

# 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	A Uniform Approach for the Fast Computation of Matrix-Type Pad $\hat{\circ}$ Approximants. SIAM Journal on Matrix Analysis and Applications, 1994, 15, 804-823.	0.7	121
2	Error Estimates and Evaluation of Matrix Functions via the Faber Transform. SIAM Journal on Numerical Analysis, 2009, 47, 3849-3883.	1.1	107
3	Superlinear Convergence of Conjugate Gradients. SIAM Journal on Numerical Analysis, 2001, 39, 300-329.	1.1	90
4	Fraction-free row reduction of matrices of Ore polynomials. Journal of Symbolic Computation, 2006, 41, 513-543.	0.5	62
5	Fraction-Free Computation of Matrix Rational Interpolants and Matrix GCDs. SIAM Journal on Matrix Analysis and Applications, 2000, 22, 114-144.	0.7	51
6	Complex Jacobi matrices. Journal of Computational and Applied Mathematics, 2001, 127, 17-65.	1.1	51
7	On the Singular Values of Matrices with Displacement Structure. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 1227-1248.	0.7	48
8	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
9	On the Asymptotic Spectrum of Finite Element Matrix Sequences. SIAM Journal on Numerical Analysis, 2007, 45, 746-769.	1.1	38
10	Recursiveness in matrix rational interpolation problems. Journal of Computational and Applied Mathematics, 1997, 77, 5-34.	1.1	35
11	Normal forms for general polynomial matrices. Journal of Symbolic Computation, 2006, 41, 708-737.	0.5	35
12	An Error Analysis for Rational Galerkin Projection Applied to the Sylvester Equation. SIAM Journal on Numerical Analysis, 2011, 49, 2430-2450.	1.1	34
13	A reliable method for computing M-Pad $\hat{\circ}$ approximants on arbitrary staircases. Journal of Computational and Applied Mathematics, 1992, 40, 19-42.	1.1	29
14	Image num $\hat{\circ}$ rique, GMRES et polyn $\hat{\circ}$ mes de Faber. Comptes Rendus Mathematique, 2005, 340, 855-860.	0.1	24
15	Superlinear convergence of the rational Arnoldi method for the approximation of matrix functions. Numerische Mathematik, 2012, 121, 205-236.	0.9	20
16	On the theory and computation of nonperfect pad $\hat{\circ}$ -hermite approximants. Journal of Computational and Applied Mathematics, 1992, 39, 295-313.	1.1	19
17	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
18	On the Convergence of Rational Ritz Values. SIAM Journal on Matrix Analysis and Applications, 2010, 31, 1740-1774.	0.7	17

#	ARTICLE	IF	CITATIONS
19	Low-Rank Updates of Matrix Functions. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 539-565.	0.7	17
20	Bounds on the Singular Values of Matrices with Displacement Structure. SIAM Review, 2019, 61, 319-344.	4.2	16
21	On the Convergence of Bounded J-Fractions on the Resolvent Set of the Corresponding Second Order Difference Operator. Journal of Approximation Theory, 1999, 99, 369-408.	0.5	12
22	Extremal Rational Functions on Symmetric Discrete Sets and Superlinear Convergence of the ADI Method. Constructive Approximation, 2010, 32, 393-428.	1.8	12
23	On the Classification of the Spectrum of Second Order Difference Operators. Mathematische Nachrichten, 2000, 216, 45-59.	0.4	9
24	Effective Computation of Rational Approximants and Interpolants. Reliable Computing, 2000, 6, 365-390.	0.8	9
25	Fraction-free row reduction of matrices of skew polynomials. , 2002, , .		9
26	The linear pencil approach to rational interpolation. Journal of Approximation Theory, 2010, 162, 1322-1346.	0.5	9
27	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
28	The stable computation of formal orthogonal polynomials. Numerical Algorithms, 1996, 11, 1-23.	1.1	8
29	The Arnoldi Process and GMRES for Nearly Symmetric Matrices. SIAM Journal on Matrix Analysis and Applications, 2008, 30, 102-120.	0.7	8
30	On the determinacy of complex Jacobi matrices. Mathematica Scandinavica, 2004, 95, 285.	0.1	6
31	A lenticular version of a von Neumann inequality. Archiv Der Mathematik, 2006, 86, 352-355.	0.3	5
32	Operators with numerical range in a conic domain. Archiv Der Mathematik, 2007, 88, 547-559.	0.3	5
33	Low-Rank Updates of Matrix Functions II: Rational Krylov Methods. SIAM Journal on Numerical Analysis, 2021, 59, 1325-1347.	1.1	5
34	Bergman Orthogonal Polynomials and the Grunsky Matrix. Constructive Approximation, 2018, 47, 211-235.	1.8	5
35	A reliable modification of the cross rule for rational Hermite interpolation. Numerical Algorithms, 1992, 3, 29-44.	1.1	4
36	Inversion of mosaic Hankel matrices via matrix polynomial systems. Linear Algebra and Its Applications, 1995, 221, 253-279.	0.4	3

#	ARTICLE	IF	CITATIONS
37	Computing high precision Matrix Pad $\hat{\circ}$ approximants. Numerical Algorithms, 2012, 61, 189-208.	1.1	3
38	Spectral Sets. Discrete Mathematics and Its Applications, 2013, , 613-638.	0.1	3
39	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
40	On an Economic Arnoldi Method for $\$BML\$$ -Matrices. SIAM Journal on Matrix Analysis and Applications, 2018, 39, 737-768.	0.7	1