Gerard Cornuejols

List of Publications by Year
in descending order

114 papers	5,583 citations	117625 34 h-index	82547 72 g-index
117 all docs	117 docs citations	117 times ranked	2494 citing authors

#	Article	IF	Citations
1	Exceptional Paperâ€"Location of Bank Accounts to Optimize Float: An Analytic Study of Exact and Approximate Algorithms. Management Science, 1977, 23, 789-810.	4.1	724
2	An algorithmic framework for convex mixed integer nonlinear programs. Discrete Optimization, 2008, 5, 186-204.	0.9	622
3	A lift-and-project cutting plane algorithm for mixed 0â€"1 programs. Mathematical Programming, 1993, 58, 295-324.	2.4	551
4	Integer Programming. Graduate Texts in Mathematics, 2014, , .	0.5	322
5	The traveling salesman problem on a graph and some related integer polyhedra. Mathematical Programming, 1985, 33, 1-27.	2.4	239
6	Recognizing Berge Graphs. Combinatorica, 2005, 25, 143-186.	1.2	234
7	Submodular set functions, matroids and the greedy algorithm: Tight worst-case bounds and some generalizations of the Rado-Edmonds theorem. Discrete Applied Mathematics, 1984, 7, 251-274.	0.9	219
8	Mixed 0-1 Programming by Lift-and-Project in a Branch-and-Cut Framework. Management Science, 1996, 42, 1229-1246.	4.1	200
9	Valid inequalities for mixed integer linear programs. Mathematical Programming, 2007, 112, 3-44.	2.4	136
10	Extended formulations in combinatorial optimization. 4or, 2010, 8, 1-48.	1.6	116
11	Polyhedral study of the capacitated vehicle routing problem. Mathematical Programming, 1993, 60, 21-52.	2.4	94
12	A Feasibility Pump for mixed integer nonlinear programs. Mathematical Programming, 2009, 119, 331-352.	2.4	88
13	A matching problem with side conditions. Discrete Mathematics, 1980, 29, 135-159.	0.7	77
14	Maximal Lattice-Free Convex Sets in Linear Subspaces. Mathematics of Operations Research, 2010, 35, 704-720.	1.3	76
15	Minimal Valid Inequalities for Integer Constraints. Mathematics of Operations Research, 2009, 34, 538-546.	1.3	74
16	Split closure and intersection cuts. Mathematical Programming, 2005, 102, 457-493.	2.4	65
17	Elementary closures for integer programs. Operations Research Letters, 2001, 28, 1-8.	0.7	55
18	Minimal Inequalities for an Infinite Relaxation of Integer Programs. SIAM Journal on Discrete Mathematics, 2010, 24, 158-168.	0.8	54

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19	Probabilistic Analysis of a Relaxation for the k-Median Problem. Mathematics of Operations Research, 1988, 13, 1-31.	1.3	52
20	On the facets of mixed integer programs with two integer variables and two constraints. Mathematical Programming, 2009, 120, 429-456.	2.4	52
21	Mixed-integer nonlinear programs featuring â€œon/offâ€•constraints. Computational Optimization and Applications, 2012, 52, 537-558.	1.6	49
22	Decomposition of Balanced Matrices. Journal of Combinatorial Theory Series B, 1999, 77, 292-406.	1.0	46
23	Even-hole-free graphs part I: Decomposition theorem. Journal of Graph Theory, 2002, 39, 6-49.	0.9	43
24	Worst-Case and Probabilistic Analysis of Algorithms for a Location Problem. Operations Research, 1980, 28, 847-858.	1.9	42
25	A Class of Hard Small 0-1 Programs. INFORMS Journal on Computing, 1999, 11, 205-210.	1.7	42
26	On the rank of mixed 0,1 polyhedra. Mathematical Programming, 2002, 91, 391-397.	2.4	42
27	Extended formulations in combinatorial optimization. Annals of Operations Research, 2013, 204, 97-143.	4.1	41
28	Even-hole-free graphs part II: Recognition algorithm. Journal of Graph Theory, 2002, 40, 238-266.	0.9	40
29	A Geometric Perspective on Lifting. Operations Research, 2011, 59, 569-577.	1.9	40
30	Two algorithms for weighted matroid intersection. Mathematical Programming, 1986, 36, 39-53.	2.4	39
31	Projected ChvÃ¡talâ€“Gomory cuts for mixed integer linear programs. Mathematical Programming, 2008, 113, 241-257.	2.4	38
32	Reduce-and-Split Cuts: Improving the Performance of Mixed-Integer Gomory Cuts. Management Science, 2005, 51, 1720-1732.	4.1	37
33	Cut-Generating Functions and S-Free Sets. Mathematics of Operations Research, 2015, 40, 276-391.	1.3	37
34	A Canonical Representation of Simple Plant Location Problems and Its Applications. SIAM Journal on Algebraic and Discrete Methods, 1980, 1, 261-272.	0.8	36
35	The packing property. Mathematical Programming, 2000, 89, 113-126.	2.4	34
36	Even and odd holes in cap-free graphs. Journal of Graph Theory, 1999, 30, 289-308.	0.9	33

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37	A class of logic problems solvable by linear programming. Journal of the ACM, 1995, 42, 1107-1112.	2.2	30
38	K-Cuts: A Variation of Gomory Mixed Integer Cuts from the LP Tableau. INFORMS Journal on Computing, 2003, 15, 385-396.	1.7	30
39	Universally signable graphs. Combinatorica, 1997, 17, 67-77.	1.2	27
40	Revival of the Gomory cuts in the 1990â€™s. Annals of Operations Research, 2007, 149, 63-66.	4.1	27
41	On the relative strength of split, triangle and quadrilateral cuts. Mathematical Programming, 2011, 126, 281-314.	2.4	27
42	Branching on general disjunctions. Mathematical Programming, 2011, 128, 403-436.	2.4	27
43	A Class of Hard Small 0â€"1 Programs. Lecture Notes in Computer Science, 1998, , 284-293.	1.3	24
44	A Primal Approach to the Simple Plant Location Problem. SIAM Journal on Algebraic and Discrete Methods, 1982, 3, 504-510.	0.8	23
45	Balanced matrices. Discrete Mathematics, 2006, 306, 2411-2437.	0.7	23
46	Equivalence between intersection cuts and the corner polyhedron. Operations Research Letters, 2010, 38, 153-155.	0.7	23
47	Polyhedral methods for the maximum clique problem. DIMACS Series in Discrete Mathematics and Theoretical Computer Science, 1996, , 11-28.	0.0	23
48	A matroid algorithm and its application to the efficient solution of two optimization problems on graphs. Mathematical Programming, 1988, 42, 471-487.	2.4	22
49	Corner polyhedron and intersection cuts. Surveys in Operations Research and Management Science, 2011, 16, 105-120.	3.1	22
50	Balanced 0, Â±1-matrices, bicoloring and total dual integrality. Mathematical Programming, 1995, 71, 249-258.	2.4	21
51	Unique lifting of integer variables in minimal inequalities. Mathematical Programming, 2013, 141, 561-576.	2.4	21
52	Polyhedral Approaches to Mixed Integer Linear Programming. , 2010, , 343-385.		21
53	Square-free perfect graphs. Journal of Combinatorial Theory Series B, 2004, 90, 257-307.	1.0	20
54	Experiments with Two-Row Cuts from Degenerate Tableaux. INFORMS Journal on Computing, 2011, 23, 578-590.	1.7	20

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55	Perfect triangle-free 2-matchings. Mathematical Programming Studies, 1980, , 1-7.	0.8	19
56	Balanced 0,ÂÂ±1 Matrices I. Decomposition. Journal of Combinatorial Theory Series B, 2001, 81, 243-274.	1.0	19
57	A connection between cutting plane theory and the geometry of numbers. Mathematical Programming, 2002, 93, 123-127.	2.4	19
58	Unique Minimal Liftings for Simplicial Polytopes. Mathematics of Operations Research, 2012, 37, 346-355.	1.3	19
59	Decomposition of odd-hole-free graphs by double star cutsets and 2-joins. Discrete Applied Mathematics, 2004, 141, 41-91.	0.9	18
60	A counterexample to a conjecture of Gomory and Johnson. Mathematical Programming, 2012, 133, 25-38.	2.4	18
61	Ideal Clutters That Do Not Pack. Mathematics of Operations Research, 2018, 43, 533-553.	1.3	18
62	Perfect matchings in balanced hypergraphs. Combinatorica, 1996, 16, 325-329.	1.2	17
63	Combining and strengthening Gomory cuts. Lecture Notes in Computer Science, 1995, , 438-451.	1.3	17
64	Intersection Cuts with Infinite Split Rank. Mathematics of Operations Research, 2012, 37, 21-40.	1.3	16
65	A 3-Slope Theorem for the infinite relaxation in the plane. Mathematical Programming, 2013, 142, 83-105.	2.4	13
66	Semidefinite Bounds. Graduate Texts in Mathematics, 2014, , 389-413.	0.5	13
67	Triangle-free graphs that are signable without even holes. Journal of Graph Theory, 2000, 34, 204-220.	0.9	12
68	Stable sets, corner polyhedra and the ChvÃ¡tal closure. Operations Research Letters, 2009, 37, 375-378.	0.7	12
69	Graphs without odd holes, parachutes or proper wheels: a generalization of Meyniel graphs and of line graphs of bipartite graphs. Journal of Combinatorial Theory Series B, 2003, 87, 300-330.	1.0	11
70	Odd Hole Recognition in Graphs of Bounded Clique Size. SIAM Journal on Discrete Mathematics, 2006, 20, 42-48.	0.8	11
71	Cuboids, a class of clutters. Journal of Combinatorial Theory Series B, 2020, 142, 144-209.	1.0	11
72	Perfect 0, Â± 1 matrices. Linear Algebra and Its Applications, 1997, 253, 299-309.	0.9	10

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73	Balanced 0,ÂÂ±1 Matrices II. Recognition Algorithm. Journal of Combinatorial Theory Series B, 2001, 81, 275-306.	1.0	10
74	A note on the MIR closure. Operations Research Letters, 2008, 36, 4-6.	0.7	10
75	Sufficiency of cut-generating functions. Mathematical Programming, 2015, 152, 643-651.	2.4	9
76	On Lifting Integer Variables in Minimal Inequalities. Lecture Notes in Computer Science, 2010, , 85-95.	1.3	9
77	A Probabilistic Analysis of the Strength of the Split and Triangle Closures. Lecture Notes in Computer Science, 2011, , 27-38.	1.3	9
78	From Totally Unimodular to Balanced 0, Â±1 Matrices: A Family of Integer Polytopes. Mathematics of Operations Research, 1994, 19, 21-23.	1.3	8
79	Perfect, ideal and balanced matrices. European Journal of Operational Research, 2001, 133, 455-461.	5.7	8
80	Mixed Integer NonLinear Programs featuring â€œOn/Offâ€•constraints: convex analysis and applications. Electronic Notes in Discrete Mathematics, 2010, 36, 1153-1160.	0.4	8
81	On the safety of Gomory cut generators. Mathematical Programming Computation, 2013, 5, 345-395.	4.8	8
82	Cut-Generating Functions for Integer Variables. Mathematics of Operations Research, 2016, 41, 1381-1403.	1.3	8
83	Lehman matrices. Journal of Combinatorial Theory Series B, 2009, 99, 531-556.	1.0	7
84	Practical strategies for generating rank-1 split cuts in mixed-integer linear programming. Mathematical Programming Computation, 2011, 3, 281-318.	4.8	7
85	Idealness of k-wise intersecting families. Mathematical Programming, 2022, 192, 29-50.	2.4	7
86	On the Relative Strength of Split, Triangle and Quadrilateral Cuts. , 2009, , .		7
87	Perfect Graphs, Partitionable Graphs and Cutsets. Combinatorica, 2002, 22, 19-33.	1.2	6
88	Ideal clutters. Discrete Applied Mathematics, 2002, 123, 303-338.	0.9	6
89	Intersecting Restrictions in Clutters. Combinatorica, 2020, 40, 605-623.	1.2	6
90	Combining Lift-and-Project and Reduce-and-Split. INFORMS Journal on Computing, 2013, 25, 475-487.	1.7	5

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91	On Some Polytopes Contained in the 0,1 Hypercube that Have a Small ChvÃ¡tal Rank. Lecture Notes in Computer Science, 2016, , 300-311.	1.3	5
92	Lifting Gomory cuts with bounded variables. Operations Research Letters, 2013, 41, 142-146.	0.7	4
93	On the relative strength of families of intersection cuts arising from pairs of tableau constraints in mixed integer programs. Mathematical Programming, 2015, 150, 459-489.	2.4	4
94	On the Rank of Mixed 0,1 Polyhedra. Lecture Notes in Computer Science, 2001, , 71-77.	1.3	4
95	Cut-Generating Functions. Lecture Notes in Computer Science, 2013, , 123-132.	1.3	4
96	Clean Clutters and Dyadic Fractional Packings. SIAM Journal on Discrete Mathematics, 2022, 36, 1012-1037.	0.8	4
97	Balanced cycles and holes in bipartite graphs. Discrete Mathematics, 1999, 199, 27-33.	0.7	3
98	Balanced Matrices. Handbooks in Operations Research and Management Science, 2005, 12, 277-319.	0.6	3
99	Resistant Sets in the Unit Hypercube. Mathematics of Operations Research, 2021, 46, 82-114.	1.3	3
100	4. Bicolorings and Equitable Bicolorings of Matrices. , 2004, , 33-37.		2
101	Decomposing Berge Graphs Containing No Proper Wheel, Long Prism Or Their Complements. Combinatorica, 2006, 26, 533-558.	1.2	2
102	Combinatorial Optimization. Oberwolfach Reports, 2015, 11, 2873-2932.	0.0	2
103	On some polytopes contained in the 0,Â1 hypercube that have a small ChvÃ¡tal rank. Mathematical Programming, 2018, 172, 467-503.	2.4	2
104	Idealness and 2-resistant sets. Operations Research Letters, 2019, 47, 358-362.	0.7	2
105	On the Rational Polytopes with ChvÃ¡tal Rank 1. Mathematical Programming, 2020, 179, 21-46.	2.4	2
106	Identically Self-blocking Clutters. Lecture Notes in Computer Science, 2019, , 1-12.	1.3	2
107	Special issue of Mathematical Programming, Series B, dedicated to the international symposium on mathematical programming, Pittsburgh, July 2015. Mathematical Programming, 2015, 151, 1-2.	2.4	1
108	The max-flow min-cut property and Â±1-resistant sets. Discrete Applied Mathematics, 2021, 289, 455-476.	0.9	1

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109	A new infinite class of ideal minimally non-packing clutters. Discrete Mathematics, 2021, 344, 112413.	0.7	1
110	Clean tangled clutters, simplices, and projective geometries. Journal of Combinatorial Theory Series B, 2022, 154, 60-92.	1.0	1
111	The ChvÃ¡tal closure of generalized stable sets in bidirected graphs. Electronic Notes in Discrete Mathematics, 2009, 35, 89-95.	0.4	0
112	Computational Aspects of Bayesian Solution Estimators in Stochastic Optimization. INFORMS Journal on Optimization, 2020, 2, 256-272.	1.4	0
113	Split and Gomory Inequalities. Graduate Texts in Mathematics, 2014, , 195-234.	0.5	0
114	Idealness of k-wise Intersecting Families. Lecture Notes in Computer Science, 2020, , 1-12.	1.3	0