

Jan Verschelde

List of Publications by Year in descending order

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52
papers

1,539
citations

516215

16
h-index

315357

38
g-index

53
all docs

53
docs citations

53
times ranked

463
citing authors

#	ARTICLE	IF	CITATIONS
1	Parallel Software to Offset the Cost of Higher Precision. ACM SIGAda Ada Letters, 2021, 40, 59-64.	0.1	3
2	Accelerated Polynomial Evaluation and Differentiation at Power Series in Multiple Double Precision. , 2021, , .		1
3	A Robust Numerical Path Tracking Algorithm for Polynomial Homotopy Continuation. SIAM Journal of Scientific Computing, 2020, 42, A3610-A3637.	1.3	14
4	Robust Numerical Tracking of One Path of a Polynomial Homotopy on Parallel Shared Memory Computers. Lecture Notes in Computer Science, 2020, , 563-582.	1.0	3
5	The method of Gaussâ€“Newton to compute power series solutions of polynomial homotopies. Linear Algebra and Its Applications, 2018, 542, 569-588.	0.4	5
6	Polynomial homotopy continuation on GPUs. ACM Communications in Computer Algebra, 2016, 49, 130-133.	0.2	2
7	Computing All Space Curve Solutions of Polynomial Systems by Polyhedral Methods. Lecture Notes in Computer Science, 2016, , 73-86.	1.0	1
8	Tracking Many Solution Paths of a Polynomial Homotopy on a Graphics Processing Unit in Double Double and Quad Double Arithmetic. , 2015, , .		4
9	Accelerating polynomial homotopy continuation on a graphics processing unit with double double and quad double arithmetic. , 2015, , .		5
10	GPU Acceleration of Newton's Method for Large Systems of Polynomial Equations in Double Double and Quad Double Arithmetic. , 2014, , .		4
11	Orthogonalization on a General Purpose Graphics Processing Unit with Double Double and Quad Double Arithmetic. , 2013, , .		5
12	Polyhedral Methods for Space Curves Exploiting Symmetry Applied to the Cyclic n-roots Problem. Lecture Notes in Computer Science, 2013, , 10-29.	1.0	11
13	Computing Puiseux series for algebraic surfaces. , 2012, , .		11
14	Evaluating Polynomials in Several Variables and their Derivatives on a GPU Computing Processor. , 2012, , .		9
15	Sampling algebraic sets in local intrinsic coordinates. Computers and Mathematics With Applications, 2011, 62, 3706-3721.	1.4	0
16	Tropical algebraic geometry in Maple: A preprocessing algorithm for finding common factors for multivariate polynomials with approximate coefficients. Journal of Symbolic Computation, 2011, 46, 755-772.	0.5	6
17	Polynomial homotopy continuation with PHCpack. ACM Communications in Computer Algebra, 2011, 44, 217-220.	0.2	27
18	Sweeping algebraic curves for singular solutions. Journal of Computational and Applied Mathematics, 2010, 234, 1228-1237.	1.1	9

#	ARTICLE	IF	CITATIONS
19	Polynomial homotopies on multicore workstations. , 2010, , .		10
20	Solving schubert problems with Littlewood-Richardson homotopies. , 2010, , .		4
21	Decomposing solution sets of polynomial systems: a new parallel monodromy breakup algorithm. International Journal of Computational Science and Engineering, 2009, 4, 94.	0.4	12
22	Parallel Implementation of a Subsystem-by-Subsystem Solver. 2008 22nd International Symposium on High Performance Computing Systems and Applications, 2008, , .	0.0	3
23	Higher-Order Deflation for Polynomial Systems With Isolated Singular Solutions. The IMA Volumes in Mathematics and Its Applications, 2008, , 79-97.	0.5	29
24	Solving Polynomial Systems Equation by Equation. The IMA Volumes in Mathematics and Its Applications, 2008, , 133-152.	0.5	13
25	PHClab: A MATLAB/Octave Interface to PHCpack. The IMA Volumes in Mathematics and Its Applications, 2008, , 15-32.	0.5	13
26	Newton's method with deflation for isolated singularities of polynomial systems. Theoretical Computer Science, 2006, 359, 111-122.	0.5	105
27	Parallel Homotopy Algorithms to Solve Polynomial Systems. Lecture Notes in Computer Science, 2006, , 225-234.	1.0	13
28	Interfacing with the Numerical Homotopy Algorithms in PHCpack. Lecture Notes in Computer Science, 2006, , 354-360.	1.0	8
29	An intrinsic homotopy for intersecting algebraic varieties. Journal of Complexity, 2005, 21, 593-608.	0.7	12
30	Symbolic-numeric completion of differential systems by homotopy continuation. , 2005, , .		5
31	Advances in Polynomial Continuation for Solving Problems in Kinematics. Journal of Mechanical Design, Transactions of the ASME, 2004, 126, 262-268.	1.7	50
32	Numerical factorization of multivariate complex polynomials. Theoretical Computer Science, 2004, 315, 651-669.	0.5	25
33	Homotopies for Intersecting Solution Components of Polynomial Systems. SIAM Journal on Numerical Analysis, 2004, 42, 1552-1571.	1.1	31
34	Numerical Irreducible Decomposition Using PHCpack. , 2003, , 109-129.		19
35	Geometric completion of differential systems using numeric-symbolic continuation. SIGSAM Bulletin: A Quarterly Publication of the Special Interest Group on Symbolic & Algebraic Manipulation, 2002, 36, 1-17.	0.3	11
36	Advances in Polynomial Continuation for Solving Problems in Kinematics. , 2002, , 481.		4

#	ARTICLE	IF	CITATIONS
37	Symmetric Functions Applied to Decomposing Solution Sets of Polynomial Systems. SIAM Journal on Numerical Analysis, 2002, 40, 2026-2046.	1.1	79
38	Numerical Decomposition of the Solution Sets of Polynomial Systems into Irreducible Components. SIAM Journal on Numerical Analysis, 2001, 38, 2022-2046.	1.1	105
39	Numerical Homotopies to Compute Generic Points on Positive Dimensional Algebraic Sets. Journal of Complexity, 2000, 16, 572-602.	0.7	71
40	Toric Newton Method for Polynomial Homotopies. Journal of Symbolic Computation, 2000, 29, 777-793.	0.5	8
41	Balancing the lifting values to improve the numerical stability of polyhedral homotopy continuation methods. Applied Mathematics and Computation, 2000, 114, 233-247.	1.4	11
42	Pieri Homotopies for Problems in Enumerative Geometry Applied to Pole Placement in Linear Systems Control. SIAM Journal on Control and Optimization, 2000, 38, 1265-1287.	1.1	23
43	Numerical Evidence for a Conjecture in Real Algebraic Geometry. Experimental Mathematics, 2000, 9, 183-196.	0.5	14
44	Algorithm 795. ACM Transactions on Mathematical Software, 1999, 25, 251-276.	1.6	439
45	Polyhedral end games for polynomial continuation. Numerical Algorithms, 1998, 18, 91-108.	1.1	38
46	Homotopies for solving polynomial systems within a bounded domain. Theoretical Computer Science, 1994, 133, 165-185.	0.5	9
47	Symmetric homotopy construction. Journal of Computational and Applied Mathematics, 1994, 50, 575-592.	1.1	19
48	Homotopies Exploiting Newton Polytopes for Solving Sparse Polynomial Systems. SIAM Journal on Numerical Analysis, 1994, 31, 915-930.	1.1	163
49	Symbolic homotopy construction. Applicable Algebra in Engineering, Communications and Computing, 1993, 4, 169-183.	0.3	28
50	The \$GBQ\$-Algorithm for Constructing Start Systems of Homotopies for Polynomial Systems. SIAM Journal on Numerical Analysis, 1993, 30, 583-594.	1.1	24
51	Nonlinear reduction for solving deficient polynomial systems by continuation methods. Numerische Mathematik, 1992, 63, 263-282.	0.9	7
52	A new start system for solving deficient polynomial systems using continuation. Applied Mathematics and Computation, 1991, 44, 225-239.	1.4	10