

Frances Y Kuo

List of Publications by Year in descending order

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52
papers

2,155
citations

361045

20
h-index

233125

45
g-index

54
all docs

54
docs citations

54
times ranked

880
citing authors

#	ARTICLE	IF	CITATIONS
1	High-dimensional integration: The quasi-Monte Carlo way. <i>Acta Numerica</i> , 2013, 22, 133-288.	6.3	404
2	Remark on algorithm 659. <i>ACM Transactions on Mathematical Software</i> , 2003, 29, 49-57.	1.6	284
3	Constructing Sobol Sequences with Better Two-Dimensional Projections. <i>SIAM Journal of Scientific Computing</i> , 2008, 30, 2635-2654.	1.3	238
4	Quasi-Monte Carlo Finite Element Methods for a Class of Elliptic Partial Differential Equations with Random Coefficients. <i>SIAM Journal on Numerical Analysis</i> , 2012, 50, 3351-3374.	1.1	176
5	Application of Quasi-Monte Carlo Methods to Elliptic PDEs with Random Diffusion Coefficients: A Survey of Analysis and Implementation. <i>Foundations of Computational Mathematics</i> , 2016, 16, 1631-1696.	1.5	97
6	Constructing Embedded Lattice Rules for Multivariate Integration. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 2162-2188.	1.3	84
7	Multi-level Quasi-Monte Carlo Finite Element Methods for a Class of Elliptic PDEs with Random Coefficients. <i>Foundations of Computational Mathematics</i> , 2015, 15, 411-449.	1.5	75
8	Higher Order QMC Petrov--Galerkin Discretization for Affine Parametric Operator Equations with Random Field Inputs. <i>SIAM Journal on Numerical Analysis</i> , 2014, 52, 2676-2702.	1.1	70
9	Liberating the dimension. <i>Journal of Complexity</i> , 2010, 26, 422-454.	0.7	55
10	Multilevel Quasi-Monte Carlo methods for lognormal diffusion problems. <i>Mathematics of Computation</i> , 2017, 86, 2827-2860.	1.1	54
11	The smoothing effect of the ANOVA decomposition. <i>Journal of Complexity</i> , 2010, 26, 523-551.	0.7	37
12	On the power of standard information for multivariate approximation in the worst case setting. <i>Journal of Approximation Theory</i> , 2009, 158, 97-125.	0.5	35
13	Multilevel Higher Order QMC Petrov--Galerkin Discretization for Affine Parametric Operator Equations. <i>SIAM Journal on Numerical Analysis</i> , 2016, 54, 2541-2568.	1.1	35
14	Component-by-Component Construction of Good Lattice Rules with a Composite Number of Points. <i>Journal of Complexity</i> , 2002, 18, 943-976.	0.7	34
15	Lattice rule algorithms for multivariate approximation in the average case setting. <i>Journal of Complexity</i> , 2008, 24, 283-323.	0.7	34
16	Quasi-Monte Carlo for finance applications. <i>ANZIAM Journal</i> , 0, 50, 308.	0.0	33
17	Randomly shifted lattice rules with the optimal rate of convergence for unbounded integrands. <i>Journal of Complexity</i> , 2010, 26, 135-160.	0.7	30
18	The smoothing effect of integration in \mathbb{R}^d and the ANOVA decomposition. <i>Mathematics of Computation</i> , 2012, 82, 383-400.	1.1	29

#	ARTICLE	IF	CITATIONS
19	Fast QMC construction of randomly shifted lattice rules achieving ϵ for unbounded integrands over $[0, 1]^d$. Journal of Complexity, 2014, 30, 444-468.	0.7	27
20	Randomly shifted lattice rules for unbounded integrands. Journal of Complexity, 2006, 22, 630-651.	0.7	22
21	Constructing lattice rules based on weighted degree of exactness and worst case error. Computing (Vienna/New York), 2010, 87, 63-89.	3.2	21
22	Fast random field generation with H-matrices. Numerische Mathematik, 2018, 140, 639-676.	0.9	21
23	Lattice Rules for Multivariate Approximation in the Worst Case Setting. , 2006, , 289-330.		21
24	Quasi-Monte Carlo methods can be efficient for integration over products of spheres. Journal of Complexity, 2005, 21, 196-210.	0.7	20
25	Circulant embedding with QMC: analysis for elliptic PDE with lognormal coefficients. Numerische Mathematik, 2018, 140, 479-511.	0.9	20
26	A Quasi-Monte Carlo Method for Optimal Control Under Uncertainty. SIAM-ASA Journal on Uncertainty Quantification, 2021, 9, 354-383.	1.1	20
27	Multivariate L_∞ approximation in the worst case setting over reproducing kernel Hilbert spaces. Journal of Approximation Theory, 2008, 152, 135-160.	0.5	19
28	Tent-transformed lattice rules for integration and approximation of multivariate non-periodic functions. Journal of Complexity, 2016, 36, 166-181.	0.7	18
29	Lattice-Nyström method for Fredholm integral equations of the second kind with convolution type kernels. Journal of Complexity, 2007, 23, 752-772.	0.7	17
30	Periodization strategy may fail in high dimensions. Numerical Algorithms, 2007, 46, 369-391.	1.1	14
31	Weighted compound integration rules with higher order convergence for all N. Numerical Algorithms, 2012, 59, 161-183.	1.1	12
32	High dimensional integration of kinks and jumps – Smoothing by preintegration. Journal of Computational and Applied Mathematics, 2018, 344, 259-274.	1.1	12
33	Lattice Algorithms for Multivariate L_∞ Approximation in the Worst-Case Setting. Constructive Approximation, 2009, 30, 475.	1.8	10
34	Fast QMC Matrix-Vector Multiplication. SIAM Journal of Scientific Computing, 2015, 37, A1436-A1450.	1.3	9
35	The ANOVA decomposition of a non-smooth function of infinitely many variables can have every term smooth. Mathematics of Computation, 2016, 86, 1855-1876.	1.1	9
36	Randomly shifted lattice rules on the unit cube for unbounded integrands in high dimensions. Journal of Complexity, 2006, 22, 71-101.	0.7	8

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37	Lattice rules with random n achieve nearly the optimal $O(n^{-\frac{1}{d}} \log^2 n)$ error independently of the dimension. <i>Journal of Approximation Theory</i> , 2019, 240, 96-113.	0.5	8
38	Efficient Implementations of the Multivariate Decomposition Method for Approximating Infinite-Variate Integrals. <i>SIAM Journal of Scientific Computing</i> , 2018, 40, A3240-A3266.	1.3	7
39	Gauss-Hermite quadratures for functions from Hilbert spaces with Gaussian reproducing kernels. <i>BIT Numerical Mathematics</i> , 2012, 52, 425-436.	1.0	6
40	Quasi-Monte Carlo Finite Element Analysis for Wave Propagation in Heterogeneous Random Media. <i>SIAM-ASA Journal on Uncertainty Quantification</i> , 2021, 9, 106-134.	1.1	6
41	Constructing Good Lattice Rules with Millions of Points. , 2004, , 181-197.		6
42	A component-by-component approach to efficient numerical integration over products of spheres. <i>Journal of Complexity</i> , 2007, 23, 25-51.	0.7	4
43	Hot New Directions for Quasi-Monte Carlo Research in Step with Applications. <i>Springer Proceedings in Mathematics and Statistics</i> , 2018, , 123-144.	0.1	3
44	Fast approximation by periodic kernel-based lattice-point interpolation with application in uncertainty quantification. <i>Numerische Mathematik</i> , 2022, 150, 33-77.	0.9	3
45	On the power of standard information for L_2 -approximation in the randomized setting. <i>BIT Numerical Mathematics</i> , 2009, 49, 543-564.	1.0	2
46	On the Choice of Weights in a Function Space for Quasi-Monte Carlo Methods for a Class of Generalised Response Models in Statistics. <i>Springer Proceedings in Mathematics and Statistics</i> , 2013, , 631-647.	0.1	2
47	Hiding the weights – CBC black box algorithms with a guaranteed error bound. <i>Mathematics and Computers in Simulation</i> , 2018, 143, 202-214.	2.4	1
48	Combining Sparse Grids, Multilevel MC and QMC for Elliptic PDEs with Random Coefficients. <i>Springer Proceedings in Mathematics and Statistics</i> , 2018, , 265-281.	0.1	1
49	Application of Quasi-Monte Carlo Methods to PDEs with Random Coefficients – An Overview and Tutorial. <i>Springer Proceedings in Mathematics and Statistics</i> , 2018, , 53-71.	0.1	1
50	Equivalence between Sobolev spaces of first-order dominating mixed smoothness and unanchored ANOVA spaces on $\hat{\mathbb{A}}_d$. <i>Mathematics of Computation</i> , 2022, 91, 1837-1869.	1.1	1
51	Guest Editors – Preface. <i>Journal of Complexity</i> , 2015, 31, vi.	0.7	0
52	Lattice meets lattice: Application of lattice cubature to models in lattice gauge theory. <i>Journal of Computational Physics</i> , 2021, 443, 110527.	1.9	0