Walter Van Assche

List of Publications by Year
in descending order

137
papers	2,988
citations	186265
28
h-index	223800
46
g-index
153
all docs	153
docs citations	153
times ranked	507
citing authors

#	Article	IF	Citations
1	Orthogonal matrix polynomials and higher-order recurrence relations. Linear Algebra and Its Applications, 1995, 219, 261-280.	0.9	131
2	Multiple orthogonal polynomials for classical weights. Transactions of the American Mathematical Society, 2003, 355, 3887-3914.	0.9	125
3	The Asymptotic Zero Distribution of Orthogonal Polynomials with Varying Recurrence Coefficients. Journal of Approximation Theory, 1999, 99, 167-197.	0.8	107
4	Some classical multiple orthogonal polynomials. Journal of Computational and Applied Mathematics, 2001, 127, 317-347.	2.0	107
5	Orthogonal polynomials with asymptotically periodic recurrence coefficients. Journal of Approximation Theory, 1986, 46, 251-283.	0.8	100
6	Orthogonal matrix polynomials and applications. Journal of Computational and Applied Mathematics, 1996, 66, 27-52.	2.0	83
7	Some discrete multiple orthogonal polynomials. Journal of Computational and Applied Mathematics, 2003, 153, 19-45.	2.0	79
8	Relative asymptotics for polynomials orthogonal with respect to a discrete Sobolev inner product. Constructive Approximation, 1995, 11, 107-137.	3.0	74
9	Orthogonal polynomials, associated polynomials and functions of the second kind. Journal of Computational and Applied Mathematics, 1991, 37, 237-249.	2.0	65
10	Polynomial interpolation and Gaussian quadrature for matrix-valued functions. Linear Algebra and Its Applications, 1994, 207, 71-114.	0.9	62
11	Nearest neighbor recurrence relations for multiple orthogonal polynomials. Journal of Approximation Theory, 2011, 163, 1427-1448.	0.8	61
12	Entropy of orthogonal polynomials with Freud weights and information entropies of the harmonic oscillator potential. Journal of Mathematical Physics, 1995, 36, 4106-4118.	1.1	53
13	Perturbation of Orthogonal Polynomials on an Arc of the Unit Circle. Journal of Approximation Theory, 1995, 83, 392-422.	0.8	53
14	Scalar and matrix Riemann–Hilbert approach to the strong asymptotics of Padé approximants and complex orthogonal polynomials with varying weight. Journal of Approximation Theory, 2004, 129, 129-166.	0.8	53
15	Multiple orthogonal polynomials associated with macdonald functions. Integral Transforms and Special Functions, 2000, 9, 229-244.	1.2	50
16	Information entropy of classical orthogonal polynomials and their application to the harmonic oscillator and Coulomb potentials. Methods and Applications of Analysis, 1997, 4, 91-110.	0.5	47
17	The recurrence coefficients of semi-classical Laguerre polynomials and the fourth Painlevé equation. Journal of Physics A: Mathematical and Theoretical, 2012, 45, 205201.	2.1	46
18	The impact of Stieltjes' work on continued fractions and orthogonal polynomials: additional material. Journal of Computational and Applied Mathematics, 1995, 65, 419-447.	2.0	45

#	ARTICLE	IF	CITATIONS
19	Entropic integrals of hyperspherical harmonics and spatial entropy of D-dimensional central potentials. Journal of Mathematical Physics, 1999, 40, 5675-5686.	1.1	41
20	Discrete PainlevÃ© equations for recurrence coefficients of orthogonal polynomials. , 2007, , .		41
21	Sieved orthogonal polynomials and discrete measures with jumps dense in an interval. Proceedings of the American Mathematical Society, 1989, 106, 163-163.	0.8	36
22	The supports of measures associated with orthogonal polynomials and the spectra of the related self-adjoint operators. Rocky Mountain Journal of Mathematics, 1991, 21, 501.	0.4	36
23	Quadratic Hermiteâ€"PadÃ© Approximation to the Exponential Function: A Riemannâ€"Hilbert Approach. Constructive Approximation, 2005, 21, 351-412.	3.0	34
24	Discrete PainlevÃ© equations for recurrence coefficients of semiclassical Laguerre polynomials. Proceedings of the American Mathematical Society, 2010, 138, 1317-1331.	0.8	34
25	Upward Extension of the Jacobi Matrix for Orthogonal Polynomials. Journal of Approximation Theory, 1996, 86, 335-357.	0.8	32
26	Functionals of Gegenbauer polynomials andD-dimensional hydrogenic momentum expectation values. Journal of Mathematical Physics, 2000, 41, 6600-6613.	1.1	32
27	Quadrature formulas based on rational interpolation. Mathematics of Computation, 1993, 61, 765-783.	2.1	30
28	Asymptotic zero distribution for a class of multiple orthogonal polynomials. Transactions of the American Mathematical Society, 2008, 360, 5571-5588.	0.9	29
29	Criterion for the resolvent set of nonsymmetric tridiagonal operators. Proceedings of the American Mathematical Society, 1995, 123, 2423-2430.	0.8	28
30	Approximating the weight function for orthogonal polynomials on several intervals. Journal of Approximation Theory, 1991, 65, 341-371.	0.8	27
31	Extremal Polynomials on Discrete Sets. Proceedings of the London Mathematical Society, 1999, 79, 191-221.	1.3	27
32	Perturbation of Orthogonal Polynomials on an Arc of the Unit Circle, II. Journal of Approximation Theory, 1999, 96, 1-32.	0.8	27
33	Asymptotics for orthogonal polynomials with regularly varying recurrence coefficients. Rocky Mountain Journal of Mathematics, 1989, 19, .	0.4	27
34	Little q-Legendre Polynomials and Irrationality of Certain Lambert Series. Ramanujan Journal, 2001, 5, 295-310.	0.7	26
35	Asymptotic properties of orthogonal polynomials from their recurrence formula, I. Journal of Approximation Theory, 1985, 44, 258-276.	0.8	24
36	LamÃ© differential equations and electrostatics. Proceedings of the American Mathematical Society, 2000, 128, 3621-3628.	0.8	24

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37	Gaussian quadrature for multiple orthogonal polynomials. Journal of Computational and Applied Mathematics, 2005, 178, 131-145.	2.0	24
38	Asymptotics of Hermite-Pade Rational Approximants for Two Analytic Functions with Separated Pairs of Branch Points (Case of Genus 0). International Mathematics Research Papers, 2010, , .	0.3	24
39	Asymptotics of multiple orthogonal polynomials associated with the modified Bessel functions of the first kind. Journal of Computational and Applied Mathematics, 2003, 153, 141-149.	2.0	23
40	Compact perturbations of orthogonal polynomials. Pacific Journal of Mathematics, 1992, 153, 163-184.	0.5	23
41	Multiple Wilson and Jacobiâ€"PiÃ±eiro polynomials. Journal of Approximation Theory, 2005, 132, 155-181.	0.8	22
42	Interlacing properties of zeros of multiple orthogonal polynomials. Journal of Mathematical Analysis and Applications, 2012, 389, 429-438.	1.0	22
43	Rakhmanov's theorem for orthogonal matrix polynomials on the unit circle. Journal of Approximation Theory, 2007, 146, 227-242.	0.8	21
44	Recurrence coefficients of generalized Meixner polynomials and PainlevÃ© equations. Journal of Physics A: Mathematical and Theoretical, 2011, 44, 035202.	2.1	21
45	Orthogonal Polynomials on a Bi-lattice. Constructive Approximation, 2012, 36, 215-242.	3.0	21
46	Asymptotic properties of orthogonal polynomials from their recurrence formula, II. Journal of Approximation Theory, 1988, 52, 322-338.	0.8	20
47	Asymptotics for orthogonal polynomials on and off the essential spectrum. Journal of Approximation Theory, 1988, 55, 220-231.	0.8	20
48	Analysis of Non-Linear Recurrence Relations for the Recurrence Coefficients of Generalized Charlier Polynomials. Journal of Nonlinear Mathematical Physics, 2003, 10, 231.	1.3	20
49	<i>q</i>-Discrete PainlevÃ© equations for recurrence coefficients of modified<i>q</i>-Freud orthogonal polynomials. Journal of Difference Equations and Applications, 2010, 16, 37-53.	1.1	20
50	Recurrence coefficients of generalized Charlier polynomials and the fifth PainlevÃ© equation. Proceedings of the American Mathematical Society, 2013, 141, 551-562.	0.8	20
51	Probabilistic proofs of asymptotic formulas for some classical polynomials. Mathematical Proceedings of the Cambridge Philosophical Society, 1985, 97, 499-510.	0.4	19
52	Relative asymptotics for orthogonal polynomials with unbounded recurrence coefficients. Journal of Approximation Theory, 1990, 62, 47-69.	0.8	18
53	Some properties of multiple orthogonal polynomials associated with Macdonald functions. Journal of Computational and Applied Mathematics, 2001, 133, 253-261.	2.0	18
54	Discrete integrable systems generated by Hermite-PadÃ© approximants. Nonlinearity, 2016, 29, 1487-1506.	1.4	17

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55	On the asymptotic distribution of eigenvalues of banded matrices. Constructive Approximation, 1988, 4, 403-417.	3.0	16
56	Quadrature Formulas Based on Rational Interpolation. Mathematics of Computation, 1993, 61, 765.	2.1	16
57	Orthogonal polynomials and laurent polynomials related to the Hahn-Extonq-Bessel function. Constructive Approximation, 1995, 11, 477-512.	3.0	16
58	A Birth and Death Process Related to the Rogersâ€"Ramanujan Continued Fraction. Journal of Mathematical Analysis and Applications, 1998, 224, 297-315.	1.0	16
59	Multiple linear <mml:math altimg="si1.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x	2.0	16
60	Multiple orthogonal polynomials associated with an exponential cubic weight. Journal of Approximation Theory, 2015, 190, 1-25.	0.8	16
61	Weighted Zero Distribution for Polynomials Orthogonal on an Infinite Interval. SIAM Journal on Mathematical Analysis, 1985, 16, 1317-1334.	1.9	15
62	The ratio of q-like orthogonal polynomials. Journal of Mathematical Analysis and Applications, 1987, 128, 535-547.	1.0	15
63	Para-Orthogonal Polynomials in Frequency Analysis. Rocky Mountain Journal of Mathematics, 2003, 33, 629.	0.4	15
64	Blumenthal's Theorem for Laurent Orthogonal Polynomials. Journal of Approximation Theory, 2002, 117, 255-278.	0.8	14
65	Christoffel functions and TurÃ¡n determinants on several intervals. Journal of Computational and Applied Mathematics, 1993, 48, 207-223.	2.0	13
66	Weak convergence of orthogonal polynomials. Indagationes Mathematicae, 1995, 6, 7-23.	0.4	13
67	Asymptotique des approximants de Hermiteâ€"PadÃ© quadratiques deÂ la fonction exponentielle et problÃ¨mes de Riemannâ€"Hilbert. Comptes Rendus Mathematique, 2003, 336, 893-896.	0.3	13
68	Irrationality of <mml:math altimg="si1.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/x	0.4	13
69	Compact Jacobi matrices : from Stieltjes to Krein and $M(a, b)$. Annales De La FacultÃ© Des Sciences De Toulouse, 1996, S5, 195-215.	0.3	13
70	Type II Hermiteâ€"PadÃ© approximation to the exponential function. Journal of Computational and Applied Mathematics, 2007, 207, 227-244.	2.0	12
71	Hyperelliptic uniformization of algebraic curves of the third order. Journal of Computational and Applied Mathematics, 2015, 284, 38-49.	2.0	12
72	Computing recurrence coefficients of multiple orthogonal polynomials. Numerical Algorithms, 2015, 70, 519-543.	1.9	12

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73	A family of nonlinear difference equations: Existence, uniqueness, and asymptotic behavior of positive solutions. Journal of Approximation Theory, 2015, 193, 39-55.	0.8	12
74	WHAT IS...A Multiple Orthogonal Polynomial?. Notices of the American Mathematical Society, 2016, 63, 1029-1031.	0.2	12
75	Norm behavior and zero distribution for orthogonal polynomials with nonsymmetric weights. Constructive Approximation, 1989, 5, 329-345.	3.0	11
76	Unique positive solution for an alternative discrete PainlevÃ© I equation. Journal of Difference Equations and Applications, 2016, 22, 656-675.	1.1	11
77	Asymptotic zero distribution of Jacobi-PiÃ±eiro and multiple Laguerre polynomials. Journal of Approximation Theory, 2016, 205, 114-132.	0.8	11
78	Hermiteâ€PadÃ© Approximants for a Pair of Cauchy Transforms with Overlapping Symmetric Supports. Communications on Pure and Applied Mathematics, 2017, 70, 444-510.	3.1	11
79	The Impact of Stieltjesâ€™ Work on Continued Fractions and Orthogonal Polynomials. , 1993, , 5-37.		11
80	Asymptotic Behaviour for Wall Polynomials and the Addition Formula for Little q-Legendre Polynomials. SIAM Journal on Mathematical Analysis, 1991, 22, 302-311.	1.9	10
81	Tau-Function Constructions of the Recurrence Coefficients of Orthogonal Polynomials. Advances in Applied Mathematics, 1998, 20, 141-168.	0.7	10
82	Mehler-Heine asymptotics for multiple orthogonal polynomials. Proceedings of the American Mathematical Society, 2016, 145, 303-314.	0.8	10
83	Ladder operators and differential equations for multiple orthogonal polynomials. Journal of Physics A: Mathematical and Theoretical, 2013, 46, 205204.	2.1	9
84	Multidimensional Toda Lattices: Continuous and Discrete Time. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 0, , .	0.5	9
85	Leonhard Euler and a q-analogue of the logarithm. Proceedings of the American Mathematical Society, 2008, 137, 1663-1676.	0.8	8
86	The generalized Krawtchouk polynomials and the fifth PainlevÃ© equation. Journal of Difference Equations and Applications, 2013, 19, 1437-1451.	1.1	8
87	Three-fold symmetric Hahn-classical multiple orthogonal polynomials. Analysis and Applications, 2020, 18, 271-332.	2.2	8
88	Sieved Orthogonal Polynomials and Discrete Measures with Jumps Dense in an Interval. Proceedings of the American Mathematical Society, 1989, 106, 163.	0.8	7
89	WKB and Turning Point Theory for Second-order Difference Equations. , 2004, , 101-138.		7
90	Some results on the asymptotic distribution of the zeros of orthogonal polynomials. Journal of Computational and Applied Mathematics, 1985, 12-13, 615-623.	2.0	6

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91	Mellin transforms for multiple Jacobiâ€"PiÃ±eiro polynomials and a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:mi>q</mml:mi></mml:math>-analogue. Journal of Approximation Theory, 2010, 162, 782-806.	0.8	6
92	Zero distribution of polynomials satisfying a differential-difference equation. Analysis and Applications, 2014, 12, 635-666.	2.2	6
93	Variations of Stieltjesâ€"Wigert and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:mi>q</mml:mi></mml:math>-Laguerre polynomials and their recurrence coefficients. Journal of Approximation Theory, 2015, 193, 56-73.	0.8	6
94	Irrationality proof of a q-extension of Î¶(2) using little q-Jacobi polynomials. Acta Arithmetica, 2009, 138, 165-178.	0.4	6
95	Pollaczek polynomials and summability methods. Journal of Mathematical Analysis and Applications, 1990, 147, 498-505.	1.0	5
96	Alpert Multiwavelets and Legendre--Angelesco Multiple Orthogonal Polynomials. SIAM Journal on Mathematical Analysis, 2017, 49, 626-645.	1.9	5
97	Jacobiâ€"Angelesco Multiple Orthogonal Polynomials on an r-Star. Constructive Approximation, 2020, 51, 353-381.	3.0	5
98	Laguerreâ€"Angelesco multiple orthogonal polynomials on an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e324" altimg="si72.svg"><mml:mi>r</mml:mi></mml:math>-star. Journal of Approximation Theory, 2020, 250, 105324.	0.8	5
99	Difference Equations for Multiple Charlier and Meixner Polynomials. , 2004, , 549-557.		5
100	Solution of an Open Problem about Two Families of Orthogonal Polynomials. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 0, , .	0.5	5
101	Orthogonal polynomials, Toda lattices and PainlevÃ© equations. Physica D: Nonlinear Phenomena, 2022, 434, 133214.	2.8	5
102	Eigenvalues of Toeplitz matrices associated with orthogonal polynomials. Journal of Approximation Theory, 1987, 51, 360-371.	0.8	4
103	Strong Asymptotics for Relativistic Hermite Polynomials. Rocky Mountain Journal of Mathematics, 2003, 33, 489.	0.4	4
104	Multiple Orthogonal Polynomials on the Unit Circle. Constructive Approximation, 2008, 28, 173-197.	3.0	4
105	Asymptotics for the ratio and the zeros of multiple Charlier polynomials. Journal of Approximation Theory, 2012, 164, 823-840.	0.8	4
106	Orthogonal and Multiple Orthogonal Polynomials, Random Matrices, and PainlevÃ© Equations. Tutorials, Schools, and Workshops in the Mathematical Sciences, 2020, , 629-683.	0.3	4
107	Erratum to "Weighted Zero Distribution For Polynomials Orthogonal on an Infinite Interval". SIAM Journal on Mathematical Analysis, 2001, 32, 1169-1170.	1.9	3
108	Orthogonal polynomials for Minkowskiâ€™s question mark function. Journal of Computational and Applied Mathematics, 2015, 284, 171-183.	2.0	3

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109	Zero Distribution of Orthogonal Polynomials on a q-Lattice. Constructive Approximation, 2021, 54, 117-144.	3.0	3
110	Discrete Orthogonal Polynomials with Hypergeometric Weights and Painlevé VI. Symmetry, Integrability and Geometry: Methods and Applications (SIGMA), 0, , .	0.5	3
111	Multiple Hermite polynomials and simultaneous Gaussian quadrature. Electronic Transactions on Numerical Analysis, 0, 50, 182-198.	0.0	3
112	Hermite-Padé Rational Approximation to Irrational Numbers. Computational Methods and Function Theory, 2011, 10, 585-602.	1.5	2
113	A tribute to Dick Askey. Journal of Approximation Theory, 2015, 193, 1-3.	0.8	2
114	Orthogonal polynomials, special functions, and applications. Journal of Approximation Theory, 2011, 163, 813.	0.8	1
115	The Moment Problem. , 2020, , 269-306.		1
116	Products of 2 × 2 stochastic matrices with random entries. Journal of Applied Probability, 1986, 23, 1019-1024.	0.7	1
117	Chebyshev polynomials in the 16th century. Journal of Approximation Theory, 2022, , 105767.	0.8	1
118	An Asymptotic Problem (Pierre Barrucand). SIAM Review, 1986, 28, 234-238.	9.5	0
119	Remarks on the (C, -1)-Summability of the Distribution of Zeros of Orthogonal Polynomials. Proceedings of the American Mathematical Society, 1994, 122, 759.	0.8	0
120	Joseph L. Ullman (1923–1995). Journal of Approximation Theory, 2010, 162, 639-645.	0.8	0
121	OPSFA'11. Journal of Approximation Theory, 2013, 170, 1-2.	0.8	0
122	Asymptotics for the ratio and the zeros of multiple Charlier polynomials. Journal of Approximation Theory, 2013, 170, 3-20.	0.8	0
123	Majorization results for zeros of orthogonal polynomials. Proceedings of the American Mathematical Society, 2017, 145, 3849-3863.	0.8	0
124	Multiple Askey–Wilson polynomials and related basic hypergeometric multiple orthogonal polynomials. Transactions of the American Mathematical Society, 2020, 373, 8289-8312.	0.9	0
125	General Orthogonal Polynomials. , 2020, , 16-50.		0
126	Jacobi and Related Polynomials. , 2020, , 51-99.		0

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127	Recursively Defined Polynomials. , 2020, , 100-118.		0
128	Wilson and Related Polynomials. , 2020, , 119-128.		0
129	Discrete Orthogonal Polynomials. , 2020, , 129-156.		0
130	Some q-Orthogonal Polynomials. , 2020, , 157-177.		0
131	The Askeyâ€"Wilson Family of Polynomials. , 2020, , 178-198.		0
132	Orthogonal Polynomials on the Unit Circle. , 2020, , 199-241.		0
133	Zeros of Orthogonal Polynomials. , 2020, , 242-268.		0
134	Matrix-Valued Orthogonal Polynomials and Differential Equations. , 2020, , 307-333.		0
135	Some Families of Matrix-Valued Jacobi Orthogonal Polynomials. , 2020, , 334-356.		0
136	Special issue OPSFA15: orthogonal polynomials, special functions and applications. Integral Transforms and Special Functions, 2021, 32, 333-335.	1.2	0
137	Gaussâ€"type quadrature. , 2014, , 35-49.		0