

# Michele Benzi

## List of Publications by Year in descending order

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102  
papers

7,914  
citations

116194

36  
h-index

56606

87  
g-index

104  
all docs

104  
docs citations

104  
times ranked

3742  
citing authors

#	ARTICLE	IF	CITATIONS
1	Rational Krylov methods for fractional diffusion problems on graphs. BIT Numerical Mathematics, 2022, 62, 357-385.	1.0	6
2	Preconditioning techniques for the coupled Stokes-Darcy problem: spectral and field-of-values analysis. Numerische Mathematik, 2022, 150, 257-298.	0.9	7
3	Low- and high-density forms of liquid water revealed by a new medium-range order descriptor. Journal of Molecular Liquids, 2022, 355, 118922.	2.3	11
4	Refined decay bounds on the entries of spectral projectors associated with sparse Hermitian matrices. Linear Algebra and Its Applications, 2022, 647, 1-30.	0.4	3
5	Some uses of the field of values in numerical analysis. Bolletino Dell Unione Matematica Italiana, 2021, 14, 159-177.	0.6	9
6	Fast Iterative Solution of the Optimal Transport Problem on Graphs. SIAM Journal of Scientific Computing, 2021, 43, A2295-A2319.	1.3	10
7	Going Beyond the Limits of Classical Atomistic Modeling of Plasmonic Nanostructures. Journal of Physical Chemistry C, 2021, 125, 23848-23863.	1.5	11
8	Risk-Dependent Centrality in Economic and Financial Networks. SIAM Journal on Financial Mathematics, 2020, 11, 526-565.	0.7	13
9	Non-local network dynamics via fractional graph Laplacians. Journal of Complex Networks, 2020, 8, .	1.1	17
10	Uzawa-Type and Augmented Lagrangian Methods for Double Saddle Point Systems. Springer INdAM Series, 2019, , 215-236.	0.4	6
11	Graphs with absorption: Numerical methods for the absorption inverse and the computation of centrality measures. Linear Algebra and Its Applications, 2019, 574, 123-152.	0.4	4
12	Stable Computation of Generalized Matrix Functions via Polynomial Interpolation. SIAM Journal on Matrix Analysis and Applications, 2019, 40, 210-234.	0.7	9
13	Some matrix properties preserved by generalized matrix functions. Special Matrices, 2019, 7, 27-37.	0.2	5
14	A finite element method for quantum graphs. IMA Journal of Numerical Analysis, 2018, 38, 1119-1163.	1.5	21
15	Iterative Methods for Double Saddle Point Systems. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 902-921.	0.7	39
16	Block preconditioners for saddle point systems arising from liquid crystal directors modeling. Calcolo, 2018, 55, 1.	0.6	19
17	Approximation of functions of large matrices with Kronecker structure. Numerische Mathematik, 2017, 135, 1-26.	0.9	25
18	Analysis of Monte Carlo accelerated iterative methods for sparse linear systems. Numerical Linear Algebra With Applications, 2017, 24, e2088.	0.9	20

#	ARTICLE	IF	CITATIONS
19	Andr�-Louis Cholesky: Mathematician, Topographer and Army Officer by Claude Brezinski and Dominique Tourn�s. Mathematical Intelligencer, 2017, 39, 99-101.	0.1	2
20	On block diagonal and block triangular iterative schemes and preconditioners for stabilized saddle point problems. Journal of Computational and Applied Mathematics, 2017, 326, 15-30.	1.1	14
21	Core�satellite graphs: Clustering, assortativity and spectral properties. Linear Algebra and Its Applications, 2017, 517, 30-52.	0.4	10
22	Preconditioning Techniques Based on the Birkhoff�von Neumann Decomposition. Computational Methods in Applied Mathematics, 2017, 17, 201-215.	0.4	2
23	What is the meaning of the graph energy after all?. Discrete Applied Mathematics, 2017, 230, 71-77.	0.5	23
24	Regularized HSS iteration methods for saddle-point linear systems. BIT Numerical Mathematics, 2017, 57, 287-311.	1.0	44
25	Commentary on Dehmer and Mowshowitz. Complexity, 2016, 21, 19-19.	0.9	0
26	Parameter estimates for the Relaxed Dimensional Factorization preconditioner and application to hemodynamics. Computer Methods in Applied Mechanics and Engineering, 2016, 300, 129-145.	3.4	26
27	Updating and Downdating Techniques for Optimizing Network Communicability. SIAM Journal of Scientific Computing, 2016, 38, B25-B49.	1.3	29
28	Edge Modification Criteria for Enhancing the Communicability of Digraphs. SIAM Journal on Matrix Analysis and Applications, 2016, 37, 443-468.	0.7	20
29	Computation of Generalized Matrix Functions. SIAM Journal on Matrix Analysis and Applications, 2016, 37, 836-860.	0.7	19
30	Dynamic communicability and epidemic spread: a case study on an empirical dynamic contact network. Journal of Complex Networks, 2016, , cnw017.	1.1	4
31	Localization in Matrix Computations: Theory and Applications. Lecture Notes in Mathematics, 2016, , 211-317.	0.1	9
32	Decay Bounds for Functions of Hermitian Matrices with Banded or Kronecker Structure. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 1263-1282.	0.7	31
33	Special Section: 2014 Copper Mountain Conference. SIAM Journal of Scientific Computing, 2015, 37, S1-S2.	1.3	0
34	On the Limiting Behavior of Parameter-Dependent Network Centrality Measures. SIAM Journal on Matrix Analysis and Applications, 2015, 36, 686-706.	0.7	105
35	Decay properties for functions of matrices over $C$ . Linear Algebra and Its Applications, 2014, 456, 174-198.	0.4	26
36	Mauro Picone, Sandro Faedo, and the numerical solution of partial differential equations in Italy (1928�1953). Numerical Algorithms, 2014, 66, 105-145.	1.1	4

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37	Walk-based measure of balance in signed networks: Detecting lack of balance in social networks. <i>Physical Review E</i> , 2014, 90, 042802.	0.8	49
38	A note on walk entropies in graphs. <i>Linear Algebra and Its Applications</i> , 2014, 445, 395-399.	0.4	10
39	A parallel implementation of the modified augmented Lagrangian preconditioner for the incompressible Navier-Stokes equations. <i>Numerical Algorithms</i> , 2013, 64, 73-84.	1.1	10
40	Special Section: 2012 Copper Mountain Conference. <i>SIAM Journal of Scientific Computing</i> , 2013, 35, S1-S2.	1.3	0
41	Decay Properties of Spectral Projectors with Applications to Electronic Structure. <i>SIAM Review</i> , 2013, 55, 3-64.	4.2	94
42	Ranking hubs and authorities using matrix functions. <i>Linear Algebra and Its Applications</i> , 2013, 438, 2447-2474.	0.4	106
43	Atomic displacements due to spin-spin repulsion in conjugated alternant hydrocarbons. <i>Chemical Physics Letters</i> , 2013, 568-569, 184-189.	1.2	7
44	Preconditioned MHSS iteration methods for a class of block two-by-two linear systems with applications to distributed control problems. <i>IMA Journal of Numerical Analysis</i> , 2013, 33, 343-369.	1.5	173
45	TM-LDA, , ,		133
46	Assessment of a vorticity based solver for the Navier-Stokes equations. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2012, 247-248, 216-225.	3.4	5
47	The physics of communicability in complex networks. <i>Physics Reports</i> , 2012, 514, 89-119.	10.3	242
48	Special Section: 2010 Copper Mountain Conference. <i>SIAM Journal of Scientific Computing</i> , 2011, 33, 2685-2685.	1.3	0
49	Field-of-Values Convergence Analysis of Augmented Lagrangian Preconditioners for the Linearized Navier-Stokes Problem. <i>SIAM Journal on Numerical Analysis</i> , 2011, 49, 770-788.	1.1	36
50	On preconditioned MHSS iteration methods for complex symmetric linear systems. <i>Numerical Algorithms</i> , 2011, 56, 297-317.	1.1	203
51	A preconditioning technique for a class of PDE-constrained optimization problems. <i>Advances in Computational Mathematics</i> , 2011, 35, 149-173.	0.8	33
52	Numerical Solution of Markov Chains. <i>Numerical Linear Algebra With Applications</i> , 2011, 18, 897-900.	0.9	1
53	Restricted additive Schwarz methods for Markov chains. <i>Numerical Linear Algebra With Applications</i> , 2011, 18, 1011-1029.	0.9	3
54	Modified augmented Lagrangian preconditioners for the incompressible Navier-Stokes equations. <i>International Journal for Numerical Methods in Fluids</i> , 2011, 66, 486-508.	0.9	73

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55	A dimensional split preconditioner for Stokes and linearized Navier–Stokes equations. Applied Numerical Mathematics, 2011, 61, 66-76.	1.2	78
56	A Relaxed Dimensional Factorization preconditioner for the incompressible Navier–Stokes equations. Journal of Computational Physics, 2011, 230, 6185-6202.	1.9	83
57	Analysis of Augmented Lagrangian-Based Preconditioners for the Steady Incompressible Navier–Stokes Equations. SIAM Journal of Scientific Computing, 2011, 33, 2761-2784.	1.3	38
58	Modified HSS iteration methods for a class of complex symmetric linear systems. Computing (Vienna/New York), 2010, 87, 93-111.	3.2	265
59	Solution of linear systems from an optimal control problem arising in wind simulation. Numerical Linear Algebra With Applications, 2010, 17, 895-915.	0.9	5
60	New multigrid smoothers for the Oseen problem. Numerical Linear Algebra With Applications, 2010, 17, 557-576.	0.9	24
61	Quadrature rule-based bounds for functions of adjacency matrices. Linear Algebra and Its Applications, 2010, 433, 637-652.	0.4	59
62	Multilevel Algorithms for Large-Scale Interior Point Methods. SIAM Journal of Scientific Computing, 2010, 31, 4152-4175.	1.3	9
63	A Generalization of the Hermitian and Skew-Hermitian Splitting Iteration. SIAM Journal on Matrix Analysis and Applications, 2009, 31, 360-374.	0.7	99
64	Splittings of symmetric matrices and a question of Ortega. Linear Algebra and Its Applications, 2008, 429, 2340-2343.	0.4	4
65	An Augmented Lagrangian Approach to Linearized Problems in Hydrodynamic Stability. SIAM Journal of Scientific Computing, 2008, 30, 1459-1473.	1.3	18
66	Some Preconditioning Techniques for Saddle Point Problems. Mathematics in Industry, 2008, , 195-211.	0.1	29
67	An Efficient Solver for the Incompressible Navier–Stokes Equations in Rotation Form. SIAM Journal of Scientific Computing, 2007, 29, 1959-1981.	1.3	29
68	Block preconditioning for saddle point systems with indefinite (1, 1) block. International Journal of Computer Mathematics, 2007, 84, 1117-1129.	1.0	30
69	An implicit compact scheme solver for two-dimensional multicomponent flows. Computers and Fluids, 2007, 36, 376-397.	1.3	11
70	On the Iwasawa decomposition of a symplectic matrix. Applied Mathematics Letters, 2007, 20, 260-265.	1.5	17
71	Francesco Paolo Cantelli. b. 20 December 1875 d. 21 July 1966. International Statistical Review, 2007, 75, 127-130.	1.1	5
72	Preconditioned Iterative Methods for Weighted Toeplitz Least Squares Problems. SIAM Journal on Matrix Analysis and Applications, 2006, 27, 1106-1124.	0.7	65

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73	An Augmented Lagrangian-Based Approach to the Oseen Problem. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 2095-2113.	1.3	171
74	On the eigenvalues of a class of saddle point matrices. <i>Numerische Mathematik</i> , 2006, 103, 173-196.	0.9	102
75	Numerical solution of saddle point problems. <i>Acta Numerica</i> , 2005, 14, 1-137.	6.3	1,724
76	Preconditioning a mixed discontinuous finite element method for radiation diffusion. <i>Numerical Linear Algebra With Applications</i> , 2004, 11, 795-811.	0.9	18
77	A direct projection method for Markov chains. <i>Linear Algebra and Its Applications</i> , 2004, 386, 27-49.	0.4	9
78	A Preconditioner for Generalized Saddle Point Problems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2004, 26, 20-41.	0.7	349
79	Spectral Properties of the Hermitian and Skew-Hermitian Splitting Preconditioner for Saddle Point Problems. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2004, 26, 377-389.	0.7	83
80	Approximate Inverse Preconditioning for Shifted Linear Systems. <i>BIT Numerical Mathematics</i> , 2003, 43, 231-244.	1.0	57
81	Optimization of the Hermitian and Skew-Hermitian Splitting Iteration for Saddle-Point Problems. <i>BIT Numerical Mathematics</i> , 2003, 43, 881-900.	1.0	87
82	A robust incomplete factorization preconditioner for positive definite matrices. <i>Numerical Linear Algebra With Applications</i> , 2003, 10, 385-400.	0.9	77
83	A Robust Preconditioner with Low Memory Requirements for Large Sparse Least Squares Problems. <i>SIAM Journal of Scientific Computing</i> , 2003, 25, 499-512.	1.3	38
84	Preconditioning Techniques for Large Linear Systems: A Survey. <i>Journal of Computational Physics</i> , 2002, 182, 418-477.	1.9	886
85	A parallel solver for large-scale Markov chains. <i>Applied Numerical Mathematics</i> , 2002, 41, 135-153.	1.2	36
86	Algebraic theory of multiplicative Schwarz methods. <i>Numerische Mathematik</i> , 2001, 89, 605-639.	0.9	67
87	Stabilized and block approximate inverse preconditioners for problems in solid and structural mechanics. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2001, 190, 6533-6554.	3.4	52
88	Preconditioning Highly Indefinite and Nonsymmetric Matrices. <i>SIAM Journal of Scientific Computing</i> , 2000, 22, 1333-1353.	1.3	105
89	Orderings for Factorized Sparse Approximate Inverse Preconditioners. <i>SIAM Journal of Scientific Computing</i> , 2000, 21, 1851-1868.	1.3	60
90	Robust Approximate Inverse Preconditioning for the Conjugate Gradient Method. <i>SIAM Journal of Scientific Computing</i> , 2000, 22, 1318-1332.	1.3	133

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91	A comparative study of sparse approximate inverse preconditioners. Applied Numerical Mathematics, 1999, 30, 305-340.	1.2	208
92	Bounds for the Entries of Matrix Functions with Applications to Preconditioning. BIT Numerical Mathematics, 1999, 39, 417-438.	1.0	89
93	Orderings for Incomplete Factorization Preconditioning of Nonsymmetric Problems. SIAM Journal of Scientific Computing, 1999, 20, 1652-1670.	1.3	98
94	An assessment of some preconditioning techniques in shell problems. Communications in Numerical Methods in Engineering, 1998, 14, 897-906.	1.3	19
95	Numerical experiments with two approximate inverse preconditioners. BIT Numerical Mathematics, 1998, 38, 234-241.	1.0	27
96	A Sparse Approximate Inverse Preconditioner for Nonsymmetric Linear Systems. SIAM Journal of Scientific Computing, 1998, 19, 968-994.	1.3	239
97	Title is missing!. Numerical Algorithms, 1997, 16, 1-15.	1.1	93
98	Existence and uniqueness of splittings for stationary iterative methods with applications to alternating methods. Numerische Mathematik, 1997, 76, 309-321.	0.9	83
99	Remarks on the numerical solution of certain linear complementarity problems. Journal of Computational and Applied Mathematics, 1997, 83, 137-143.	1.1	1
100	A Sparse Approximate Inverse Preconditioner for the Conjugate Gradient Method. SIAM Journal of Scientific Computing, 1996, 17, 1135-1149.	1.3	312
101	THE ARITHMETIC MEAN METHOD FOR FINDING THE STATIONARY VECTOR OF MARKOV CHAINS. International Journal of Parallel, Emergent and Distributed Systems, 1995, 6, 25-37.	0.4	7
102	A Direct Projection Method for Sparse Linear Systems. SIAM Journal of Scientific Computing, 1995, 16, 1159-1176.	1.3	35