

Philip E Gill

List of Publications by Year in descending order

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59
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7,637
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147786

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docs citations

64
times ranked

4644
citing authors

#	ARTICLE	IF	CITATIONS
1	SNOPT: An SQP Algorithm for Large-Scale Constrained Optimization. <i>SIAM Review</i> , 2005, 47, 99-131.	8.4	1,797
2	SNOPT: An SQP Algorithm for Large-Scale Constrained Optimization. <i>SIAM Journal on Optimization</i> , 2002, 12, 979-1006.	2.0	1,286
3	Interior Methods for Nonlinear Optimization. <i>SIAM Review</i> , 2002, 44, 525-597.	8.4	513
4	An Augmented Lagrangian Method for Total Variation Video Restoration. <i>IEEE Transactions on Image Processing</i> , 2011, 20, 3097-3111.	9.8	481
5	Algorithms for the Solution of the Nonlinear Least-Squares Problem. <i>SIAM Journal on Numerical Analysis</i> , 1978, 15, 977-992.	2.3	459
6	On projected newton barrier methods for linear programming and an equivalence to Karmarkar's projective method. <i>Mathematical Programming</i> , 1986, 36, 183-209.	2.4	386
7	Newton-type methods for unconstrained and linearly constrained optimization. <i>Mathematical Programming</i> , 1974, 7, 311-350.	2.4	277
8	Aquifer Reclamation Design: The Use of Contaminant Transport Simulation Combined With Nonlinear Programming. <i>Water Resources Research</i> , 1984, 20, 415-427.	4.2	242
9	Procedures for optimization problems with a mixture of bounds and general linear constraints. <i>ACM Transactions on Mathematical Software</i> , 1984, 10, 282-298.	2.9	175
10	Numerically stable methods for quadratic programming. <i>Mathematical Programming</i> , 1978, 14, 349-372.	2.4	152
11	Primal-Dual Interior Methods for Nonconvex Nonlinear Programming. <i>SIAM Journal on Optimization</i> , 1998, 8, 1132-1152.	2.0	128
12	Algebraic tensegrity form-finding. <i>International Journal of Solids and Structures</i> , 2005, 42, 4833-4858.	2.7	125
13	Preconditioners for Indefinite Systems Arising in Optimization. <i>SIAM Journal on Matrix Analysis and Applications</i> , 1992, 13, 292-311.	1.4	121
14	A practical anti-cycling procedure for linearly constrained optimization. <i>Mathematical Programming</i> , 1989, 45, 437-474.	2.4	117
15	Sequential Quadratic Programming Methods. <i>The IMA Volumes in Mathematics and Its Applications</i> , 2012, , 147-224.	0.5	96
16	Maintaining LU factors of a general sparse matrix. <i>Linear Algebra and Its Applications</i> , 1987, 88-89, 239-270.	0.9	90
17	A numerically stable form of the simplex algorithm. <i>Linear Algebra and Its Applications</i> , 1973, 7, 99-138.	0.9	78
18	A primal-dual augmented Lagrangian. <i>Computational Optimization and Applications</i> , 2012, 51, 1-25.	1.6	62

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19	Optimization of tensegrity structures. International Journal of Solids and Structures, 2006, 43, 4687-4703.	2.7	57
20	On the Stability of Cholesky Factorization for Symmetric Quasidefinite Systems. SIAM Journal on Matrix Analysis and Applications, 1996, 17, 35-46.	1.4	55
21	Methods for Computing and Modifying the LDV Factors of a Matrix. Mathematics of Computation, 1975, 29, 1051.	2.1	53
22	The computation of Lagrange-multiplier estimates for constrained minimization. Mathematical Programming, 1979, 17, 32-60.	2.4	53
23	An SQP method for the optimal control of large-scale dynamical systems. Journal of Computational and Applied Mathematics, 2000, 120, 197-213.	2.0	53
24	Sparse Matrix Methods in Optimization. SIAM Journal on Scientific and Statistical Computing, 1984, 5, 562-589.	1.5	50
25	Stability of Symmetric Ill-Conditioned Systems Arising in Interior Methods for Constrained Optimization. SIAM Journal on Matrix Analysis and Applications, 1996, 17, 187-211.	1.4	47
26	Reduced-Hessian Quasi-Newton Methods for Unconstrained Optimization. SIAM Journal on Optimization, 2001, 12, 209-237.	2.0	47
27	State and parameter estimation in nonlinear systems as an optimal tracking problem. Physics Letters, Section A: General, Atomic and Solid State Physics, 2008, 372, 2640-2644.	2.1	45
28	A Globally Convergent Stabilized SQP Method. SIAM Journal on Optimization, 2013, 23, 1983-2010.	2.0	43
29	Limited-Memory Reduced-Hessian Methods for Large-Scale Unconstrained Optimization. SIAM Journal on Optimization, 2003, 14, 380-401.	2.0	38
30	Iterative Methods for Finding a Trust-region Step. SIAM Journal on Optimization, 2009, 20, 1110-1131.	2.0	36
31	A stabilized SQP method: global convergence. IMA Journal of Numerical Analysis, 2017, 37, 407-443.	2.9	36
32	Methods for convex and general quadratic programming. Mathematical Programming Computation, 2015, 7, 71-112.	4.8	32
33	Iterative Solution of Augmented Systems Arising in Interior Methods. SIAM Journal on Optimization, 2007, 18, 666-690.	2.0	31
34	A Subspace Minimization Method for the Trust-Region Step. SIAM Journal on Optimization, 2010, 20, 1439-1461.	2.0	31
35	A weighted gram-schmidt method for convex quadratic programming. Mathematical Programming, 1984, 30, 176-195.	2.4	30
36	Properties of a representation of a basis for the null space. Mathematical Programming, 1985, 33, 172-186.	2.4	25

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37	OpenSees-SNOPT Framework for Finite-Element-Based Optimization of Structural and Geotechnical Systems. <i>Journal of Structural Engineering</i> , 2012, 138, 822-834.	3.4	25
38	Primal and dual active-set methods for convex quadratic programming. <i>Mathematical Programming</i> , 2016, 159, 469-508.	2.4	23
39	The Design and Structure of a Fortran Program Library for Optimization. <i>ACM Transactions on Mathematical Software</i> , 1979, 5, 259-283.	2.9	22
40	Model Building and Practical Aspects of Nonlinear Programming. , 1985, , 209-247.		21
41	Chapter III Constrained nonlinear programming. <i>Handbooks in Operations Research and Management Science</i> , 1989, 1, 171-210.	0.6	18
42	A stabilized SQP method: superlinear convergence. <i>Mathematical Programming</i> , 2017, 163, 369-410.	2.4	18
43	Numerical Optimal Control of Parabolic PDES Using DASOPT. <i>The IMA Volumes in Mathematics and Its Applications</i> , 1997, , 271-299.	0.5	18
44	A primal-dual trust region algorithm for nonlinear optimization. <i>Mathematical Programming</i> , 2004, 100, 49.	2.4	14
45	An augmented Lagrangian method for video restoration. , 2011, , .		13
46	Primal-dual methods for linear programming. <i>Mathematical Programming</i> , 1995, 70, 251-277.	2.4	11
47	A note on a sufficient-decrease criterion for a non-derivative step-length procedure. <i>Mathematical Programming</i> , 1982, 23, 349-352.	2.4	10
48	George B. Dantzig and systems optimization. <i>Discrete Optimization</i> , 2008, 5, 151-158.	0.9	9
49	A Shifted Primal-Dual Penalty-Barrier Method for Nonlinear Optimization. <i>SIAM Journal on Optimization</i> , 2020, 30, 1067-1093.	2.0	9
50	Dynamical Parameter and State Estimation in Neuron Models. , 2011, , 139-180.		8
51	Recent developments in constrained optimization. <i>Journal of Computational and Applied Mathematics</i> , 1988, 22, 257-270.	2.0	7
52	Some issues in implementing a sequential quadratic programming algorithm. <i>ACM SIGNUM Newsletter</i> , 1985, 20, 13-19.	0.2	7
53	Trends in nonlinear programming software. <i>European Journal of Operational Research</i> , 1984, 17, 141-149.	5.7	6
54	On the Performance of SQP Methods for Nonlinear Optimization. <i>Springer Proceedings in Mathematics and Statistics</i> , 2015, , 95-123.	0.2	5

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55	Interior Methods For a Class of Elliptic Variational Inequalities. Lecture Notes in Computational Science and Engineering, 2003, , 218-235.	0.3	5
56	The 2-D magnetotelluric inverse problem solved with optimization. Geophysical Journal International, 2011, 184, 639-650.	2.4	4
57	QP-BASED METHODS FOR LARGE-SCALE NONLINEARLY CONSTRAINED OPTIMIZATION. , 1981, , 57-98.		4
58	A note on "On fast trust region methods for quadratic models with linear constraints", by Michael J.D. Powell. Mathematical Programming Computation, 2015, 7, 235-235.	4.8	0
59	The Design and Implementation of Software for Unconstrained Optimization. , 1978, , 281-334.		0