

Andrea Lodi

List of Publications by Year in descending order

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Version: 2024-02-01

79
papers

4,043
citations

279701

23
h-index

128225

60
g-index

80
all docs

80
docs citations

80
times ranked

2836
citing authors

#	ARTICLE	IF	CITATIONS
1	An algorithmic framework for convex mixed integer nonlinear programs. <i>Discrete Optimization</i> , 2008, 5, 186-204.	0.6	622
2	Local branching. <i>Mathematical Programming</i> , 2003, 98, 23-47.	1.6	619
3	Machine learning for combinatorial optimization: A methodological tour d'horizon. <i>European Journal of Operational Research</i> , 2021, 290, 405-421.	3.5	484
4	The feasibility pump. <i>Mathematical Programming</i> , 2005, 104, 91-104.	1.6	288
5	MIPLIB 2010. <i>Mathematical Programming Computation</i> , 2011, 3, 103-163.	3.2	275
6	On the optimal design of water distribution networks: a practical MINLP approach. <i>Optimization and Engineering</i> , 2012, 13, 219-246.	1.3	162
7	Piecewise linear approximation of functions of two variables in MILP models. <i>Operations Research Letters</i> , 2010, 38, 39-46.	0.5	140
8	A feasibility pump heuristic for general mixed-integer problems. <i>Discrete Optimization</i> , 2007, 4, 63-76.	0.6	109
9	Mathematical programming techniques in water network optimization. <i>European Journal of Operational Research</i> , 2015, 243, 774-788.	3.5	102
10	A Feasibility Pump for mixed integer nonlinear programs. <i>Mathematical Programming</i> , 2009, 119, 331-352.	1.6	88
11	On learning and branching: a survey. <i>Top</i> , 2017, 25, 207-236.	1.1	76
12	Mixed Integer Programming Computation. , 2010, , 619-645.		71
13	On handling indicator constraints in mixed integer programming. <i>Computational Optimization and Applications</i> , 2016, 65, 545-566.	0.9	61
14	On mathematical programming with indicator constraints. <i>Mathematical Programming</i> , 2015, 151, 191-223.	1.6	58
15	Bilevel Knapsack with Interdiction Constraints. <i>INFORMS Journal on Computing</i> , 2016, 28, 319-333.	1.0	58
16	A storm of feasibility pumps for nonconvex MINLP. <i>Mathematical Programming</i> , 2012, 136, 375-402.	1.6	52
17	A Study on the Computational Complexity of the Bilevel Knapsack Problem. <i>SIAM Journal on Optimization</i> , 2014, 24, 823-838.	1.2	47
18	Mixed integer nonlinear programming tools: an updated practical overview. <i>Annals of Operations Research</i> , 2013, 204, 301-320.	2.6	41

#	ARTICLE	IF	CITATIONS
19	Performance Variability in Mixed-Integer Programming. , 2013, , 1-12.		39
20	QPLIB: a library of quadratic programming instances. Mathematical Programming Computation, 2019, 11, 237-265.	3.2	38
21	A Decentralized Framework for the Optimal Coordination of Distributed Energy Resources. IEEE Transactions on Power Systems, 2019, 34, 349-359.	4.6	36
22	A multicut outer-approximation approach for competitive facility location under random utilities. European Journal of Operational Research, 2020, 284, 874-881.	3.5	32
23	Machine-Learning-Based Column Selection for Column Generation. Transportation Science, 2021, 55, 815-831.	2.6	32
24	Repairing MIP infeasibility through local branching. Computers and Operations Research, 2008, 35, 1436-1445.	2.4	30
25	Primal cutting plane algorithms revisited. Mathematical Methods of Operations Research, 2002, 56, 67-81.	0.4	26
26	Learning a Classification of Mixed-Integer Quadratic Programming Problems. Lecture Notes in Computer Science, 2018, , 595-604.	1.0	26
27	Forecasting future needs and optimal allocation of medical residency positions: the Emilia-Romagna Region case study. Human Resources for Health, 2015, 13, 7.	1.1	23
28	On interval-subgradient and no-good cuts. Operations Research Letters, 2010, 38, 341-345.	0.5	20
29	Single-commodity robust network design with finite and Hose demand sets. Mathematical Programming, 2016, 157, 297-342.	1.6	18
30	Nash equilibria in the two-player kidney exchange game. Mathematical Programming, 2017, 161, 389-417.	1.6	18
31	Exact Solutions for the Carrier-Vehicle Traveling Salesman Problem. Transportation Science, 2018, 52, 320-330.	2.6	18
32	The Heuristic (Dark) Side of MIP Solvers. Studies in Computational Intelligence, 2013, , 273-284.	0.7	16
33	Multilevel Approaches for the Critical Node Problem. Operations Research, 2021, 69, 486-508.	1.2	15
34	Improving branch-and-cut performance by random sampling. Mathematical Programming Computation, 2016, 8, 113-132.	3.2	14
35	Ten years of feasibility pump, and counting. EURO Journal on Computational Optimization, 2019, 7, 1-14.	1.5	14
36	Experiments with a Feasibility Pump Approach for Nonconvex MINLPs. Lecture Notes in Computer Science, 2010, , 350-360.	1.0	14

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37	Computing equilibria for integer programming games. <i>European Journal of Operational Research</i> , 2022, 303, 1057-1070.	3.5	14
38	Predicting Tactical Solutions to Operational Planning Problems Under Imperfect Information. <i>INFORMS Journal on Computing</i> , 2022, 34, 227-242.	1.0	13
39	Solving Quadratic Programming by Cutting Planes. <i>SIAM Journal on Optimization</i> , 2019, 29, 1076-1105.	1.2	12
40	Learning to handle parameter perturbations in Combinatorial Optimization: An application to facility location. <i>EURO Journal on Transportation and Logistics</i> , 2020, 9, 100023.	1.3	11
41	JANOS: An Integrated Predictive and Prescriptive Modeling Framework. <i>INFORMS Journal on Computing</i> , 2022, 34, 807-816.	1.0	11
42	Pump scheduling in drinking water distribution networks with an LP/NLP-based branch and bound. <i>Optimization and Engineering</i> , 2021, 22, 1275-1313.	1.3	10
43	Guidelines for the computational testing of machine learning approaches to vehicle routing problems. <i>Operations Research Letters</i> , 2022, 50, 229-234.	0.5	10
44	A Partially Ranked Choice Model for Large-Scale Data-Driven Assortment Optimization. <i>INFORMS Journal on Optimization</i> , 2020, 2, 297-319.	0.9	9
45	Design and implementation of a modular interior-point solver for linear optimization. <i>Mathematical Programming Computation</i> , 2021, 13, 509-551.	3.2	9
46	Branch-Price-and-Cut Algorithms for the Vehicle Routing Problem with Stochastic and Correlated Travel Times. <i>Operations Research</i> , 2021, 69, 436-455.	1.2	9
47	A Classifier to Decide on the Linearization of Mixed-Integer Quadratic Problems in CPLEX. <i>Operations Research</i> , 2022, 70, 3303-3320.	1.2	9
48	Predicting the probability distribution of bus travel time to measure the reliability of public transport services. <i>Transportation Research Part C: Emerging Technologies</i> , 2022, 138, 103619.	3.9	9
49	Single-commodity robust network design problem: Complexity, instances and heuristic solutions. <i>European Journal of Operational Research</i> , 2014, 238, 711-723.	3.5	8
50	Integrated integer programming and decision diagram search tree with an application to the maximum independent set problem. <i>Constraints</i> , 2020, 25, 23-46.	0.4	8
51	Integral Simplex Using Decomposition with Primal Cuts. <i>Lecture Notes in Computer Science</i> , 2014, , 22-33.	1.0	8
52	Nonlinear chance-constrained problems with applications to hydro scheduling. <i>Mathematical Programming</i> , 2022, 191, 405-444.	1.6	6
53	Learning MILP Resolution Outcomes Before Reaching Time-Limit. <i>Lecture Notes in Computer Science</i> , 2019, , 275-291.	1.0	6
54	Branch-and-Bound for Biobjective Mixed-Integer Linear Programming. <i>INFORMS Journal on Computing</i> , 2022, 34, 909-933.	1.0	6

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55	Integral simplex using decomposition with primal cutting planes. <i>Mathematical Programming</i> , 2017, 166, 327-367.	1.6	5
56	The Covering-Assignment Problem for Swarm-Powered <i>Ad Hoc</i> Clouds: A Distributed 3-D Mapping Usecase. <i>IEEE Internet of Things Journal</i> , 2021, 8, 7316-7332.	5.5	5
57	Models and Algorithms for Robust Network Design with Several Traffic Scenarios. <i>Lecture Notes in Computer Science</i> , 2012, , 261-272.	1.0	5
58	Existence of Nash Equilibria on Integer Programming Games. <i>Springer Proceedings in Mathematics and Statistics</i> , 2018, , 11-23.	0.1	5
59	Test-assignment: a quadratic coloring problem. <i>Journal of Heuristics</i> , 2013, 19, 549-564.	1.1	4
60	BDD-based optimization for the quadratic stable set problem. <i>Discrete Optimization</i> , 2022, 44, 100610.	0.6	4
61	A Convex Reformulation and an Outer Approximation for a Large Class of Binary Quadratic Programs. <i>Operations Research</i> , 2023, 71, 471-486.	1.2	4
62	A theoretical and computational equilibria analysis of a multi-player kidney exchange program. <i>European Journal of Operational Research</i> , 2023, 305, 373-385.	3.5	4
63	On the difficulty of virtual private network instances. <i>Networks</i> , 2014, 63, 327-333.	1.6	3
64	Virtual private network design over the first Chvátal closure. <i>RAIRO - Operations Research</i> , 2015, 49, 569-588.	1.0	3
65	A Comparison of Optimization Methods for Multi-objective Constrained Bin Packing Problems. <i>Lecture Notes in Computer Science</i> , 2018, , 462-476.	1.0	3
66	An Augment-and-Branch-and-Cut Framework for Mixed 0-1 Programming. <i>Lecture Notes in Computer Science</i> , 2003, , 119-133.	1.0	3
67	On the Estimation of Discrete Choice Models to Capture Irrational Customer Behaviors. <i>INFORMS Journal on Computing</i> , 2022, 34, 1606-1625.	1.0	3
68	Single Allocation Hub Location with Heterogeneous Economies of Scale. <i>Operations Research</i> , 2022, 70, 766-785.	1.2	3
69	Experiments on virtual private network design with concave capacity costs. <i>Optimization Letters</i> , 2018, 12, 945-957.	0.9	2
70	The Quadratic Multiknapsack Problem with Conflicts and Balance Constraints. <i>INFORMS Journal on Computing</i> , 2021, 33, 949-962.	1.0	2
71	A note on the Lasserre hierarchy for different formulations of the maximum independent set problem. <i>Operations Research Letters</i> , 2021, 49, 30-34.	0.5	2
72	Measures of balance in combinatorial optimization. <i>4or</i> , 2022, 20, 391-415.	1.0	2

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73	On generalized surrogate duality in mixed-integer nonlinear programming. <i>Mathematical Programming</i> , 2022, 192, 89-118.	1.6	2
74	Learning chordal extensions. <i>Journal of Global Optimization</i> , 2021, 81, 3-22.	1.1	1
75	On Generalized Surrogate Duality in Mixed-Integer Nonlinear Programming. <i>Lecture Notes in Computer Science</i> , 2020, , 322-337.	1.0	1
76	Cutting Plane Generation through Sparse Principal Component Analysis. <i>SIAM Journal on Optimization</i> , 2022, 32, 1319-1343.	1.2	1
77	Special issue on: Nonlinear and combinatorial methods for energy optimization. <i>EURO Journal on Computational Optimization</i> , 2017, 5, 1-3.	1.5	0
78	Rejoinder on: On learning and branching: a survey. <i>Top</i> , 2017, 25, 247-248.	1.1	0
79	An Exact Algorithmic Framework for a Class of Mixed-Integer Programs with Equilibrium Constraints. <i>SIAM Journal on Optimization</i> , 2021, 31, 275-306.	1.2	0