Philippe Toint

List of Publications by Year in descending order

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69 papers	4,626 citations	159358 30 h-index	106150 65 g-index
78 all docs	78 docs citations	78 times ranked	1978 citing authors

#	Article	IF	Citations
1	Adaptive regularization minimization algorithms with nonsmooth norms. IMA Journal of Numerical Analysis, 2023, 43, 920-949.	1.5	2
2	An algorithm for the minimization of nonsmooth nonconvex functions using inexact evaluations and its worst-case complexity. Mathematical Programming, 2021, 187, 1-24.	1.6	8
3	High-order evaluation complexity for convexly-constrained optimization with non-Lipschitzian group sparsity terms. Mathematical Programming, 2021, 187, 47-78.	1.6	6
4	A concise second-order complexity analysis for unconstrained optimization using high-order regularized models. Optimization Methods and Software, 2020, 35, 243-256.	1.6	12
5	A note on solving nonlinear optimization problems in variable precision. Computational Optimization and Applications, 2020, 76, 917-933.	0.9	8
6	Sharp Worst-Case Evaluation Complexity Bounds for Arbitrary-Order Nonconvex Optimization with Inexpensive Constraints. SIAM Journal on Optimization, 2020, 30, 513-541.	1.2	16
7	Complexity of Partially Separable Convexly Constrained Optimization with Non-Lipschitzian Singularities. SIAM Journal on Optimization, 2019, 29, 874-903.	1.2	9
8	Adaptive Regularization Algorithms with Inexact Evaluations for Nonconvex Optimization. SIAM Journal on Optimization, 2019, 29, 2881-2915.	1.2	25
9	Second-Order Optimality and Beyond: Characterization and Evaluation Complexity in Convexly Constrained Nonlinear Optimization. Foundations of Computational Mathematics, 2018, 18, 1073-1107.	1.5	24
10	Worst-case evaluation complexity for unconstrained nonlinear optimization using high-order regularized models. Mathematical Programming, 2017, 163, 359-368.	1.6	84
11	Numerical experience with a derivative-free trust-funnel method for nonlinear optimization problems with general nonlinear constraints. Optimization Methods and Software, 2016, 31, 511-534.	1.6	9
12	Simple examples for the failure of Newtonâ€™s method with line search for strictly convex minimization. Mathematical Programming, 2016, 158, 23-34.	1.6	4
13	CUTEst: a Constrained and Unconstrained Testing Environment with safe threads for mathematical optimization. Computational Optimization and Applications, 2015, 60, 545-557.	0.9	196
14	A derivative-free trust-funnel method for equality-constrained nonlinear optimization. Computational Optimization and Applications, 2015, 61, 25-49.	0.9	19
15	A Stochastic and Flexible Activity Based Model for Large Population. Application to Belgium. Jasss, 2015, 18, .	1.0	8
16	Differentiating the Method of Conjugate Gradients. SIAM Journal on Matrix Analysis and Applications, 2014, 35, 110-126.	0.7	4
17	An adaptive cubic regularization algorithm for nonconvex optimization with convex constraints and its function-evaluation complexity. IMA Journal of Numerical Analysis, 2012, 32, 1662-1695.	1.5	48
18	Nonlinear programming without a penalty function or a filter. Mathematical Programming, 2010, 122, 155-196.	1.6	55

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19	Convergence of a Regularized Euclidean Residual Algorithm for Nonlinear Least-Squares. SIAM Journal on Numerical Analysis, 2010, 48, 1-29.	1.1	32
20	On the Complexity of Steepest Descent, Newton's and Regularized Newton's Methods for Nonconvex Unconstrained Optimization Problems. SIAM Journal on Optimization, 2010, 20, 2833-2852.	1.2	136
21	Self-Correcting Geometry in Model-Based Algorithms for Derivative-Free Unconstrained Optimization. SIAM Journal on Optimization, 2010, 20, 3512-3532.	1.2	44
22	Recognizing underlying sparsity in optimization. Mathematical Programming, 2009, 119, 273-303.	1.6	7
23	Exploiting problem structure in pattern search methods for unconstrained optimization. Optimization Methods and Software, 2006, 21, 479-491.	1.6	10
24	Transfers to Sustain Dynamic Core-Theoretic Cooperation in International Stock Pollutant Control. , 2006, , 251-274.		8
25	Numerical methods for large-scale nonlinear optimization. Acta Numerica, 2005, 14, 299-361.	6.3	106
26	Transfers to sustain dynamic core-theoretic cooperation in international stock pollutant control. Journal of Economic Dynamics and Control, 2003, 28, 79-99.	0.9	118
27	Exploiting negative curvature directions in linesearch methods for unconstrained optimization. Optimization Methods and Software, 2000, 14, 75-98.	1.6	35
28	On The Overspecification of Multinomial and Nested Logit Models Due to Alternative Specific Constants. Transportation Science, 1997, 31, 363-371.	2.6	20
29	Recent progress in unconstrained nonlinear optimization without derivatives. Mathematical Programming, 1997, 79, 397-414.	1.6	148
30	The inverse shortest paths problem with upper bounds on shortest paths costs. Lecture Notes in Economics and Mathematical Systems, 1997, , 156-171.	0.3	28
31	Convergence Properties of Minimization Algorithms for Convex Constraints Using a Structured Trust Region. SIAM Journal on Optimization, 1996, 6, 1059-1086.	1.2	15
32	Convergence Properties of an Augmented Lagrangian Algorithm for Optimization with a Combination of General Equality and Linear Constraints. SIAM Journal on Optimization, 1996, 6, 674-703.	1.2	86
33	Numerical experiments with the LANCELOT package (release A) for large-scale nonlinear optimization. Mathematical Programming, 1996, 73, 73-110.	1.6	27
34	CUTE. ACM Transactions on Mathematical Software, 1995, 21, 123-160.	1.6	577
35	On the use of an inverse shortest paths algorithm for recovering linearly correlated costs. Mathematical Programming, 1994, 63, 1-22.	1.6	74
36	A note on exploiting structure when using slack variables. Mathematical Programming, 1994, 67, 89-97.	1.6	8

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37	Performance of a Multifrontal Scheme for Partially Separable Optimization. , 1994, , 79-96.		16
38	Global Convergence of a Class of Trust Region Algorithms for Optimization Using Inexact Projections on Convex Constraints. SIAM Journal on Optimization, 1993, 3, 164-221.	1.2	42
39	Large-Scale Nonlinear Constrained Optimization. , 1993, , 21-48.		4
40	Lancelot. Springer Series in Computational Mathematics, 1992, , .	0.1	248
41	LSNNO, a FORTRAN subroutine for solving large-scale nonlinear network optimization problems. ACM Transactions on Mathematical Software, 1992, 18, 308-328.	1.6	15
42	On an instance of the inverse shortest paths problem. Mathematical Programming, 1992, 53, 45-61.	1.6	248
43	A SIF/LANCELOT Primer. Springer Series in Computational Mathematics, 1992, , 14-101.	0.1	0
44	The Specification of LANCELOT Subroutines. Springer Series in Computational Mathematics, 1992, , 244-305.	0.1	0
45	The SIF Reference Report. Springer Series in Computational Mathematics, 1992, , 180-243.	0.1	0
46	A Description of how LANCELOT Works. Springer Series in Computational Mathematics, 1992, , 144-154.	0.1	0
47	Installing LANCELOT on your System. Springer Series in Computational Mathematics, 1992, , 155-179.	0.1	0
48	A Globally Convergent Augmented Lagrangian Algorithm for Optimization with General Constraints and Simple Bounds. SIAM Journal on Numerical Analysis, 1991, 28, 545-572.	1.1	666
49	Convergence of quasi-Newton matrices generated by the symmetric rank one update. Mathematical Programming, 1991, 50, 177-195.	1.6	154
50	On large scale nonlinear Network optimization. Mathematical Programming, 1990, 48, 125-159.	1.6	44
51	Correction to the Paper on Global Convergence of a Class of Trust Region Algorithms for Optimization with Simple Bounds. SIAM Journal on Numerical Analysis, 1989, 26, 764-767.	1.1	31
52	Global Convergence of a Class of Trust Region Algorithms for Optimization with Simple Bounds. SIAM Journal on Numerical Analysis, 1988, 25, 433-460.	1.1	240
53	Global Convergence of a a of Trust-Region Methods for Nonconvex Minimization in Hilbert Space. IMA Journal of Numerical Analysis, 1988, 8, 231-252.	1.5	121
54	On Large Scale Nonlinear Least Squares Calculations. SIAM Journal on Scientific and Statistical Computing, 1987, 8, 416-435.	1.5	38

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55	A Comparison Between Some Direct and Iterative Methods for Certain Large Scale Geodetic Least Squares Problems. SIAM Journal on Scientific and Statistical Computing, 1986, 7, 799-816.	1.5	24
56	Numerical solution of large sets of algebraic nonlinear equations. Mathematics of Computation, 1986, 46, 175-189.	1.1	33
57	Two new methods for solving large scale least squares in geodetic surveying computations. Bulletin Geodesique, 1986, 60, 311-328.	0.4	0
58	Global convergence of the partitioned BFGS algorithm for convex partially separable optimization. Mathematical Programming, 1986, 36, 290-306.	1.6	37
59	A Modification of an Algorithm by Golub and Plemmons for Large Linear Least Squares in the Context of Doppler Positioning. IMA Journal of Numerical Analysis, 1985, 5, 221-233.	1.5	8
60	Numerical experiments with partially separable optimization problems. Lecture Notes in Mathematics, 1984, , 203-220.	0.1	32
61	On the existence of convex decompositions of partially separable functions. Mathematical Programming, 1984, 28, 25-49.	1.6	27
62	Optimal estimation of Jacobian and Hessian matrices that arise in finite difference calculations. Mathematics of Computation, 1984, 43, 69-88.	1.1	25
63	Forcing sparsity by projecting with respect to a non-diagonally weighted frobenius norm. Mathematical Programming, 1983, 25, 125-129.	1.6	5
64	Partitioned variable metric updates for large structured optimization problems. Numerische Mathematik, 1982, 39, 119-137.	0.9	121
65	Local convergence analysis for partitioned quasi-Newton updates. Numerische Mathematik, 1982, 39, 429-448.	0.9	130
66	The Shanno-Toint Procedure for Updating Sparse Symmetric Matrices. IMA Journal of Numerical Analysis, 1981, 1, 403-413.	1.5	8
67	On the Estimation of Sparse Hessian Matrices. SIAM Journal on Numerical Analysis, 1979, 16, 1060-1074.	1.1	111
68	Some numerical results using a sparse matrix updating formula in unconstrained optimization. Mathematics of Computation, 1978, 32, 839-851.	1.1	60
69	On sparse and symmetric matrix updating subject to a linear equation. Mathematics of Computation, 1977, 31, 954-961.	1.1	109