

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

48 papers	12,050 citations	30 h-index	48 g-index
48 ext. papers	13,480 ext. citations	2.4 avg, IF	6.35 L-index

#	Paper	IF	Citations
48	A Rapidly Convergent Descent Method for Minimization. <i>Computer Journal</i> , 1963 , 6, 163-168	1.3	3390
47	An efficient method for finding the minimum of a function of several variables without calculating derivatives. <i>Computer Journal</i> , 1964 , 7, 155-162	1.3	2961
46	Restart procedures for the conjugate gradient method. <i>Mathematical Programming</i> , 1977 , 12, 241-254	2.1	1168
45	A fast algorithm for nonlinearly constrained optimization calculations. <i>Lecture Notes in Mathematics</i> , 1978 , 144-157	0.4	545
44	A Direct Search Optimization Method That Models the Objective and Constraint Functions by Linear Interpolation 1994 , 51-67		339
43	Direct search algorithms for optimization calculations. <i>Acta Numerica</i> , 1998 , 7, 287-336	15.1	317
42	Algorithms for nonlinear constraints that use lagrangian functions. <i>Mathematical Programming</i> , 1978 , 14, 224-248	2.1	308
41	Piecewise Quadratic Approximations on Triangles. <i>ACM Transactions on Mathematical Software</i> , 1977 , 3, 316-325	2.3	291
40	On the Estimation of Sparse Jacobian Matrices. <i>IMA Journal of Applied Mathematics</i> , 1974 , 13, 117-119	1	264
39	The watchdog technique for forcing convergence in algorithms for constrained optimization. <i>Mathematical Programming Studies</i> , 1982 , 1-17		187
38	On search directions for minimization algorithms. <i>Mathematical Programming</i> , 1973 , 4, 193-201	2.1	186
37	The NEWUOA software for unconstrained optimization without derivatives. <i>Nonconvex Optimization and Its Applications</i> , 2006 , 255-297		163
36	Variable Metric Methods for Constrained Optimization 1983 , 288-311		153
35	An Iterative Method for Finding Stationary Values of a Function of Several Variables. <i>Computer Journal</i> , 1962 , 5, 147-151	1.3	146
34	Convergence Properties of Algorithms for Nonlinear Optimization. <i>SIAM Review</i> , 1986 , 28, 487-500	7.4	135
33	Nonconvex minimization calculations and the conjugate gradient method. <i>Lecture Notes in Mathematics</i> , 1984 , 122-141	0.4	128
32	A trust region algorithm for equality constrained optimization. <i>Mathematical Programming</i> , 1990 , 49, 189-211	2.1	123

31	Recent advances in unconstrained optimization. <i>Mathematical Programming</i> , 1971 , 1, 26-57	2.1	121
30	On the Convergence of the Variable Metric Algorithm. <i>IMA Journal of Applied Mathematics</i> , 1971 , 7, 21-36		113
29	The Differential Correction Algorithm for Rational Sell _infity \$-Approximation. <i>SIAM Journal on Numerical Analysis</i> , 1972 , 9, 493-504	2.4	98
28	On the Estimation of Sparse Hessian Matrices. <i>SIAM Journal on Numerical Analysis</i> , 1979 , 16, 1060-1074	2.4	92
27	A tolerant algorithm for linearly constrained optimization calculations. <i>Mathematical Programming</i> , 1989 , 45, 547-566	2.1	91
26	A recursive quadratic programming algorithm that uses differentiable exact penalty functions. <i>Mathematical Programming</i> , 1986 , 35, 265-278	2.1	81
25	Univariate multiquadric approximation: Quasi-interpolation to scattered data. <i>Constructive Approximation</i> , 1992 , 8, 275-288	1.6	79
24	On the quadratic programming algorithm of Goldfarb and Idnani. <i>Mathematical Programming Studies</i> , 1985 , 46-61		76
23	How bad are the BFGS and DFP methods when the objective function is quadratic?. <i>Mathematical Programming</i> , 1986 , 34, 34-47	2.1	70
22	A Survey of Numerical Methods for Unconstrained Optimization. <i>SIAM Review</i> , 1970 , 12, 79-97	7.4	65
21	Some convergence properties of the conjugate gradient method. <i>Mathematical Programming</i> , 1976 , 11, 42-49	2.1	60
20	On the Modification of LDL T Factorizations. <i>Mathematics of Computation</i> , 1974 , 28, 1067	1.6	40
19	Updating conjugate directions by the BFGS formula. <i>Mathematical Programming</i> , 1987 , 38, 29-46	2.1	38
18	Fast evaluation of polyharmonic splines in three dimensions. <i>IMA Journal of Numerical Analysis</i> , 2006 , 27, 427-450	1.8	25
17	The convergence of variable metric matrices in unconstrained optimization. <i>Mathematical Programming</i> , 1983 , 27, 123-143	2.1	23
16	On the convergence of trust region algorithms for unconstrained minimization without derivatives. <i>Computational Optimization and Applications</i> , 2012 , 53, 527-555	1.4	20
15	A View of Unconstrained Minimization Algorithms that Do Not Require Derivatives. <i>ACM Transactions on Mathematical Software</i> , 1975 , 1, 97-107	2.3	19
14	On fast trust region methods for quadratic models with linear constraints. <i>Mathematical Programming Computation</i> , 2015 , 7, 237-267	7.8	18

13	Truncated Laurent expansions for the fast evaluation of thin plate splines. <i>Numerical Algorithms</i> , 1993 , 5, 99-120	2.1	17
12	Quadratic Termination Properties of Minimization Algorithms I. Statement and Discussion of Results. <i>IMA Journal of Applied Mathematics</i> , 1972 , 10, 333-342	1	15
11	On the use of quadratic models in unconstrained minimization without derivatives. <i>Optimization Methods and Software</i> , 2004 , 19, 399-411	1.3	14
10	Univariate Multiquadric Approximation: Reproduction of Linear Polynomials. <i>International Series of Numerical Mathematics</i> , 1990 , 227-240	0.4	14
9	Tabulation of Thin Plate Splines on a Very Fine Two-Dimensional Grid 1992 , 221-244		14
8	Beyond symmetric Broyden for updating quadratic models in minimization without derivatives. <i>Mathematical Programming</i> , 2013 , 138, 475-500	2.1	11
7	The differential correction algorithm for generalized rational functions. <i>Constructive Approximation</i> , 1987 , 3, 249-256	1.6	10
6	On Best L2 Spline Approximations 1968 , 317-339		7
5	Conditions for Superlinear Convergence in l1 and l2 Solutions of Overdetermined Non-linear Equations. <i>IMA Journal of Numerical Analysis</i> , 1984 , 4, 241-251	1.8	6
4	Univariate Interpolation on a Regular Finite Grid by a Multiquadric Plus a Linear Polynomial. <i>IMA Journal of Numerical Analysis</i> , 1992 , 12, 107-133	1.8	4
3	On nonlinear optimization since 1959 2009 , 141-160		3
2	Optimization algorithms in 1979 1980 , 83-98		1
1	Algorithms for Constrained and Unconstrained Optimization Calculations 1982 , 293-310		1