Dorit S Hochbaum

List of Publications by Year
in descending order

127 papers	5,441 citations	116194 36 h-index	97045 71 g-index
130 all docs	130 docs citations	130 times ranked	3468 citing authors

#	Article	IF	Citations
1	A unified approach for a 1D generalized total variation problem. Mathematical Programming, 2022, 194, 415-442.	1.6	1
2	Network flow methods for the minimum covariate imbalance problem. European Journal of Operational Research, 2022, 300, 827-836.	3.5	3
3	A Better Decision Tree: The Max-Cut Decision Tree with Modified PCA Improves Accuracy and Running Time. SN Computer Science, 2022, 3, .	2.3	2
4	Applications and efficient algorithms for integer programming problems on monotone constraints. Networks, 2021, 77, 21-49.	1.6	1
5	A Graph-Theoretic Approach for Spatial Filtering and Its Impact on Mixed-Type Spatial Pattern Recognition in Wafer Bin Maps. IEEE Transactions on Semiconductor Manufacturing, 2021, 34, 194-206.	1.4	7
6	Complexity, algorithms and applications of the integer network flow with fractional supplies problem. Operations Research Letters, 2021, 49, 559-564.	0.5	0
7	An Optimally-Competitive Algorithm for Maximum Online Perfect Bipartite Matching with i.i.d. Arrivals. Theory of Computing Systems, 2020, 64, 645-661.	0.7	1
8	HNCcorr: combinatorial optimization for neuron identification. Annals of Operations Research, 2020, 289, 5-32.	2.6	1
9	Identifying Drug Sensitivity Subnetworks with NETPHIX. IScience, 2020, 23, 101619.	1.9	5
10	A fully polynomial time approximation scheme for the Replenishment Storage problem. Operations Research Letters, 2020, 48, 835-839.	0.5	0
11	Network-based approaches elucidate differences within APOBEC and clock-like signatures in breast cancer. Genome Medicine, 2020, 12, 52.	3.6	20
12	Approximation algorithms for connected maximum coverage problem for the discovery of mutated driver pathways in cancer. Information Processing Letters, 2020, 158, 105940.	0.4	0
13	A comparative study of the leading machine learning techniques and two new optimization algorithms. European Journal of Operational Research, 2019, 272, 1041-1057.	3.5	21
14	The Replenishment Schedule to Minimize Peak Storage Problem: The Gap Between the Continuous and Discrete Versions of the Problem. Operations Research, 2019, 67, 1345-1361.	1.2	2
15	HNCcorr: A Novel Combinatorial Approach for Cell Identification in Calcium-Imaging Movies. ENeuro, 2019, 6, ENEURO.0304-18.2019.	0.9	27
16	Efficient algorithms to discover alterations with complementary functional association in cancer. PLoS Computational Biology, 2019, 15, e1006802.	1.5	9
17	Adjacency-Clustering for Identifying Defect Patterns and Yield Prediction in Integrated Circuit Manufacturing. IFAC-PapersOnLine, 2019, 52, 2086-2091.	0.5	1
18	Algorithms and complexity of range clustering. Networks, 2019, 73, 170-186.	1.6	5

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19	Adjacency-Clustering and Its Application for Yield Prediction in Integrated Circuit Manufacturing. Operations Research, 2018, 66, 1571-1585.	1.2	4
20	Machine Learning and Data Mining with Combinatorial Optimization Algorithms. , 2018, , 109-129.		4
21	Complexity and approximations for submodular minimization problems on two variables per inequality constraints. Discrete Applied Mathematics, 2018, 250, 252-261.	0.5	1
22	Weighted matching with pair restrictions. Optimization Letters, 2018, 12, 649-659.	0.9	0
23	DISPATCH: An Optimally-Competitive Algorithm for Maximum Online Perfect Bipartite Matching with i.i.d.ÂArrivals. Lecture Notes in Computer Science, 2018, , 149-164.	1.0	0
24	High-performance geometric algorithms for sparse computation in big data analytics. , 2017, , .		2
25	A Faster Algorithm Solving a Generalization of Isotonic Median Regression and a Class of Fused Lasso Problems. SIAM Journal on Optimization, 2017, 27, 2563-2596.	1.2	7
26	A competitive study of the pseudoflow algorithm for the minimum sâ€“t cut problem in vision applications. Journal of Real-Time Image Processing, 2016, 11, 589-609.	2.2	9
27	Sparse Computation for Large-Scale Data Mining. IEEE Transactions on Big Data, 2016, 2, 151-174.	4.4	20
28	A polynomial time repeated cuts algorithm for the time cost tradeoff problem: The linear and convex crashing cost deadline problem. Computers and Industrial Engineering, 2016, 95, 64-71.	3.4	10
29	Sparse-Reduced Computation - Enabling Mining of Massively-large Data Sets. , 2016, , .		7
30	Efficient deployment of mobile detectors for security applications. , 2015, , .		0
31	Range contracts: Risk sharing and beyond. European Journal of Operational Research, 2015, 243, 956-963.	3.5	2
32	Production cost functions and demand uncertainty effects in price-only contracts. IIE Transactions, 2015, 47, 190-202.	2.1	7
33	Sparse computation for large-scale data mining. , 2014, , .		5
34	The Supervised Normalized Cut Method for Detecting, Classifying, and Identifying Special Nuclear Materials. INFORMS Journal on Computing, 2014, 26, 45-58.	1.0	20
35	Security routing games with multivehicle Chinese postman problem. Networks, 2014, 64, 181-191.	1.6	42
36	Simplifications and speedups of the pseudoflow algorithm. Networks, 2013, 61, 40-57.	1.6	17

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37	Evaluating performance of image segmentation criteria and techniques. EURO Journal on Computational Optimization, 2013, 1, 155-180.	1.5	14
38	A Polynomial Time Algorithm for Rayleigh Ratio on Discrete Variables: Replacing Spectral Techniques for Expander Ratio, Normalized Cut, and Cheeger Constant. Operations Research, 2013, 61, 184-198.	1.2	22
39	Real-time robust target tracking in videos via graph-cuts. Proceedings of SPIE, 2013, , .	0.8	1
40	Multi-Label Markov Random Fields as an Efficient and Effective Tool for Image Segmentation, Total Variations and Regularization. Numerical Mathematics, 2013, 6, 169-198.	0.6	6
41	Ranking of multidimensional drug profiling data by fractional-adjusted bi-partitional scores. Bioinformatics, 2012, 28, i106-i114.	1.8	9
42	Rating Customers According to Their Promptness to Adopt New Products. Operations Research, 2011, 59, 1171-1183.	1.2	11
43	Nuclear threat detection with mobile distributed sensor networks. Annals of Operations Research, 2011, 187, 45-63.	2.6	33
44	On Hardness of Multiflow Transmission in Delay Constrained Cooperative Wireless Networks. , 2011, , .		5
45	Complexity of some inverse shortest path lengths problems. Networks, 2010, 56, 20-29.	1.6	5
46	How to allocate review tasks for robust ranking. Acta Informatica, 2010, 47, 325-345.	0.5	2
47	Covering the edges of bipartite graphs using <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi>K</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn><mml:mo>,</m graphs. Theoretical Computer Science, 2010, 411, 1-9.	0.5	2
48	Polynomial Time Algorithms for Ratio Regions and a Variant of Normalized Cut. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2010, 32, 889-898.	9.7	52
49	The multi-integer set cover and the facility terminal cover problem. Networks, 2009, 53, 63-66.	1.6	2
50	Dynamic evolution of economically preferred facilities. European Journal of Operational Research, 2009, 193, 649-659.	3.5	7
51	A Computational Study of the Pseudoflow and Push-Relabel Algorithms for the Maximum Flow Problem. Operations Research, 2009, 57, 358-376.	1.2	71
52	The inequality-satisfiability problem. Operations Research Letters, 2008, 36, 229-233.	0.5	2
53	Country credit-risk rating aggregation via the separation-deviation modelâ€. Optimization Methods and Software, 2008, 23, 741-762.	1.6	7
54	The Pseudoflow Algorithm: A New Algorithm for the Maximum-Flow Problem. Operations Research, 2008, 56, 992-1009.	1.2	157

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55	TECHNICAL NOTEâ€"Solving Linear Cost Dynamic Lot-Sizing Problems inO(nlogn) Time. Operations Research, 2008, 56, 255-261.	1.2	17
56	Complexity and algorithms for nonlinear optimizationÂproblems. Annals of Operations Research, 2007, 153, 257-296.	2.6	64
57	Optimizing over Consecutive 1's and Circular 1's Constraints. SIAM Journal on Optimization, 2006, 17, 311-330.	1.2	23
58	Cyclical scheduling and multi-shift scheduling: Complexity and approximation algorithms. Discrete Optimization, 2006, 3, 327-340.	0.6	33
59	Methodologies and Algorithms for Group-Rankings Decision. Management Science, 2006, 52, 1394-1408.	2.4	158
60	Complexity and algorithms for convex network optimization and other nonlinear problems. 4or, 2005, 3, 171-216.	1.0	18
61	A Cut-Based Algorithm for the Nonlinear Dual of the Minimum Cost Network Flow Problem. Algorithmica, 2004, 39, 189-208.	1.0	23
62	Monotonizing linear programs with up to two nonzeroes per column. Operations Research Letters, 2004, 32, 49-58.	0.5	20
63	50th Anniversary Article: Selection, Provisioning, Shared Fixed Costs, Maximum Closure, and Implications on Algorithmic Methods Today. Management Science, 2004, 50, 709-723.	2.4	31
64	The SONET edge-partition problem. Networks, 2003, 41, 13-23.	1.6	54
65	Minimizing a Convex Cost Closure Set. SIAM Journal on Discrete Mathematics, 2003, 16, 192-207.	0.4	35
66	Efficient Algorithms for the Inverse Spanning-Tree Problem. Operations Research, 2003, 51, 785-797.	1.2	44
67	Solving the Convex Cost Integer Dual Network Flow Problem. Management Science, 2003, 49, 950-964.	2.4	68
68	Baseball, Optimization, and the World Wide Web. Interfaces, 2002, 32, 12-22.	1.6	18
69	Minimax problems with bitonic matrices. Networks, 2002, 40, 113-124.	1.6	6
70	Solving integer programs over monotone inequalities in three variables: A framework for half integrality and good approximations. European Journal of Operational Research, 2002, 140, 291-321.	3.5	60
71	An efficient algorithm for image segmentation, Markov random fields and related problems. Journal of the ACM, 2001, 48, 686-701.	1.8	131
72	The Bounded Cycle-Cover Problem. INFORMS Journal on Computing, 2001, 13, 104-119.	1.0	19

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73	A new?old algorithm for minimum-cut and maximum-flow in closure graphs. Networks, 2001, 37, 171-193.	1.6	72
74	Capacity Acquisition, Subcontracting, and Lot Sizing. Management Science, 2001, 47, 1081-1100.	2.4	100
75	Approximating a generalization of MAX 2SAT and MIN 2SAT. Discrete Applied Mathematics, 2000, 107, 41-59.	0.5	8
76	Performance Analysis and Best Implementations of Old and New Algorithms for the Open-Pit Mining Problem. Operations Research, 2000, 48, 894-914.	1.2	129
77	A linear-time algorithm for the bottleneck transportation problem with a fixed number of sources. Operations Research Letters, 1999, 24, 25-28.	0.5	5
78	A half-integral linear programming relaxation for scheduling precedence-constrained jobs on a single machine. Operations Research Letters, 1999, 25, 199-204.	0.5	68
79	Approximating Clique and Biclique Problems. Journal of Algorithms, 1998, 29, 174-200.	0.9	83
80	Analysis of the greedy approach in problems of maximumk-coverage. Naval Research Logistics, 1998, 45, 615-627.	1.4	136
81	A primalâ€“dual interpretation of two 2-approximation algorithms for the feedback vertex set problem in undirected graphs. Operations Research Letters, 1998, 22, 111-118.	0.5	78
82	Locating centers in a dynamically changing network, and related problems. Location Science, 1998, 6, 243-256.	0.2	18
83	The Pseudoflow Algorithm and the Pseudoflow-Based Simplex for the Maximum Flow Problem. Lecture Notes in Computer Science, 1998, , 325-337.	1.0	18
84	Scheduling Semiconductor Burn-In Operations to Minimize Total Flowtime. Operations Research, 1997, 45, 874-885.	1.2	116
85	Path Costs in Evolutionary Tree Reconstruction. Journal of Computational Biology, 1997, 4, 163-175.	0.8	6
86	Generalized p-Center problems: Complexity results and approximation algorithms. European Journal of Operational Research, 1997, 100, 594-607.	3.5	13
87	k-edge subgraph problems. Discrete Applied Mathematics, 1997, 74, 159-169.	0.5	15
88	Scheduling with batching: two job types. Discrete Applied Mathematics, 1997, 72, 99-114.	0.5	6
89	Approximation Algorithms for the k-Clique Covering Problem. SIAM Journal on Discrete Mathematics, 1996, 9, 492-509.	0.4	13
90	On the Complexity of the Production-Transportation Problem. SIAM Journal on Optimization, 1996, 6, 250-264.	1.2	12

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91	The bottleneck graph partition problem. Networks, 1996, 28, 221-225.	1.6	6
92	Approximation Algorithms for Network Design Problems on Bounded Subsets. Journal of Algorithms, 1996, 21, 403-414.	0.9	2
93	About strongly polynomial time algorithms for quadratic optimization over submodular constraints. Mathematical Programming, 1995, 69, 269-309.	1.6	49
94	A nonlinear Knapsack problem. Operations Research Letters, 1995, 17, 103-110.	0.5	95
95	A Polynomial Algorithm for the k-cut Problem for Fixed k. Mathematics of Operations Research, 1994, 19, 24-37.	0.8	194
96	Strongly Polynomial Algorithms for the Quadratic Transportation Problem with a Fixed Number of Sources. Mathematics of Operations Research, 1994, 19, 94-111.	0.8	29
97	Scheduling with batching: minimizing the weighted number of tardy jobs. Operations Research Letters, 1994, 16, 79-86.	0.5	65
98	Simple and Fast Algorithms for Linear and Integer Programs with Two Variables Per Inequality. SIAM Journal on Computing, 1994, 23, 1179-1192.	0.8	128
99	Lower and Upper Bounds for the Allocation Problem and Other Nonlinear Optimization Problems. Mathematics of Operations Research, 1994, 19, 390-409.	0.8	91
100	A modified greedy heuristic for the Set Covering problem with improved worst case bound. Information Processing Letters, 1993, 48, 305-310.	0.4	37
101	Why should biconnected components be identified first. Discrete Applied Mathematics, 1993, 42, 203-210.	0.5	8
102	The empirical performance of a polynomial algorithm for constrained nonlinear optimization. Annals of Operations Research, 1993, 43, 229-248.	2.6	3
103	Tight bounds and 2-approximation algorithms for integer programs with two variables per inequality. Mathematical Programming, 1993, 62, 69-83.	1.6	87
104	Polynomial and Strongly Polynomial Algorithms for Convex Network Optimization. Network Optimization Problems: Algorithms, Applications and Complexity, 1993, , 63-92.	0.1	5
105	An Exact Sublinear Algorithm for the Max-Flow, Vertex Disjoint Paths and Communication Problems on Random Graphs. Operations Research, 1992, 40, 923-935.	1.2	5
106	The multicovering problem. European Journal of Operational Research, 1992, 62, 323-339.	3.5	18
107	A polynomial algorithm for an integer quadratic non-separable transportation problem. Mathematical Programming, 1992, 55, 359-371.	1.6	21
108	Strongly Polynomial Algorithms for the High Multiplicity Scheduling Problem. Operations Research, 1991, 39, 648-653.	1.2	69

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109	Minimizing the number of tardy job units under release time constraints. Discrete Applied Mathematics, 1990, 28, 45-57.	0.5	40
110	A Fast Perfect-Matching Algorithm in Random Graphs. SIAM Journal on Discrete Mathematics, 1990, 3, 48-57.	0.4	7
111	Asymptotically Optimal Linear Algorithm for the Minimum k-Cut in a Random Graph. SIAM Journal on Discrete Mathematics, 1990, 3, 58-73.	0.4	5
112	An O(nlog2n) algorithm for the maximum weigthed tardiness problem. Information Processing Letters, 1989, 31, 215-219.	0.4	14
113	Analysis of a flow problem with fixed charges. Networks, 1989, 19, 291-312.	1.6	64
114	A Polynomial Approximation Scheme for Scheduling on Uniform Processors: Using the Dual Approximation Approach. SIAM Journal on Computing, 1988, 17, 539-551.	0.8	297
115	Fast approximation algorithms for a nonconvex covering problem. Journal of Algorithms, 1987, 8, 305-323.	0.9	38
116	OR Practiceâ€"Lagrangian Relaxation for Testing Infeasibility in VLSI Routing. Operations Research, 1986, 34, 819-831.	1.2	3
117	The Linzertorte problem, or a unified approach to painting, baking and weaving. Discrete Applied Mathematics, 1986, 14, 17-32.	0.5	0
118	A better than â€œbest possibleâ€•algorithm to edge color multigraphs. Journal of Algorithms, 1986, 7, 79-104.	0.9	38
119	A fast approximation algorithm for the multicovering problem. Discrete Applied Mathematics, 1986, 15, 35-40.	0.5	66
120	Best possible heuristics for the bottleneck wandering salesperson and bottleneck vehicle routing problem. European Journal of Operational Research, 1986, 26, 380-384.	3.5	3
121	A Best Possible Heuristic for the k-Center Problem. Mathematics of Operations Research, 1985, 10, 180-184.	0.8	711
122	When are NP-hard location problems easy?. Annals of Operations Research, 1984, 1, 201-214.	2.6	22
123	Efficient bounds for the stable set, vertex cover and set packing problems. Discrete Applied Mathematics, 1983, 6, 243-254.	0.5	214
124	Approximation Algorithms for the Set Covering and Vertex Cover Problems. SIAM Journal on Computing, 1982, 11, 555-556.	0.8	395
125	Steinhaus's geometric location problem for random samples in the plane. Advances in Applied Probability, 1982, 14, 56-67.	0.4	4
126	Heuristics for the fixed cost median problem. Mathematical Programming, 1982, 22, 148-162.	1.6	209

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127	Algorithms and Complexities of Matching Variants in Covariate Balancing. Operations Research, 0, , .	1.2	0