

Friedrich Pillichshammer

List of Publications by Year in descending order

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137
papers

1,815
citations

331538

21
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434063

31
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146
all docs

146
docs citations

146
times ranked

382
citing authors

#	ARTICLE	IF	CITATIONS
1	Multivariate integration in weighted Hilbert spaces based on Walsh functions and weighted Sobolev spaces. <i>Journal of Complexity</i> , 2005, 21, 149-195.	0.7	74
2	Introduction to Quasi-Monte Carlo Integration and Applications. <i>Compact Textbooks in Mathematics</i> , 2014, , .	0.1	72
3	Construction algorithms for polynomial lattice rules for multivariate integration. <i>Mathematics of Computation</i> , 2005, 74, 1895-1922.	1.1	52
4	Lattice rules for nonperiodic smooth integrands. <i>Numerische Mathematik</i> , 2014, 126, 259-291.	0.9	43
5	The construction of good extensible rank-1 lattices. <i>Mathematics of Computation</i> , 2008, 77, 2345-2373.	1.1	39
6	Exponential convergence and tractability of multivariate integration for Korobov spaces. <i>Mathematics of Computation</i> , 2011, 80, 905-905.	1.1	39
7	Walsh Series Analysis of the L_2 -Discrepancy of Symmetrized Point Sets. <i>Monatshefte Fur Mathematik</i> , 2001, 132, 1-18.	0.5	38
8	Approximation of analytic functions in Korobov spaces. <i>Journal of Complexity</i> , 2014, 30, 2-28.	0.7	38
9	Multivariate integration of infinitely many times differentiable functions in weighted Korobov spaces. <i>Mathematics of Computation</i> , 2014, 83, 1189-1206.	1.1	37
10	Efficient calculation of the worst-case error and (fast) component-by-component construction of higher order polynomial lattice rules. <i>Numerical Algorithms</i> , 2012, 59, 403-431.	1.1	36
11	Integration in Hermite spaces of analytic functions. <i>Journal of Complexity</i> , 2015, 31, 380-404.	0.7	32
12	Tractability of multivariate approximation defined over Hilbert spaces with exponential weights. <i>Journal of Approximation Theory</i> , 2016, 207, 301-338.	0.5	31
13	Strong tractability of multivariate integration of arbitrary high order using digitally shifted polynomial lattice rules. <i>Journal of Complexity</i> , 2007, 23, 436-453.	0.7	30
14	From van der Corput to modern constructions of sequences for quasi-Monte Carlo rules. <i>Indagationes Mathematicae</i> , 2015, 26, 760-822.	0.2	30
15	Sums of distances to the nearest integer and the discrepancy of digital nets. <i>Acta Arithmetica</i> , 2003, 106, 379-408.	0.2	29
16	DISTRIBUTION PROPERTIES OF GENERALIZED VAN DER CORPUT-HALTON SEQUENCES AND THEIR SUBSEQUENCES. <i>International Journal of Number Theory</i> , 2009, 05, 719-746.	0.2	27
17	THE AVERAGE DISTANCE BETWEEN TWO POINTS. <i>Bulletin of the Australian Mathematical Society</i> , 2009, 80, 353-359.	0.3	26
18	On the mean square weighted L_2 discrepancy of randomized digital (t,m,s) -nets over \mathbb{Z}_2 . <i>Acta Arithmetica</i> , 2005, 117, 371-403.	0.2	25

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19	Construction Algorithms for Digital Nets with Low Weighted Star Discrepancy. SIAM Journal on Numerical Analysis, 2005, 43, 76-95.	1.1	23
20	Approximation in Hermite spaces of smooth functions. Journal of Approximation Theory, 2016, 207, 98-126.	0.5	23
21	Optimal L_2 discrepancy bounds for higher order digital sequences over the finite field F_2 . Acta Arithmetica, 2014, 162, 65-99.	0.2	23
22	Cyclic Digital Nets, Hyperplane Nets, and Multivariate Integration in Sobolev Spaces. SIAM Journal on Numerical Analysis, 2006, 44, 385-411.	1.1	22
23	Construction algorithms for higher order polynomial lattice rules. Journal of Complexity, 2011, 27, 281-299.	0.7	21
24	Precise distribution properties of the van der Corput sequence and related sequences. Manuscripta Mathematica, 2005, 118, 11-41.	0.3	20
25	Discrepancy Theory and Quasi-Monte Carlo Integration. Lecture Notes in Mathematics, 2014, , 539-619.	0.1	20
26	On the discrepancy of (0,1)-sequences. Journal of Number Theory, 2004, 104, 301-314.	0.2	18
27	Component-by-component construction of low-discrepancy point sets of small size. Monte Carlo Methods and Applications, 2008, 14, 129-149.	0.3	18
28	Very low truncation dimension for high dimensional integration under modest error demand. Journal of Complexity, 2016, 35, 63-85.	0.7	17
29	Bounds for the weighted L_p discrepancy and tractability of integration. Journal of Complexity, 2003, 19, 529-547.	0.7	16
30	Tractability properties of the weighted star discrepancy. Journal of Complexity, 2008, 24, 134-143.	0.7	16
31	L_2 discrepancy of generalized two-dimensional Hammersley point sets scrambled with arbitrary permutations. Acta Arithmetica, 2010, 141, 395-418.	0.2	16
32	L_p discrepancy of generalized two-dimensional Hammersley point sets. Monatshefte Fur Mathematik, 2009, 158, 31-61.	0.5	15
33	On the Optimal Order of Integration in Hermite Spaces with Finite Smoothness. SIAM Journal on Numerical Analysis, 2018, 56, 684-707.	1.1	15
34	Proof techniques in quasi-Monte Carlo theory. Journal of Complexity, 2015, 31, 327-371.	0.7	14
35	The tent transformation can improve the convergence rate of quasi-Monte Carlo algorithms using digital nets. Numerische Mathematik, 2006, 105, 413-455.	0.9	13
36	On the existence of higher order polynomial lattices based on a generalized figure of merit. Journal of Complexity, 2007, 23, 581-593.	0.7	13

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37	On the sum of squared distances in the Euclidean plane. Archiv Der Mathematik, 2000, 74, 472-480.	0.3	12
38	On the t -Discrepancy of the Hammersley Point Set. Monatshefte Fur Mathematik, 2002, 136, 67-79.	0.5	12
39	A thorough analysis of the discrepancy of shifted Hammersley and van der Corput point sets. Annali Di Matematica Pura Ed Applicata, 2007, 186, 229-250.	0.5	12
40	Construction Algorithms for Good Extensible Lattice Rules. Constructive Approximation, 2009, 30, 361-393.	1.8	12
41	Explicit constructions of point sets and sequences with low discrepancy. , 2014, , 63-86.		12
42	A reduced fast component-by-component construction of lattice points for integration in weighted spaces with fast decreasing weights. Journal of Computational and Applied Mathematics, 2015, 276, 1-15.	1.1	12
43	Constructions of general polynomial lattices for multivariate integration. Bulletin of the Australian Mathematical Society, 2007, 76, 93-110.	0.3	11
44	The weighted star discrepancy of Korobov's t -sets. Proceedings of the American Mathematical Society, 2015, 143, 5043-5057.	0.4	11
45	Diaphony, discrepancy, spectral test and worst-case error. Mathematics and Computers in Simulation, 2005, 70, 159-171.	2.4	10
46	Constructions of general polynomial lattice rules based on the weighted star discrepancy. Finite Fields and Their Applications, 2007, 13, 1045-1070.	0.6	10
47	A note on equivalence of anchored and ANOVA spaces; lower bounds. Journal of Complexity, 2017, 38, 31-38.	0.7	10
48	Improved upper bounds for the star discrepancy of digital nets in dimension 3. Acta Arithmetica, 2003, 108, 167-189.	0.2	10
49	A note on the sum of distances under a diameter constraint. Archiv Der Mathematik, 2001, 77, 195-199.	0.3	9
50	On extremal point distributions in the Euclidean plane. Acta Mathematica Hungarica, 2003, 98, 311-321.	0.3	9
51	Polynomial Lattice Point Sets. Springer Proceedings in Mathematics and Statistics, 2012, , 189-210.	0.1	9
52	A Method for Approximate Inversion of the Hyperbolic CDF. Computing (Vienna/New York), 2002, 69, 291-303.	3.2	8
53	Duality theory and propagation rules for higher order nets. Discrete Mathematics, 2011, 311, 362-386.	0.4	8
54	$\frac{L}{\mathbb{L}}$ in Korobov spaces with exponential weights. Journal of Complexity, 2017, 41, 102-125.	0.7	8

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55	Average growth-behavior and distribution properties of generalized weighted digit-block-counting functions. Monatshefte Fur Mathematik, 2008, 154, 199-230.	0.5	7
56	On Weyl products and uniform distribution modulo one. Monatshefte Fur Mathematik, 2018, 185, 365-395.	0.5	7
57	Truncation dimension for linear problems on multivariate function spaces. Numerical Algorithms, 2019, 80, 661-685.	1.1	7
58	Tractability properties of the weighted star discrepancy of the Halton sequence. Journal of Computational and Applied Mathematics, 2019, 350, 46-54.	1.1	7
59	On the mean square weighted error in combinatorial designs. Journal of Number Theory, 2019, 188, 1-20.	0.7	6
60	On optimal point distributions in combinatorial designs. Journal of Number Theory, 2019, 188, 21-34.	1.1	6
61	Low discrepancy polynomial lattice point sets. Journal of Number Theory, 2012, 132, 2510-2534.	0.2	6
62	L_p -discrepancy of the symmetrized van der Corput sequence. Archiv Der Mathematik, 2015, 104, 407-418.	0.3	6
63	Optimal L_p -discrepancy bounds for second order digital sequences. Israel Journal of Mathematics, 2017, 221, 489-510.	0.4	6
64	Tractability of approximation in the weighted Korobov space in the worst-case setting $\hat{\alpha}$ a complete picture. Journal of Complexity, 2021, 67, 101571.	0.7	6
65	Weighted Discrepancy and High-Dimensional Numerical Integration. BIT Numerical Mathematics, 2003, 43, 123-137.	1.0	5
66	Dyadic Diaphony of Digital Nets Over $\hat{\alpha}, 2$. Monatshefte Fur Mathematik, 2005, 145, 285-299.	0.5	5
67	Periodic functions with bounded remainder. Archiv Der Mathematik, 2006, 87, 554-563.	0.3	5
68	Euler's Constant and Averages of Fractional Parts. American Mathematical Monthly, 2010, 117, 78.	0.2	5
69	DISCREPANCY OF SECOND ORDER DIGITAL SEQUENCES IN FUNCTION SPACES WITH DOMINATING MIXED SMOOTHNESS. Mathematika, 2017, 63, 863-894.	0.3	5
70	Extreme and periodic L_2 discrepancy of plane point sets. Acta Arithmetica, 2021, 199, 163-198.	0.2	5
71	The Weighted Dyadic Diaphony of Digital Sequences. , 2008, , 549-560.		5
72	Moments of the Weighted Sum-of-Digits Function. Quaestiones Mathematicae, 2005, 28, 321-336.	0.2	4

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73	The construction of good extensible Korobov rules. Computing (Vienna/New York), 2007, 79, 79-91.	3.2	4
74	The Sum of Distances Between Vertices of a Convex Polygon with Unit Perimeter. American Mathematical Monthly, 2008, 115, 350-355.	0.2	4
75	The p -adic diaphony of the Halton sequence. Functiones Et Approximatio, Commentarii Mathematici, 2013, 49, .	0.1	4
76	A metrical lower bound on the star discrepancy of digital sequences. Monatshefte Fur Mathematik, 2014, 174, 105-123.	0.5	4
77	Metrical lower bounds on the discrepancy of digital Kronecker-sequences. Journal of Number Theory, 2014, 135, 262-283.	0.2	4
78	Open type quasi-Monte Carlo integration based on Halton sequences in weighted Sobolev spaces. Journal of Complexity, 2016, 33, 169-189.	0.7	4
79	Digital inversive vectors can achieve polynomial tractability for the weighted star discrepancy and for multivariate integration. Proceedings of the American Mathematical Society, 2017, 145, 3297-3310.	0.4	4
80	Secure pseudorandom bit generators and point sets with low star-discrepancy. Journal of Computational and Applied Mathematics, 2021, 396, 113601.	1.1	4
81	Discrepancy of Hyperplane Nets and Cyclic Nets. , 2009, , 573-587.		4
82	On the root mean square weighted L2 discrepancy of scrambled nets. Journal of Complexity, 2004, 20, 638-653.	0.7	3
83	Digital Sequences with Best Possible Order of L_2 -Discrepancy. Mathematika, 2006, 53, 149-160.	0.3	3
84	Randomized Smolyak algorithms based on digital sequences for multivariate integration. IMA Journal of Numerical Analysis, 2007, 27, 655-674.	1.5	3
85	Point sets with low L_p -discrepancy. Mathematica Slovaca, 2007, 57, 11.	0.3	3
86	On the existence of low p -diaphony sequences made of digital sequences and lattice point sets. Mathematische Nachrichten, 2013, 286, 224-235.	0.4	3
87	Integration and approximation in cosine spaces of smooth functions. Mathematics and Computers in Simulation, 2018, 143, 35-45.	2.4	3
88	Exponential tractability of linear weighted tensor product problems in the worst-case setting for arbitrary linear functionals. Journal of Complexity, 2020, 61, 101501.	0.7	3
89	A note on the periodic L_2 -discrepancy of Korobov's p -sets. Archiv Der Mathematik, 2020, 115, 67-78.	0.3	3
90	Distribution properties of sequences generated by Q -additive functions with respect to Cantor representation of integers. Acta Arithmetica, 2009, 138, 179-200.	0.2	3

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91	A generalization of NUT digital (0,1)-sequences and best possible lower bounds for star discrepancy. Acta Arithmetica, 2013, 158, 321-340.	0.2	3
92	A lower bound on a quantity related to the quality of polynomial lattices. Functiones Et Approximatio, Commentarii Mathematici, 2011, 45, .	0.1	3
93	L 2 Discrepancy of Two-Dimensional Digitally Shifted Hammersley Point Sets in Base b. , 2009, , 355-368.		3
94	Learning a function from noisy samples at a finite sparse set of points. Journal of Approximation Theory, 2009, 161, 448-463.	0.5	2
95	Tractability properties of the weighted star discrepancy of regular grids. Journal of Complexity, 2018, 46, 103-112.	0.7	2
96	Lattice-based integration algorithms: Kronecker sequences and rank-1 lattices. Annali Di Matematica Pura Ed Applicata, 2018, 197, 109-126.	0.5	2
97	Truncation Dimension for Function Approximation. , 2018, , 771-792.		2
98	Truncation in average and worst case settings for special classes of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" overflow="scroll" id="d1e22" altimg="si10.gif" \rangle \langle \text{mml:mi} \rangle \hat{z} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -variate functions. Mathematics and Computers in Simulation, 2019, 161, 52-65.	2.4	2
99	Tractability properties of the discrepancy in Orlicz norms. Journal of Complexity, 2020, 61, 101468.	0.7	2
100	Metrical Star Discrepancy Bounds for Lacunary Subsequences of Digital Kronecker-Sequences and Polynomial Tractability. Uniform Distribution Theory, 2018, 13, 65-86.	0.2	2
101	L ₂ discrepancy of generalized Zaremba point sets. Journal De Theorie Des Nombres De Bordeaux, 2011, 23, 121-136.	0.0	2
102	Dyadic diaphony of digital sequences. Journal De Theorie Des Nombres De Bordeaux, 2007, 19, 501-521.	0.0	2
103	Exact order of extreme L_p discrepancy of infinite sequences in arbitrary dimension. Archiv Der Mathematik, 2022, 118, 169-179.	0.3	2
104	Weighted discrepancy of Faure-Niederreiter nets for a certain sequence of weights. Bulletin of the Australian Mathematical Society, 2003, 67, 377-382.	0.3	1
105	A lower bound for rank 2 lattice rules. Mathematics of Computation, 2003, 73, 853-861.	1.1	1
106	On the weighted dyadic diaphony of digital (t, s) -sequences. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1026601-1026602.	0.2	1
107	Extensible hyperplane nets. Finite Fields and Their Applications, 2011, 17, 407-423.	0.6	1
108	Discrepancy of higher rank polynomial lattice point sets. Monte Carlo Methods and Applications, 2012, 18, .	0.3	1

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109	Controlling the shape of generating matrices in global function field constructions of digital sequences. , 0 , 164-189.		1
110	Discrepancy bounds for low-dimensional point sets. , 0 , 58-90.		1
111	Construction of a rank-1 lattice sequence based on primitive polynomials. , 0 , 204-215.		1
112	Tractability of multivariate analytic problems. , 2014 , 147-170.		1
113	Numerical integration in log-Korobov and log-cosine spaces. Numerical Algorithms, 2015, 70, 753-775.	1.1	1
114	Tractability of Multivariate Integration in Hybrid Function Spaces. Springer Proceedings in Mathematics and Statistics, 2016 , 437-454.	0.1	1
115	Tractability of \mathbb{L}_2 -approximation in hybrid function spaces. Functiones Et Approximatio, Commentarii Mathematici, 2018, 58, .	0.1	1
116	A note on isotropic discrepancy and spectral test of lattice point sets. Journal of Complexity, 2020, 58, 101441.	0.7	1
117	A note on Korobov lattice rules for integration of analytic functions. Journal of Complexity, 2021, 63, 101524.	0.7	1
118	Weighted integration over a hyperrectangle based on digital nets and sequences. Journal of Computational and Applied Mathematics, 2021, 393, 113509.	1.1	1
119	Discrepancy estimates for index-transformed uniformly distributed sequences. Functiones Et Approximatio, Commentarii Mathematici, 2014, 51, .	0.1	1
120	Walsh Series Analysis of the Star Discrepancy of Digital Nets and Sequences. , 2004 , 315-327.		1
121	A generalisation of a result of de la Vallée Poussin. Elemente Der Mathematik, 2012, 67, 26-38.	0.1	1
122	Component-by-Component Construction of Hybrid Point Sets Based on Hammersley and Lattice Point Sets. Springer Proceedings in Mathematics and Statistics, 2013 , 501-515.	0.1	1
123	The Inverse of the Star-Discrepancy Problem and the Generation of Pseudo-Random Numbers. Lecture Notes in Computer Science, 2014 , 173-184.	1.0	1
124	Bounds for the Quality Parameter of Digital Shift Nets over \mathbb{Z}_2 . Finite Fields and Their Applications, 2002, 8, 444-454.	0.6	0
125	Smolyak algorithms based on digital (t, \mathbb{Z}_m^s, d) -sequences for multivariate integration. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1022403-1022404.	0.2	0
126	Strong tractability of multivariate integration of arbitrary order. Proceedings in Applied Mathematics and Mechanics, 2007, 7, 1022405-1022406.	0.2	0

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127	On the existence and distribution quality of hyperplane sequences. <i>Finite Fields and Their Applications</i> , 2013, 22, 1-15.	0.6	0
128	On an important family of inequalities of Niederreiter involving exponential sums. , 0, , 144-163.		0
129	Some highlights of Harald Niederreiter's work. , 0, , 1-21.		0
130	Applications of geometric discrepancy in numerical analysis and statistics. , 0, , 39-57.		0
131	A quasi-Monte Carlo method for the coagulation equation. , 0, , 216-234.		0
132	Ian Sloan and Lattice Rules. , 2018, , 741-769.		0
133	Digital net properties of a polynomial analogue of Frolov's construction. <i>Finite Fields and Their Applications</i> , 2018, 51, 325-350.	0.6	0
134	On the relation of the spectral test to isotropic discrepancy and L-approximation in Sobolev spaces. <i>Journal of Complexity</i> , 2021, 67, 101576.	0.7	0
135	Lattice Point Sets. <i>Compact Textbooks in Mathematics</i> , 2014, , 73-106.	0.1	0
136	Discrepancy of Digital Sequences: New Results on a Classical QMC Topic. <i>Springer Proceedings in Mathematics and Statistics</i> , 2020, , 81-103.	0.1	0
137	Lower Bounds on the L_p Discrepancy of Digital NUT Sequences. <i>Springer Proceedings in Mathematics and Statistics</i> , 2020, , 329-344.	0.1	0