017, 74, 213-231.	2.0	9
9	Preconditioned Multishift BiCG for \mathcal{H}_2 -Optimal Model Reduction. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 401-424.	1.4	18
10	Multipreconditioned Gmres for Shifted Systems. SIAM Journal of Scientific Computing, 2017, 39, S222-S247.	2.8	16
11	The Radau–Lanczos Method for Matrix Functions. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 710-732.	1.4	6
12	Asynchronous optimized Schwarz methods with and without overlap. Numerische Mathematik, 2017, 137, 199-227.	1.9	32
13	Preconditioned eigensolvers for large-scale nonlinear Hermitian eigenproblems with variational characterizations. I. Extreme eigenvalues. Mathematics of Computation, 2016, 85, 2887-2918.	2.1	9
14	Constraint Preconditioning for the Coupled Stokes–Darcy System. SIAM Journal of Scientific Computing, 2016, 38, A668-A690.	2.8	26
15	Efficient low-rank solution of generalized Lyapunov equations. Numerische Mathematik, 2016, 134, 327-342.	1.9	32
16	Domain Overlap for Iterative Sparse Triangular Solves on GPUs. Lecture Notes in Computational Science and Engineering, 2016, , 527-545.	0.3	5
17	Preconditioned Eigensolvers for Large-Scale Nonlinear Hermitian Eigenproblems with Variational Characterizations. II. Interior Eigenvalues. SIAM Journal of Scientific Computing, 2015, 37, A2969-A2997.	2.8	7
18	Nonlinear Schwarz iterations with reduced rank extrapolation. Applied Numerical Mathematics, 2015, 94, 209-221.	2.1	9

#	ARTICLE	IF	CITATIONS
19	Local convergence of Newton-like methods for degenerate eigenvalues of nonlinear eigenproblems. I. Classical algorithms. <i>Numerische Mathematik</i> , 2015, 129, 353-381.	1.9	7
20	Local convergence of Newton-like methods for degenerate eigenvalues of nonlinear eigenproblems: II. Accelerated algorithms. <i>Numerische Mathematik</i> , 2015, 129, 383-403.	1.9	4
21	On two numerical methods for the solution of large-scale algebraic Riccati equations. <i>IMA Journal of Numerical Analysis</i> , 2014, 34, 904-920.	2.9	40
22	Additive Schwarz with Variable Weights. <i>Lecture Notes in Computational Science and Engineering</i> , 2014, , 779-787.	0.3	5
23	On the performance of the algebraic optimized Schwarz methods with applications. <i>Numerical Algorithms</i> , 2014, 67, 889-916.	1.9	0
24	On necessary conditions for convergence of stationary iterative methods for Hermitian semidefinite linear systems. <i>Linear Algebra and Its Applications</i> , 2014, 453, 192-201.	0.9	2
25	Nearly positive matrices. <i>Linear Algebra and Its Applications</i> , 2014, 449, 520-544.	0.9	5
26	Krylov subspace recycling for sequences of shifted linear systems. <i>Applied Numerical Mathematics</i> , 2014, 81, 105-118.	2.1	36
27	Local convergence analysis of several inexact Newton-type algorithms for general nonlinear eigenvalue problems. <i>Numerische Mathematik</i> , 2013, 123, 333-362.	1.9	22
28	Overlapping Blocks by Growing a Partition with Applications to Preconditioning. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, A453-A473.	2.8	2
29	The Optimized Schwarz Method with a Coarse Grid Correction. <i>SIAM Journal of Scientific Computing</i> , 2012, 34, A421-A458.	2.8	40
30	Short-Term Recurrence Krylov Subspace Methods for Nearly Hermitian Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2012, 33, 480-500.	1.4	4
31	An Optimal Block Iterative Method and Preconditioner for Banded Matrices with Applications to PDEs on Irregular Domains. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2012, 33, 653-680.	1.4	11
32	A new look at CMRH and its relation to GMRES. <i>BIT Numerical Mathematics</i> , 2012, 52, 485-501.	2.0	18
33	Efficient Preconditioned Inner Solves For Inexact Rayleigh Quotient Iteration And Their Connections To The Single-Vector Jacobiâ€“Davidson Method. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2011, 32, 993-1018.	1.4	16
34	Diffusion on a Tensor Product Graph for Semi-Supervised Learning and Interactive Image Segmentation. <i>Advances in Imaging and Electron Physics</i> , 2011, 169, 147-172.	0.2	0
35	On the geometric convergence of optimized Schwarz methods with applications to elliptic problems. <i>Numerische Mathematik</i> , 2010, 114, 697-728.	1.9	16
36	On the field of values of oblique projections. <i>Linear Algebra and Its Applications</i> , 2010, 433, 810-818.	0.9	1

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37	Interpreting IDR as a Petrov-Galerkin Method. SIAM Journal of Scientific Computing, 2010, 32, 1898-1912.	2.8	26
38	Two characterizations of matrices with the Perron-Frobenius property. Numerical Linear Algebra With Applications, 2009, 16, 863-869.	1.6	4
39	On the Convergence of Optimized Schwarz Methods by way of Matrix Analysis. Lecture Notes in Computational Science and Engineering, 2009, , 363-370.	0.3	2
40	Inexact GMRES for singular linear systems. BIT Numerical Mathematics, 2008, 48, 511-531.	2.0	8
41	On Hybrid Multigrid-Schwarz Algorithms. Journal of Scientific Computing, 2008, 36, 165-175.	2.3	9
42	New conditions for non-stagnation of minimal residual methods. Numerische Mathematik, 2008, 109, 477-487.	1.9	10
43	A note on the mesh independence of convergence bounds for additive Schwarz preconditioned GMRES. Numerical Linear Algebra With Applications, 2008, 15, 547-557.	1.6	1
44	Generalizations of M-matrices which may not have a nonnegative inverse. Linear Algebra and Its Applications, 2008, 429, 2435-2450.	0.9	18
45	Convergence of Stationary Iterative Methods for Hermitian Semidefinite Linear Systems and Applications to Schwarz Methods. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 925-938.	1.4	16
46	Schwarz Iterations for Symmetric Positive Semidefinite Problems. SIAM Journal on Matrix Analysis and Applications, 2007, 29, 98-116.	1.4	15
47	Extensions of Certain Graph-based Algorithms for Preconditioning. SIAM Journal of Scientific Computing, 2007, 29, 2144-2161.	2.8	5
48	Recent computational developments in Krylov subspace methods for linear systems. Numerical Linear Algebra With Applications, 2007, 14, 1-59.	1.6	256
49	Optimal left and right additive Schwarz preconditioning for minimal residual methods with Euclidean and energy norms. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 1612-1621.	6.6	21
50	A Proposal for a Dynamically Adapted Inexact Additive Schwarz Preconditioner. , 2007, , 341-345.		0
51	The many proofs of an identity on the norm of oblique projections. Numerical Algorithms, 2006, 42, 309-323.	1.9	96
52	The effect of non-optimal bases on the convergence of Krylov subspace methods. Numerische Mathematik, 2005, 100, 711-733.	1.9	13
53	Algebraic Analysis of Schwarz Methods for Singular Systems. , 2005, , 647-652.		1
54	On the Occurrence of Superlinear Convergence of Exact and Inexact Krylov Subspace Methods. SIAM Review, 2005, 47, 247-272.	9.5	45

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55	Additive Schwarz Iterations for Markov Chains. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2005, 27, 445-458.	1.4	32
56	Overlapping additive and multiplicative Schwarz iterations for H-matrices. <i>Linear Algebra and Its Applications</i> , 2004, 393, 91-105.	0.9	14
57	Algebraic Schwarz methods for the numerical solution of Markov chains. <i>Linear Algebra and Its Applications</i> , 2004, 386, 67-81.	0.9	20
58	Conditions for strict inequality in comparisons of spectral radii of splittings of different matrices. <i>Linear Algebra and Its Applications</i> , 2003, 363, 65-80.	0.9	13
59	Theory of Inexact Krylov Subspace Methods and Applications to Scientific Computing. <i>SIAM Journal of Scientific Computing</i> , 2003, 25, 454-477.	2.8	158
60	Convergence Theory of Restricted Multiplicative Schwarz Methods. <i>SIAM Journal on Numerical Analysis</i> , 2002, 40, 2318-2336.	2.3	24
61	Flexible Inner-Outer Krylov Subspace Methods. <i>SIAM Journal on Numerical Analysis</i> , 2002, 40, 2219-2239.	2.3	95
62	Comparison of Convergence of General Stationary Iterative Methods for Singular Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2002, 24, 68-77.	1.4	14
63	Nonstationary Multisplittings with General Weighting Matrices. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2001, 22, 1089-1094.	1.4	24
64	FQMR: A Flexible Quasi-Minimal Residual Method with Inexact Preconditioning. <i>SIAM Journal of Scientific Computing</i> , 2001, 23, 363-380.	2.8	36
65	An Algebraic Convergence Theory for Restricted Additive Schwarz Methods Using Weighted Max Norms. <i>SIAM Journal on Numerical Analysis</i> , 2001, 39, 463-479.	2.3	68
66	Algebraic theory of multiplicative Schwarz methods. <i>Numerische Mathematik</i> , 2001, 89, 605-639.	1.9	67
67	Perspectives on asynchronous computations for fluid flow problems. , 2001, , 977-980.		3
68	Comparison theorems for the convergence factor of iterative methods for singular matrices. <i>Linear Algebra and Its Applications</i> , 2000, 316, 67-87.	0.9	15
69	On asynchronous iterations. <i>Journal of Computational and Applied Mathematics</i> , 2000, 123, 201-216.	2.0	179
70	Convergence of some asynchronous nonlinear multisplitting methods. <i>Numerical Algorithms</i> , 2000, 25, 347-361.	1.9	6
71	Block and asynchronous two-stage methods for mildly nonlinear systems. <i>Numerische Mathematik</i> , 1999, 82, 1-20.	1.9	31
72	Weighted max norms, splittings, and overlapping additive Schwarz iterations. <i>Numerische Mathematik</i> , 1999, 83, 259-278.	1.9	86

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73	Timing Models and Local Stopping Criteria for Asynchronous Iterative Algorithms. Journal of Parallel and Distributed Computing, 1999, 58, 446-465.	4.1	25
74	Orderings for Incomplete Factorization Preconditioning of Nonsymmetric Problems. SIAM Journal of Scientific Computing, 1999, 20, 1652-1670.	2.8	98
75	Existence and uniqueness of splittings for stationary iterative methods with applications to alternating methods. Numerische Mathematik, 1997, 76, 309-321.	1.9	83
76	A projection cutting plane algorithm for convex programming problems. Applied Mathematics and Computation, 1996, 74, 261-271.	2.2	0
77	Two-stage Multisplitting Methods with Overlapping Blocks. Numerical Linear Algebra With Applications, 1996, 3, 113-124.	1.6	29
78	Block Two-stage Methods for Singular Systems and Markov Chains. Numerical Linear Algebra With Applications, 1996, 3, 413-426.	1.6	37
79	Nonstationary parallel relaxed multisplitting methods. Linear Algebra and Its Applications, 1996, 241-243, 733-747.	0.9	22
80	Two-stage Multisplitting Methods with Overlapping Blocks. Numerical Linear Algebra With Applications, 1996, 3, 113-124.	1.6	4
81	Regions of convergence of the Rayleigh quotient iteration method. Numerical Linear Algebra With Applications, 1995, 2, 251-269.	1.6	11
82	Local convergence of the (exact and inexact) iterative aggregation method for linear systems and Markov operators. Numerische Mathematik, 1994, 69, 61-82.	1.9	13
83	Asynchronous two-stage iterative methods. Numerische Mathematik, 1994, 69, 141-153.	1.9	63
84	Equivalence of conditions for convergence of iterative methods for singular equations. Numerical Linear Algebra With Applications, 1994, 1, 151-154.	1.6	27
85	Iterative and semi-iterative methods for computing stationary probability vectors of Markov operators. Mathematics of Computation, 1993, 61, 719-719.	2.1	21
86	Local Convergence of (Exact and Inexact) Iterative Aggregation. The IMA Volumes in Mathematics and Its Applications, 1993, , 137-143.	0.5	4
87	Two-Stage and Multisplitting Methods for the Parallel Solution of Linear Systems. SIAM Journal on Matrix Analysis and Applications, 1992, 13, 671-679.	1.4	73
88	A sequence of lower bounds for the spectral radius of nonnegative matrices. Linear Algebra and Its Applications, 1992, 174, 239-242.	0.9	3
89	H-Splittings and two-stage iterative methods. Numerische Mathematik, 1992, 63, 345-356.	1.9	207
90	Pseudoirreducible and pseudoprimitive bounded operators. Linear Algebra and Its Applications, 1991, 154-156, 779-791.	0.9	3

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91	Comparison theorems for weak splittings of bounded operators. <i>Numerische Mathematik</i> , 1990, 58, 387-397.	1.9	77
92	Convergence of nested classical iterative methods for linear systems. <i>Numerische Mathematik</i> , 1990, 58, 685-702.	1.9	88
93	Splittings of M -operators: Irreducibility and the index of the iteration operator. <i>Numerical Functional Analysis and Optimization</i> , 1990, 11, 529-553.	1.4	26
94	A Block Ordering Method for Sparse Matrices. <i>SIAM Journal on Scientific and Statistical Computing</i> , 1990, 11, 811-823.	1.5	43
95	Criteria for Combining Inverse and Rayleigh Quotient Iteration. <i>SIAM Journal on Numerical Analysis</i> , 1988, 25, 1369-1375.	2.3	41
96	New Approaches in Economic Analysis. <i>Science</i> , 1985, 228, 419-422.	12.6	16
97	Conditions for the Existence of a Balance Growth Solution for the Leontief Dynamic Input-Output Model. <i>Econometrica</i> , 1985, 53, 1411.	4.2	30
98	Bilateral representation of trade for inter- regional models. <i>Applied Mathematical Modelling</i> , 1984, 8, 50-52.	4.2	1
99	Application of sparse matrix techniques to inter-regional input-output analysis. <i>Economic Change and Restructuring</i> , 1979, 15, 142-167.	0.4	9
100	Subdirect sums of nonsingular M -matrices and of their inverses. <i>Electronic Journal of Linear Algebra</i> , 0, 13, .	0.6	32
101	Subdirect sums of S -strictly diagonally dominant matrices. <i>Electronic Journal of Linear Algebra</i> , 0, 15, .	0.6	20
102	On general matrices having the Perron-Frobenius Property. <i>Electronic Journal of Linear Algebra</i> , 0, 17, .	0.6	33
103	Paths of matrices with the strong Perron-Frobenius property converging to a given matrix with the Perron-Frobenius property. <i>Electronic Journal of Linear Algebra</i> , 0, 19, .	0.6	2
104	Matrix functions preserving sets of generalized nonnegative matrices. <i>Electronic Journal of Linear Algebra</i> , 0, 20, .	0.6	2