

# Alberto Caprara

## List of Publications by Year in descending order

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77  
papers

4,484  
citations

126901

33  
h-index

106340

65  
g-index

79  
all docs

79  
docs citations

79  
times ranked

2352  
citing authors

#	ARTICLE	IF	CITATIONS
1	Solving the Temporal Knapsack Problem via Recursive Dantzig-Wolfe Reformulation. Information Processing Letters, 2016, 116, 379-386.	0.6	16
2	Bilevel Knapsack with Interdiction Constraints. INFORMS Journal on Computing, 2016, 28, 319-333.	1.7	58
3	Theoretical and computational results about optimality-based domain reductions. Computational Optimization and Applications, 2016, 64, 513-533.	1.6	6
4	Timetabling and assignment problems in railway planning and integer multicommodity flow. Networks, 2015, 66, 1-10.	2.7	5
5	Automatic Dantzig-Wolfe reformulation of mixed integer programs. Mathematical Programming, 2015, 149, 391-424.	2.4	37
6	Friendly bin packing instances without Integer Round-up Property. Mathematical Programming, 2015, 150, 5-17.	2.4	27
7	Delay-Robust Event Scheduling. Operations Research, 2014, 62, 274-283.	1.9	6
8	A Complexity and Approximability Study of the Bilevel Knapsack Problem. Lecture Notes in Computer Science, 2013, , 98-109.	1.3	16
9	A Lagrangian heuristic for a train-unit assignment problem. Discrete Applied Mathematics, 2013, 161, 1707-1718.	0.9	36
10	Finding cliques of maximum weight on a generalization of permutation graphs. Optimization Letters, 2013, 7, 289-296.	1.6	4
11	On integer polytopes with few nonzero vertices. Operations Research Letters, 2013, 41, 74-77.	0.7	9
12	Uncommon Dantzig-Wolfe Reformulation for the Temporal Knapsack Problem. INFORMS Journal on Computing, 2013, 25, 560-571.	1.7	23
13	A Lagrangian Heuristic for Robustness, with an Application to Train Timetabling. Transportation Science, 2012, 46, 124-133.	4.4	82
14	Railway Rolling Stock Planning: Robustness Against Large Disruptions. Transportation Science, 2012, 46, 217-232.	4.4	71
15	An effective branch-and-bound algorithm for convex quadratic integer programming. Mathematical Programming, 2012, 135, 369-395.	2.4	34
16	Models and Algorithms for the Train Unit Assignment Problem. Lecture Notes in Computer Science, 2012, , 24-35.	1.3	7
17	A Freight Service Design Problem for a Railway Corridor. Transportation Science, 2011, 45, 147-162.	4.4	17
18	Optimal linear arrangements using betweenness variables. Mathematical Programming Computation, 2011, 3, 261-280.	4.8	15

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19	Decorous Lower Bounds for Minimum Linear Arrangement. INFORMS Journal on Computing, 2011, 23, 26-40.	1.7	21
20	Solution of the Train Platforming Problem. Transportation Science, 2011, 45, 246-257.	4.4	51
21	Partial Convexification of General MIPs by Dantzig-Wolfe Reformulation. Lecture Notes in Computer Science, 2011, , 39-51.	1.3	9
22	Global optimization problems and domain reduction strategies. Mathematical Programming, 2010, 125, 123-137.	2.4	31
23	Solving a real-world train-unit assignment problem. Mathematical Programming, 2010, 124, 207-231.	2.4	71
24	Non-cyclic train timetabling and comparability graphs. Operations Research Letters, 2010, 38, 179-184.	0.7	48
25	Lower Bounds for the Minimum Linear Arrangement of a Graph. Electronic Notes in Discrete Mathematics, 2010, 36, 843-849.	0.4	1
26	An approximation scheme for the two-stage, two-dimensional knapsack problem. Discrete Optimization, 2010, 7, 114-124.	0.9	3
27	Scheduling extra freight trains on railway networks. Transportation Research Part B: Methodological, 2010, 44, 215-231.	5.9	171
28	A New Approximation Method for Set Covering Problems, with Applications to Multidimensional Bin Packing. SIAM Journal on Computing, 2010, 39, 1256-1278.	1.0	54
29	Practical Solution of Periodic Filtered Approximation as a Convex Quadratic Integer Program. , 2010, , 149-160.		3
30	A Structural Lemma in 2-Dimensional Packing, and Its Implications on Approximability. Lecture Notes in Computer Science, 2009, , 77-86.	1.3	17
31	Bidimensional packing by bilinear programming. Mathematical Programming, 2009, 118, 75-108.	2.4	29
32	Constrained 0-1 quadratic programming: Basic approaches and extensions. European Journal of Operational Research, 2008, 187, 1494-1503.	5.7	29
33	A column generation approach to train timetabling on a corridor. 4or, 2008, 6, 125-142.	1.6	116
34	Packing $d$ -Dimensional Bins in $d$ Stages. Mathematics of Operations Research, 2008, 33, 203-215.	1.3	21
35	Chapter 3 Passenger Railway Optimization. Handbooks in Operations Research and Management Science, 2007, , 129-187.	0.6	111
36	Embedding $\{0, \frac{1}{2}\}$ -Cuts in a Branch-and-Cut Framework: A Computational Study. INFORMS Journal on Computing, 2007, 19, 229-238.	1.7	39

#	ARTICLE	IF	CITATIONS
37	Improved approximation algorithms for multidimensional bin packing problems. , 2006, , .		55
38	A Lagrangian heuristic algorithm for a real-world train timetabling problem. Discrete Applied Mathematics, 2006, 154, 738-753.	0.9	174
39	Fast Approximation Schemes for Two-Stage, Two-Dimensional Bin Packing. Mathematics of Operations Research, 2005, 30, 150-172.	1.3	27
40	Modified subset sum heuristics for bin packing. Information Processing Letters, 2005, 96, 18-23.	0.6	11
41	Bidimensional Packing by Bilinear Programming. Lecture Notes in Computer Science, 2005, , 377-391.	1.3	12
42	Laying Out Sparse Graphs with Provably Minimum Bandwidth. INFORMS Journal on Computing, 2005, 17, 356-373.	1.7	24
43	On the two-dimensional Knapsack Problem. Operations Research Letters, 2004, 32, 5-14.	0.7	100
44	Worst-case analysis of the subset sum algorithm for bin packing. Operations Research Letters, 2004, 32, 159-166.	0.7	38
45	Packing cuts in undirected graphs. Networks, 2004, 44, 1-11.	2.7	7
46	One-threshold graphs and d-dimensional bin packing. Networks, 2004, 44, 266-280.	2.7	6
47	1001 Optimal PDB Structure Alignments: Integer Programming Methods for Finding the Maximum Contact Map Overlap. Journal of Computational Biology, 2004, 11, 27-52.	1.6	138
48	A 3/4-Approximation Algorithm for Multiple Subset Sum. Journal of Heuristics, 2003, 9, 99-111.	1.4	23
49	Models and algorithms for a staff scheduling problem. Mathematical Programming, 2003, 98, 445-476.	2.4	52
50	Approximation schemes for ordered vector packing problems. Naval Research Logistics, 2003, 50, 58-69.	2.2	46
51	Packing cycles in undirected graphs. Journal of Algorithms, 2003, 48, 239-256.	0.9	50
52	The Reversal Median Problem. INFORMS Journal on Computing, 2003, 15, 93-113.	1.7	69
53	Modeling and Solving the Train Timetabling Problem. Operations Research, 2002, 50, 851-861.	1.9	426
54	Improved Approximation for Breakpoint Graph Decomposition and Sorting by Reversals. Journal of Combinatorial Optimization, 2002, 6, 157-182.	1.3	14

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55	An Approximation Scheme for the Two-Stage, Two-Dimensional Bin Packing Problem. Lecture Notes in Computer Science, 2002, , 315-328.	1.3	7
56	On the Practical Solution of the Reversal Median Problem. Lecture Notes in Computer Science, 2001, , 238-251.	1.3	32
57	Lower bounds and algorithms for the 2-dimensional vector packing problem. Discrete Applied Mathematics, 2001, 111, 231-262.	0.9	82
58	A Global Method for Crew Planning in Railway Applications. Lecture Notes in Economics and Mathematical Systems, 2001, , 17-36.	0.3	19
59	Sorting Permutations by Reversals Through Branch-and-Price. INFORMS Journal on Computing, 2001, 13, 224-244.	1.7	20
60	Packing Cycles and Cuts in Undirected Graphs. Lecture Notes in Computer Science, 2001, , 512-523.	1.3	2
61	Approximation Schemes for Ordered Vector Packing Problems. Lecture Notes in Computer Science, 2001, , 63-75.	1.3	1
62	A PTAS for the Multiple Subset Sum Problem with different knapsack capacities. Information Processing Letters, 2000, 73, 111-118.	0.6	38
63	Approximation algorithms for knapsack problems with cardinality constraints. European Journal of Operational Research, 2000, 123, 333-345.	5.7	135
64	Algorithms for the Set Covering Problem. Annals of Operations Research, 2000, 98, 353-371.	4.1	296
65	On the separation of maximally violated mod-k cuts. Mathematical Programming, 2000, 87, 37-56.	2.4	49
66	The Multiple Subset Sum Problem. SIAM Journal on Optimization, 2000, 11, 308-319.	2.0	65
67	A Heuristic Method for the Set Covering Problem. Operations Research, 1999, 47, 730-743.	1.9	347
68	Sorting Permutations by Reversals and Eulerian Cycle Decompositions. SIAM Journal on Discrete Mathematics, 1999, 12, 91-110.	0.8	184
69	Separating lifted odd-hole inequalities to solve the index selection problem. Discrete Applied Mathematics, 1999, 92, 111-134.	0.9	16
70	On the Tightness of the Alternating-Cycle Lower Bound for Sorting by Reversals. Journal of Combinatorial Optimization, 1999, 3, 149-182.	1.3	29
71	Formulations and hardness of multiple sorting by reversals. , 1999, , .		65
72	Exact Solution of the Quadratic Knapsack Problem. INFORMS Journal on Computing, 1999, 11, 125-137.	1.7	150

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73	Properties of some ILP formulations of a class of partitioning problems. Discrete Applied Mathematics, 1998, 87, 11-23.	0.9	9
74	Modeling and Solving the Crew Rostering Problem. Operations Research, 1998, 46, 820-830.	1.9	101
75	Algorithms for railway crew management. Mathematical Programming, 1997, 79, 125-141.	2.4	140
76	{0, 1/2}-Chvátal-Gomory cuts. Mathematical Programming, 1996, 74, 221-235.	2.4	100
77	An Effective Peak Period Heuristic for Railway Rolling Stock Planning. Transportation Science, 0, , .	4.4	2