Alexander Martin

List of Publications by Year
in descending order

64 papers	2,105 citations	257429 24 h-index	243610 44 g-index
67 all docs	67 docs citations	67 times ranked	1360 citing authors

#	Article	IF	Citations
1	Branching rules revisited. Operations Research Letters, 2005, 33, 42-54.	0.7	327
2	Mixed Integer Models for the Stationary Case of Gas Network Optimization. Mathematical Programming, 2006, 105, 563-582.	2.4	185
3	Cutting planes in integer and mixed integer programming. Discrete Applied Mathematics, 2002, 123, 397-446.	0.9	152
4	MIPLIB 2003. Operations Research Letters, 2006, 34, 361-372.	0.7	148
5	Transmission and generation investment in electricity markets: The effects of market splitting and network fee regimes. European Journal of Operational Research, 2016, 254, 493-509.	5.7	96
6	Validation of nominations in gas network optimization: models, methods, and solutions. Optimization Methods and Software, 2015, 30, 15-53.	2.4	84
7	Using Piecewise Linear Functions for Solving MINLPs. The IMA Volumes in Mathematics and Its Applications, 2012, , 287-314.	0.5	79
8	Solving Multiple Knapsack Problems by Cutting Planes. SIAM Journal on Optimization, 1996, 6, 858-877.	2.0	61
9	Combination of Nonlinear and Linear Optimization of Transient Gas Networks. INFORMS Journal on Computing, 2011, 23, 605-617.	1.7	60
10	Decomposing Matrices into Blocks. SIAM Journal on Optimization, 1998, 9, 236-269.	2.0	54
11	On the long run effects of market splitting: Why more price zones might decrease welfare. Energy Policy, 2016, 94, 453-467.	8.8	51
12	Combinatorial and Continuous Models for the Optimization of Traffic Flows on Networks. SIAM Journal on Optimization, 2006, 16, 1155-1176.	2.0	44
13	A simulated annealing algorithm for transient optimization in gas networks. Mathematical Methods of Operations Research, 2007, 66, 99-115.	1.0	41
14	Strict linear prices in non-convex European day-ahead electricity markets. Optimization Methods and Software, 2014, 29, 189-221.	2.4	40
15	A mixed integer approach for time-dependent gas network optimization. Optimization Methods and Software, 2010, 25, 625-644.	2.4	38
16	Mixed integer linear models for the optimization of dynamical transport networks. Mathematical Methods of Operations Research, 2011, 73, 339-362.	1.0	36
17	UMTS radio network evaluation and optimization beyond snapshots. Mathematical Methods of Operations Research, 2006, 63, 1-29.	1.0	35
18	Routing Through Virtual Paths in Layered Telecommunication Networks. Operations Research, 1999, 47, 693-702.	1.9	34

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19	MIP-based instantaneous control of mixed-integer PDE-constrained gas transport problems. Computational Optimization and Applications, 2018, 70, 267-294.	1.6	34
20	Progress in presolving for mixed integer programming. Mathematical Programming Computation, 2015, 7, 367-398.	4.8	33
21	Mathematical optimization for challenging network planning problems in unbundled liberalized gas markets. Energy Systems, 2014, 5, 449-473.	3.0	31
22	Robust runway scheduling under uncertain conditions. Journal of Air Transport Management, 2016, 56, 28-37.	4.5	31
23	Challenges in Optimal Control Problems for Gas and Fluid Flow in Networks of Pipes and Canals: From Modeling to Industrial Applications. Industrial and Applied Mathematics, 2017, , 77-122.	0.2	30
24	Quadratic 0/1 optimization and a decomposition approach for the placement of electronic circuits. Mathematical Programming, 1994, 63, 257-279.	2.4	29
25	Parallelizing the Dual Simplex Method. INFORMS Journal on Computing, 2000, 12, 45-56.	1.7	24
26	General Mixed Integer Programming: Computational Issues for Branch-and-Cut Algorithms. Lecture Notes in Computer Science, 2001, , 1-25.	1.3	24
27	Mixed Integer Optimization of Water Supply Networks. International Series of Numerical Mathematics, 2012, , 35-54.	1.1	23
28	Computational Integer Programming and Cutting Planes. Handbooks in Operations Research and Management Science, 2005, 12, 69-121.	0.6	22
29	Maximizing the storage capacity of gas networks: a global MINLP approach. Optimization and Engineering, 2019, 20, 543-573.	2.4	18
30	LP and SDP branch-and-cut algorithms for the minimum graph bisection problem: a computational comparison. Mathematical Programming Computation, 2012, 4, 275-306.	4.8	17
31	Chapter 6: The MILP-relaxation approach. , 2015, , 103-122.		17
32	Packing Steiner Trees: Separation Algorithms. SIAM Journal on Discrete Mathematics, 1996, 9, 233-257.	0.8	16
33	Towards simulation based mixed–integer optimization with differential equations. Networks, 2018, 72, 60-83.	2.7	16
34	A comparison of performance metrics for balancing the power consumption of trains in a railway network by slight timetable adaptation. Public Transport, 2017, 9, 95-113.	2.7	15
35	A Comparative Study of Linear and Semidefinite Branch-and-Cut Methods for Solving the Minimum Graph Bisection Problem. , 2008, , 112-124.		14
36	A Decomposition Method for Multiperiod Railway Network Expansion—With a Case Study for Germany. Transportation Science, 2017, 51, 1102-1121.	4.4	11

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37	Scheduling Locomotives and Car Transfers in Freight Transport. Transportation Science, 2008, 42, 478-491.	4.4	10
38	Solving network design problems via iterative aggregation. Mathematical Programming Computation, 2015, 7, 189-217.	4.8	10
39	A multicriteria approach for optimizing bus schedules and school starting times. Annals of Operations Research, 2006, 147, 199-216.	4.1	9
40	Efficient reformulation and solution of a nonlinear PDE-controlled flow network model. Computing (Vienna/New York), 2009, 85, 245-265.	4.8	9
41	Efficient Formulations and Decomposition Approaches for Power Peak Reduction in Railway Traffic via Timetabling. Transportation Science, 2021, 55, 747-767.	4.4	9
42	Optimisation Methods for UMTS Radio Network Planning. Operations Research Proceedings: Papers of the Annual Meeting = Vorträge Der Jahrestagung / DGOR, 2004, , 31-38.	0.1	9
43	Two-row and two-column mixed-integer presolve using hashing-based pairing methods. EURO Journal on Computational Optimization, 2020, 8, 205-240.	2.4	7
44	The Intersection of Knapsack Polyhedra and Extensions. Lecture Notes in Computer Science, 1998, , 243-256.	1.3	7
45	Progress in Academic Computational Integer Programming. , 2013, , 483-506.		7
46	Binary Steiner trees: Structural results and an exact solution approach. Discrete Optimization, 2016, 21, 85-117.	0.9	6
47	Market-Based Redispatch May Result in Inefficient Dispatch. SSRN Electronic Journal, 0, , .	0.4	6
48	Hybrid Genetic Algorithm Within Branch-and-Cut for the Minimum Graph Bisection Problem. Lecture Notes in Computer Science, 2006, , 1-12.	1.3	6
49	Cutting Planes for the Optimisation of Gas Networks. , 2005, , 307-329.		5
50	On the Graph Bisection Cut Polytope. SIAM Journal on Discrete Mathematics, 2008, 22, 1073-1098.	0.8	5
51	Some integer programs arising in the design of main frame computers. Zeitschrift Fuer Operations-Research, Serie B: Praxis, 1993, 38, 77-100.	0.3	4
52	Polyhedral approximation of ellipsoidal uncertainty sets via extended formulations: a computational case study. Computational Management Science, 2016, 13, 151-193.	1.3	4
53	How Many Steiner Terminals Can You Connect in 20 Years?. , 2013, , 215-244.		3
54	Routing in grid graphs by cutting planes. Zeitschrift Fuer Operations-Research, Serie B: Praxis, 1995, 41, 255-275.	0.3	2

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55	Pricing and clearing combinatorial markets with singleton and swap orders. Mathematical Methods of Operations Research, 2017, 85, 155-177.	1.0	2
56	Solving mixed-integer nonlinear optimization problems using simultaneous convexification: a case study for gas networks. Journal of Global Optimization, 2021, 80, 307-340.	1.8	2
57	Optimal mixed-mode runway scheduling &#x2014; Mixed-integer programming for ATC scheduling. , 2011, , .		1
58	Transient gas pipeline flow: analytical examples, numerical simulation and a comparison to the quasi-static approach. Optimization and Engineering, 0, , 1.	2.4	1
59	Nonlinear and Mixed Integer Linear Programming. International Series of Numerical Mathematics, 2012, , 55-65.	1.1	1
60	Mathematical Models and Polyhedral Studies for Integral Sheet Metal Design. SIAM Journal on Optimization, 2012, 22, 1493-1517.	2.0	0
61	Optimierung in der Energiewirtschaft: lokale vs. globale Optimallösungen. Chemie-Ingenieur-Technik, 2012, 84, n/a-n/a.	0.8	0
62	Ontology-Based Approach to Transform Fatigue Properties of Branched Sheet Metal Products for Use in Algorithm-Based Product Development. , 2008, , .		0
63	Topology and Dynamic Networks: Optimization with Application in Future Technologies. , 2010, , 263-276.		0
64	Energy-Efficient Timetabling in a German Underground System. Mathematics in Industry, 2021, , 105-112.	0.3	0