

Donald Goldfarb

List of Publications by Year in descending order

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Version: 2024-02-01

65
papers

9,247
citations

126907

33
h-index

118850

62
g-index

65
all docs

65
docs citations

65
times ranked

7059
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | A family of variable-metric methods derived by variational means. <i>Mathematics of Computation</i> , 1970, 24, 23-26. | 2.1 | 2,326 |
| 2 | An Iterative Regularization Method for Total Variation-Based Image Restoration. <i>Multiscale Modeling and Simulation</i> , 2005, 4, 460-489. | 1.6 | 1,477 |
| 3 | Bregman Iterative Algorithms for ℓ_1 -Minimization with Applications to Compressed Sensing. <i>SIAM Journal on Imaging Sciences</i> , 2008, 1, 143-168. | 2.2 | 1,121 |
| 4 | Fixed point and Bregman iterative methods for matrix rank minimization. <i>Mathematical Programming</i> , 2011, 128, 321-353. | 2.4 | 739 |
| 5 | Feature Article—The Ellipsoid Method: A Survey. <i>Operations Research</i> , 1981, 29, 1039-1091. | 1.9 | 388 |
| 6 | Robust Low-Rank Tensor Recovery: Models and Algorithms. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2014, 35, 225-253. | 1.4 | 381 |
| 7 | Alternating direction augmented Lagrangian methods for semidefinite programming. <i>Mathematical Programming Computation</i> , 2010, 2, 203-230. | 4.8 | 241 |
| 8 | A Fast Algorithm for Sparse Reconstruction Based on Shrinkage, Subspace Optimization, and Continuation. <i>SIAM Journal of Scientific Computing</i> , 2010, 32, 1832-1857. | 2.8 | 191 |
| 9 | Extension of Davidon's Variable Metric Method to Maximization Under Linear Inequality and Equality Constraints. <i>SIAM Journal on Applied Mathematics</i> , 1969, 17, 739-764. | 1.8 | 177 |
| 10 | Steepest-edge simplex algorithms for linear programming. <i>Mathematical Programming</i> , 1992, 57, 341-374. | 2.4 | 164 |
| 11 | Second-order Cone Programming Methods for Total Variation-Based Image Restoration. <i>SIAM Journal of Scientific Computing</i> , 2005, 27, 622-645. | 2.8 | 157 |
| 12 | Fast alternating linearization methods for minimizing the sum of two convex functions. <i>Mathematical Programming</i> , 2013, 141, 349-382. | 2.4 | 139 |
| 13 | Efficient block-coordinate descent algorithms for the Group Lasso. <i>Mathematical Programming Computation</i> , 2013, 5, 143-169. | 4.8 | 110 |
| 14 | Convergence of Fixed-Point Continuation Algorithms for Matrix Rank Minimization. <i>Foundations of Computational Mathematics</i> , 2011, 11, 183-210. | 2.5 | 101 |
| 15 | The Total Variation Regularized ℓ_1 Model for Multiscale Decomposition. <i>Multiscale Modeling and Simulation</i> , 2007, 6, 190-211. | 1.6 | 86 |
| 16 | Stochastic Quasi-Newton Methods for Nonconvex Stochastic Optimization. <i>SIAM Journal on Optimization</i> , 2017, 27, 927-956. | 2.0 | 81 |
| 17 | Image Cartoon-Texture Decomposition and Feature Selection Using the Total Variation Regularized ℓ_1 Functional. <i>Lecture Notes in Computer Science</i> , 2005, , 73-84. | 1.3 | 69 |
| 18 | A computational comparison of the dinic and network simplex methods for maximum flow. <i>Annals of Operations Research</i> , 1988, 13, 81-123. | 4.1 | 67 |

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|----|--|-----|-----------|
| 19 | Conjugate Gradient Method for Nonlinear Programming Problems with Linear Constraints. <i>Industrial & Engineering Chemistry Fundamentals</i> , 1968, 7, 142-151. | 0.7 | 66 |
| 20 | Modifications and implementation of the ellipsoid algorithm for linear programming. <i>Mathematical Programming</i> , 1982, 23, 1-19. | 2.4 | 66 |
| 21 | A comparison of three total variation based texture extraction models. <i>Journal of Visual Communication and Image Representation</i> , 2007, 18, 240-252. | 2.8 | 63 |
| 22 | Curvilinear path steplength algorithms for minimization which use directions of negative curvature. <i>Mathematical Programming</i> , 1980, 18, 31-40. | 2.4 | 60 |
| 23 | Parametric Maximum Flow Algorithms for Fast Total Variation Minimization. <i>SIAM Journal of Scientific Computing</i> , 2009, 31, 3712-3743. | 2.8 | 55 |
| 24 | Polynomial-Time Highest-Gain Augmenting Path Algorithms for the Generalized Circulation Problem. <i>Mathematics of Operations Research</i> , 1997, 22, 793-802. | 1.3 | 51 |
| 25 | Accelerated Linearized Bregman Method. <i>Journal of Scientific Computing</i> , 2013, 54, 428-453. | 2.3 | 49 |
| 26 | Worst case behavior of the steepest edge simplex method. <i>Discrete Applied Mathematics</i> , 1979, 1, 277-285. | 0.9 | 48 |
| 27 | Factorized variable metric methods for unconstrained optimization. <i>Mathematics of Computation</i> , 1976, 30, 796-811. | 2.1 | 47 |
| 28 | Fast Multiple-Splitting Algorithms for Convex Optimization. <i>SIAM Journal on Optimization</i> , 2012, 22, 533-556. | 2.0 | 46 |
| 29 | Fast First-Order Methods for Composite Convex Optimization with Backtracking. <i>Foundations of Computational Mathematics</i> , 2014, 14, 389-417. | 2.5 | 40 |
| 30 | An alternating direction method for total variation denoising. <i>Optimization Methods and Software</i> , 2015, 30, 594-615. | 2.4 | 40 |
| 31 | A Faster Combinatorial Algorithm for the Generalized Circulation Problem. <i>Mathematics of Operations Research</i> , 1996, 21, 529-539. | 1.3 | 39 |
| 32 | A primal simplex algorithm that solves the maximum flow problem in at most nm pivots and $O(n^2 m)$ time. <i>Mathematical Programming</i> , 1990, 47, 353-365. | 2.4 | 37 |
| 33 | Scalable Robust Matrix Recovery: Frank-Wolfe Meets Proximal Methods. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, A3291-A3317. | 2.8 | 37 |
| 34 | On the convergence of an active-set method for ℓ_1 minimization. <i>Optimization Methods and Software</i> , 2012, 27, 1127-1146. | 2.4 | 35 |
| 35 | Chapter II Linear programming. <i>Handbooks in Operations Research and Management Science</i> , 1989, , 73-170. | 0.6 | 34 |
| 36 | Efficient Shortest Path Simplex Algorithms. <i>Operations Research</i> , 1990, 38, 624-628. | 1.9 | 28 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 37 | A polynomial dual simplex algorithm for the generalized circulation problem. <i>Mathematical Programming</i> , 2002, 91, 271-288. | 2.4 | 28 |
| 38 | A relaxed version of Karmarkar's method. <i>Mathematical Programming</i> , 1988, 40-40, 289-315. | 2.4 | 27 |
| 39 | Efficient algorithms for robust and stable principal component pursuit problems. <i>Computational Optimization and Applications</i> , 2014, 58, 1-29. | 1.6 | 27 |
| 40 | Matrix factorizations in optimization of nonlinear functions subject to linear constraints. <i>Mathematical Programming</i> , 1976, 10, 1-31. | 2.4 | 25 |
| 41 | Polynomial-time primal simplex algorithms for the minimum cost network flow problem. <i>Algorithmica</i> , 1992, 8, 145-160. | 1.3 | 24 |
| 42 | Block Coordinate Descent Methods for Semidefinite Programming. <i>Profiles in Operations Research</i> , 2012, , 533-564. | 0.4 | 24 |
| 43 | ADMM for multiaffine constrained optimization. <i>Optimization Methods and Software</i> , 2020, 35, 257-303. | 2.4 | 22 |
| 44 | A primal projective interior point method for linear programming. <i>Mathematical Programming</i> , 1991, 51, 17-43. | 2.4 | 19 |
| 45 | Quasi-Newton methods: superlinear convergence without line searches for self-concordant functions. <i>Optimization Methods and Software</i> , 2019, 34, 194-217. | 2.4 | 19 |
| 46 | Anti-stalling pivot rules for the network simplex algorithm. <i>Networks</i> , 1990, 20, 79-91. | 2.7 | 17 |
| 47 | Shortest path algorithms using dynamic breadth-first search. <i>Networks</i> , 1991, 21, 29-50. | 2.7 | 14 |
| 48 | An $O(nm)$ -Time Network Simplex Algorithm for the Shortest Path Problem. <i>Operations Research</i> , 1999, 47, 445-448. | 1.9 | 14 |
| 49 | Successive Rank-One Approximations for Nearly Orthogonally Decomposable Symmetric Tensors. <i>SIAM Journal on Matrix Analysis and Applications</i> , 2015, 36, 1638-1659. | 1.4 | 14 |
| 50 | On strongly polynomial variants of the network simplex algorithm for the maximum flow problem. <i>Operations Research Letters</i> , 1991, 10, 383-387. | 0.7 | 13 |
| 51 | Partial-Update Newton Methods for Unary, Factorable, and Partially Separable Optimization. <i>SIAM Journal on Optimization</i> , 1993, 3, 382-397. | 2.0 | 13 |
| 52 | A new scaling algorithm for the minimum cost network flow problem. <i>Operations Research Letters</i> , 1999, 25, 205-211. | 0.7 | 12 |
| 53 | On the Complexity of the Simplex Method. , 1994, , 25-38. | | 12 |
| 54 | Combinatorial interior point methods for generalized network flow problems. <i>Mathematical Programming</i> , 2002, 93, 227-246. | 2.4 | 10 |

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 55 | Variable metric and conjugate direction methods in unconstrained optimization. , 1972, , . | | 8 |
| 56 | A Self-Correcting Version of Karmarkar's Algorithm. SIAM Journal on Numerical Analysis, 1989, 26, 1006-1015. | 2.3 | 8 |
| 57 | Using negative curvature in solving nonlinear programs. Computational Optimization and Applications, 2017, 68, 479-502. | 1.6 | 8 |
| 58 | Block BFGS Methods. SIAM Journal on Optimization, 2018, 28, 1205-1231. | 2.0 | 7 |
| 59 | A Path-Following Projective Interior Point Method for Linear Programming. SIAM Journal on Optimization, 1994, 4, 65-85. | 2.0 | 6 |
| 60 | Strongly polynomial dual simplex methods for the maximum flow problem. Mathematical Programming, 1998, 80, 17-33. | 2.4 | 6 |
| 61 | Greedy Approaches to Symmetric Orthogonal Tensor Decomposition. SIAM Journal on Matrix Analysis and Applications, 2017, 38, 1210-1226. | 1.4 | 6 |
| 62 | On strongly polynomial dual simplex algorithms for the maximum flow problem. Mathematical Programming, 1997, 78, 159-168. | 2.4 | 5 |
| 63 | Matrix factorizations in optimization of nonlinear functions subject to linear constraints " an addendum. Mathematical Programming, 1977, 12, 279-280. | 2.4 | 1 |
| 64 | On the maximum capacity augmentation algorithm for the maximum flow problem. Discrete Applied Mathematics, 1993, 47, 9-16. | 0.9 | 1 |
| 65 | On the Complexity of a Class of Projective Interior Point Methods. Mathematics of Operations Research, 1995, 20, 116-134. | 1.3 | 1 |