

# Bernhard Beckermann

## List of Publications by Year in descending order

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40  
papers

1,009  
citations

471061

17  
h-index

433756

31  
g-index

41  
all docs

41  
docs citations

41  
times ranked

375  
citing authors

#	ARTICLE	IF	CITATIONS
1	Low-Rank Updates of Matrix Functions II: Rational Krylov Methods. SIAM Journal on Numerical Analysis, 2021, 59, 1325-1347.	1.1	5
2	Bounds on the Singular Values of Matrices with Displacement Structure. SIAM Review, 2019, 61, 319-344.	4.2	16
3	Low-Rank Updates of Matrix Functions. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 539-565.	0.7	17
4	On an Economic Arnoldi Method for $BML$ -Matrices. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 737-768.	0.7	1
5	Bergman Orthogonal Polynomials and the Grunsky Matrix. Constructive Approximation, 2018, 47, 211-235.	1.8	5
6	On the Singular Values of Matrices with Displacement Structure. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 1227-1248.	0.7	48
7	An Error Analysis of Galerkin Projection Methods for Linear Systems with Tensor Product Structure. SIAM Journal on Numerical Analysis, 2013, 51, 3307-3326.	1.1	9
8	Spectral Sets. Discrete Mathematics and Its Applications, 2013, , 613-638.	0.1	3
9	Computing high precision Matrix Padé approximants. Numerical Algorithms, 2012, 61, 189-208.	1.1	3
10	Superlinear convergence of the rational Arnoldi method for the approximation of matrix functions. Numerische Mathematik, 2012, 121, 205-236.	0.9	20
11	An Error Analysis for Rational Galerkin Projection Applied to the Sylvester Equation. SIAM Journal on Numerical Analysis, 2011, 49, 2430-2450.	1.1	34
12	Extremal Rational Functions on Symmetric Discrete Sets and Superlinear Convergence of the ADI Method. Constructive Approximation, 2010, 32, 393-428.	1.8	12
13	The linear pencil approach to rational interpolation. Journal of Approximation Theory, 2010, 162, 1322-1346.	0.5	9
14	On the Convergence of Rational Ritz Values. SIAM Journal on Matrix Analysis and Applications, 2010, 31, 1740-1774.	0.7	17
15	Error Estimates and Evaluation of Matrix Functions via the Faber Transform. SIAM Journal on Numerical Analysis, 2009, 47, 3849-3883.	1.1	107
16	The Arnoldi Process and GMRES for Nearly Symmetric Matrices. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 102-120.	0.7	8
17	On the Asymptotic Spectrum of Finite Element Matrix Sequences. SIAM Journal on Numerical Analysis, 2007, 45, 746-769.	1.1	38
18	Operators with numerical range in a conic domain. Archiv Der Mathematik, 2007, 88, 547-559.	0.3	5

#	ARTICLE	IF	CITATIONS
19	Fraction-free row reduction of matrices of Ore polynomials. <i>Journal of Symbolic Computation</i> , 2006, 41, 513-543.	0.5	62
20	Normal forms for general polynomial matrices. <i>Journal of Symbolic Computation</i> , 2006, 41, 708-737.	0.5	35
21	A lenticular version of a von Neumann inequality. <i>Archiv Der Mathematik</i> , 2006, 86, 352-355.	0.3	5
22	Image numérique, GMRES et polynômes de Faber. <i>Comptes Rendus Mathématique</i> , 2005, 340, 855-860.	0.1	24
23	On the determinacy of complex Jacobi matrices. <i>Mathematica Scandinavica</i> , 2004, 95, 285.	0.1	6
24	Fraction-free row reduction of matrices of skew polynomials. , 2002, , .		9
25	Superlinear Convergence of Conjugate Gradients. <i>SIAM Journal on Numerical Analysis</i> , 2001, 39, 300-329.	1.1	90
26	Complex Jacobi matrices. <i>Journal of Computational and Applied Mathematics</i> , 2001, 127, 17-65.	1.1	51
27	On the Classification of the Spectrum of Second Order Difference Operators. <i>Mathematische Nachrichten</i> , 2000, 216, 45-59.	0.4	9
28	Effective Computation of Rational Approximants and Interpolants. <i>Reliable Computing</i> , 2000, 6, 365-390.	0.8	9
29	Fraction-Free Computation of Matrix Rational Interpolants and Matrix GCDs. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2000, 22, 114-144.	0.7	51
30	On the Convergence of Bounded J-Fractions on the Resolvent Set of the Corresponding Second Order Difference Operator. <i>Journal of Approximation Theory</i> , 1999, 99, 369-408.	0.5	12
31	Recursiveness in matrix rational interpolation problems. <i>Journal of Computational and Applied Mathematics</i> , 1997, 77, 5-34.	1.1	35
32	The stable computation of formal orthogonal polynomials. <i>Numerical Algorithms</i> , 1996, 11, 1-23.	1.1	8
33	Inversion of mosaic Hankel matrices via matrix polynomial systems. <i>Linear Algebra and Its Applications</i> , 1995, 221, 253-279.	0.4	3
34	A Uniform Approach for the Fast Computation of Matrix-Type Padé Approximants. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1994, 15, 804-823.	0.7	121
35	On the theory and computation of nonperfect padé-hermite approximants. <i>Journal of Computational and Applied Mathematics</i> , 1992, 39, 295-313.	1.1	19
36	A reliable method for computing M-Padé approximants on arbitrary staircases. <i>Journal of Computational and Applied Mathematics</i> , 1992, 40, 19-42.	1.1	29

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37	A reliable modification of the cross rule for rational Hermite interpolation. Numerical Algorithms, 1992, 3, 29-44.	1.1	4
38	A uniform approach for Hermite Pad $\hat{\circ}$ and simultaneous Pad $\hat{\circ}$ approximants and their matrix-type generalizations. Numerical Algorithms, 1992, 3, 45-54.	1.1	47
39	The structure of the singular solution table of the M-Pad $\hat{\circ}$ approximation problem. Journal of Computational and Applied Mathematics, 1990, 32, 3-15.	1.1	17
40	On the rational approximation of Markov functions, with applications to the computation of Markov functions of Toeplitz matrices. Numerical Algorithms, 0, , 1.	1.1	2