Philip E Gill

List of Publications by Citations

63 papers	5,999 citations	30 h-index	64 g-index
64 ext. papers	6,864 ext. citations	2.5 avg, IF	5.58 L-index

#	Paper	IF	Citations
63	SNOPT: An SQP Algorithm for Large-Scale Constrained Optimization. *SIAM Review*, **2005**, 47, 99-131	7.4	1289
62	SNOPT: An SQP Algorithm for Large-Scale Constrained Optimization. *SIAM Journal on Optimization*, **2002**, 12, 979-1006	2	1073
61	Interior Methods for Nonlinear Optimization. *SIAM Review*, **2002**, 44, 525-597	7.4	410
60	Algorithms for the Solution of the Nonlinear Least-Squares Problem. *SIAM Journal on Numerical Analysis*, **1978**, 15, 977-992	2.4	372
59	An augmented Lagrangian method for total variation video restoration. *IEEE Transactions on Image Processing*, **2011**, 20, 3097-111	8.7	332
58	On projected newton barrier methods for linear programming and an equivalence to Karmarkar projective method. *Mathematical Programming*, **1986**, 36, 183-209	2.1	279
57	Newton-type methods for unconstrained and linearly constrained optimization. *Mathematical Programming*, **1974**, 7, 311-350	2.1	238
56	Aquifer Reclamation Design: The Use of Contaminant Transport Simulation Combined With Nonlinear Programing. *Water Resources Research*, **1984**, 20, 415-427	5.4	219
55	Procedures for optimization problems with a mixture of bounds and general linear constraints. *ACM Transactions on Mathematical Software*, **1984**, 10, 282-298	2.3	147
54	Numerically stable methods for quadratic programming. *Mathematical Programming*, **1978**, 14, 349-372	2.1	128
53	Algebraic tensegrity form-finding. *International Journal of Solids and Structures*, **2005**, 42, 4833-4858	3.1	116
52	Primal-Dual Interior Methods for Nonconvex Nonlinear Programming. *SIAM Journal on Optimization* , **1998**, 8, 1132-1152	2	113
51	Preconditioners for Indefinite Systems Arising in Optimization. *SIAM Journal on Matrix Analysis and Applications*, **1992**, 13, 292-311	1.5	101
50	A practical anti-cycling procedure for linearly constrained optimization. *Mathematical Programming*, **1989**, 45, 437-474	2.1	98
49	Maintaining LU factors of a general sparse matrix. *Linear Algebra and Its Applications*, **1987**, 88-89, 239-270	0.9	74
48	A numerically stable form of the simplex algorithm. *Linear Algebra and Its Applications*, **1973**, 7, 99-138	0.9	67
47	Sequential Quadratic Programming Methods. *The IMA Volumes in Mathematics and Its Applications*, **2012**, 147-224	0.5	55

46	On the Stability of Cholesky Factorization for Symmetric Quasidefinite Systems. *SIAM Journal on Matrix Analysis and Applications*, **1996**, 17, 35-46	1.5	48
45	Optimization of tensegrity structures. *International Journal of Solids and Structures*, **2006**, 43, 4687-4703	3.1	47
44	Methods for Computing and Modifying the LDV Factors of a Matrix. *Mathematics of Computation*, **1975**, 29, 1051	1.6	46
43	A primal-dual augmented Lagrangian. *Computational Optimization and Applications*, **2012**, 51, 1-25	1.4	45
42	An SQP method for the optimal control of large-scale dynamical systems. *Journal of Computational and Applied Mathematics*, **2000**, 120, 197-213	2.4	44
41	Sparse Matrix Methods in Optimization. *SIAM Journal on Scientific and Statistical Computing*, **1984**, 5, 562-589		43
40	The computation of Lagrange-multiplier estimates for constrained minimization. *Mathematical Programming*, **1979**, 17, 32-60	2.1	42
39	Stability of Symmetric Ill-Conditioned Systems Arising in Interior Methods for Constrained Optimization. *SIAM Journal on Matrix Analysis and Applications*, **1996**, 17, 187-211	1.5	41
38	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	2.3	39
37	A Globally Convergent Stabilized SQP Method. *SIAM Journal on Optimization*, **2013**, 23, 1983-2010	2	37
36	Reduced-Hessian Quasi-Newton Methods for Unconstrained Optimization. *SIAM Journal on Optimization*, **2001**, 12, 209-237	2	37
35	Iterative Methods for Finding a Trust-region Step. *SIAM Journal on Optimization*, **2009**, 20, 1110-1131	2	31
34	Limited-Memory Reduced-Hessian Methods for Large-Scale Unconstrained Optimization. *SIAM Journal on Optimization*, **2003**, 14, 380-401	2	30
33	A stabilized SQP method: global convergence. *IMA Journal of Numerical Analysis*, **2017**, 37, 407-443	1.8	28
32	A Subspace Minimization Method for the Trust-Region Step. *SIAM Journal on Optimization*, **2010**, 20, 1439-1461	2	26
31	Iterative Solution of Augmented Systems Arising in Interior Methods. *SIAM Journal on Optimization*, **2007**, 18, 666-690	2	25
30	A weighted gram-schmidt method for convex quadratic programming. *Mathematical Programming*, **1984**, 30, 176-195	2.1	24
29	Properties of a representation of a basis for the null space. *Mathematical Programming*, **1985**, 33, 172-186	2.1	22

28	Methods for convex and general quadratic programming. *Mathematical Programming Computation*, **2015**, 7, 71-112	7.8	20
27	OpenSees-SNOPT Framework for Finite-Element-Based Optimization of Structural and Geotechnical Systems. *Journal of Structural Engineering*, **2012**, 138, 822-834	3	19
26	A stabilized SQP method: superlinear convergence. *Mathematical Programming*, **2017**, 163, 369-410	2.1	16
25	The Design and Structure of a Fortran Program Library for Optimization. *ACM Transactions on Mathematical Software*, **1979**, 5, 259-283	2.3	16
24	Primal and dual active-set methods for convex quadratic programming. *Mathematical Programming*, **2016**, 159, 469-508	2.1	14
23	Chapter III Constrained nonlinear programming. *Handbooks in Operations Research and Management Science*, **1989**, 1, 171-210		14
22	Model Building and Practical Aspects of Nonlinear Programming **1985**, 209-247		14
21	A primal-dual trust region algorithm for nonlinear optimization. *Mathematical Programming*, **2004**, 100, 49	2.1	10
20	Nonlinear least squares and nonlinearly constrained optimization. *Lecture Notes in Mathematics*, **1976**, 134-147	0.4	10
19	Numerical Optimal Control of Parabolic PDES Using DASOPT. *The IMA Volumes in Mathematics and Its Applications*, **1997**, 271-299	0.5	10
18	A note on a sufficient-decrease criterion for a non-derivative step-length procedure. *Mathematical Programming*, **1982**, 23, 349-352	2.1	9
17	An augmented Lagrangian method for video restoration **2011**,		8
16	Dynamical Parameter and State Estimation in Neuron Models **2011**, 139-180		8
15	George B. Dantzig and systems optimization. *Discrete Optimization*, **2008**, 5, 151-158	1	7
14	Range-Space Methods for Convex Quadratic Programming. **1982**,		7
13	Primaldual methods for linear programming. *Mathematical Programming*, **1995**, 70, 251-277	2.1	6
12	Recent developments in constrained optimization. *Journal of Computational and Applied Mathematics*, **1988**, 22, 257-270	2.4	6
11	Trends in nonlinear programming software. *European Journal of Operational Research*, **1984**, 17, 141-149	5.6	6

10	Some issues in implementing a sequential quadratic programming algorithm. *ACM SIGNUM Newsletter*, **1985**, 20, 13-19		6
9	Sparse Matrix Methods in Optimization. **1982**,		6
8	A Shifted Primal-Dual Penalty-Barrier Method for Nonlinear Optimization. *SIAM Journal on Optimization*, **2020**, 30, 1067-1093	2	4
7	Interior Methods For a Class of Elliptic Variational Inequalities. *Lecture Notes in Computational Science and Engineering*, **2003**, 218-235	0.3	4
6	QP-BASED METHODS FOR LARGE-SCALE NONLINEARLY CONSTRAINED OPTIMIZATION **1981**, 57-98		4
5	The 2-D magnetotelluric inverse problem solved with optimization. *Geophysical Journal International*, **2011**, 184, 639-650	2.6	3
4	On the Performance of SQP Methods for Nonlinear Optimization. *Springer Proceedings in Mathematics and Statistics*, **2015**, 95-123	0.2	3
3	Maintaining Lu Factors of a General Sparse Matrix. **1986**,		2
2	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	7.8	
1	The Design and Implementation of Software for Unconstrained Optimization **1978**, 281-334		