

Bibliografia

- [1] AUGERAT, P.; BELENGUER, J.; BENAVENT, E.; CORBERÁN, A.; NADDEF, D. ; RINALDI, G.. **Computational results with a branch and cut code for the capacitated vehicle routing problem.** Technical Report 949-M, Universite Joseph Fourier, Grenoble, France, 1995.
- [2] AUGERAT, P.; BELENGUER, J.; BENAVENT, E.; CORBERÁN, A. ; NADDEF, D.. **Separating capacity constraints in the CVRP using tabu search.** European Journal of Operational Research, 106:546–557, 1998.
- [3] ACHUTHAN, N.; CACCETTA, L. ; HILL, S.. **Capacited vehicle routing problem: Some new cutting planes.** Asia-Pacific Journal of Operational Research, 15:109–123, 1998.
- [4] ACHUTHAN, N.; CACCETTA, L. ; HILL, S.. **An improved branch-and-cut algorithm for the capacitated vehicle routing problem.** Transportation Science, 37:153–169, 2003.
- [5] ARAQUE, J.; HALL, L. ; MAGNANTI, T.. **Capacitated trees, capacitated routing and polyhedra.** Technical Report SOR-90-12, Princeton University, 1990.
- [6] ARAQUE, J.; KUDVA, G.; MORIN, T. ; PEKNY, J.. **A branch-and-cut algorithm for the vehicle routing problem.** Annals of Operations Research, 50:37–59, 1994.
- [7] AGARWAL, Y.; MATHUR, K. ; SALKIN, H.. **A set-partitioning based exact algorithm for the vehicle routing problem.** Networks, 19:731–739, 1989.
- [8] AUGERAT, P.. **Approche polyédrale du problème de tournées de véhicules.** PhD thesis, Institut National Polytechnique de Grenoble, 1995.

- [9] BLASUM, U.; HOCHSTÄTTLER, W.. **Application of the branch and cut method to the vehicle routing problem.** Technical Report ZPR2000-386, Zentrum für Angewandte Informatik Köln, 2000.
- [10] BARNHART, C.; HANE, C. ; VANCE, P.. **Using branch-and-price-and-cut to solve origin-destination integer multicommodity flow problems.** Operations Research, 40:318–326, 2000.
- [11] BARNHART, C.; JOHNSON, E.; NEMHAUSER, G.; SAVELSBERGH, M. ; VANCE, P.. **Branch-and-price: Column generation for solving huge integer programs.** Operations Research, 46:316–329, 1998.
- [12] BALINSKI, M.; QUANDT, R.. **On an integer program for a delivery problem.** Operations Research, 12:300–304, 1964.
- [13] BELOV, G.; SCHETHAUER, G.. **Solving the general one-dimensional cutting stock problem with a cutting plane approach.** Technical Report MATH-NM-11-2000, Technische Universität Dresden, 2000.
- [14] BELOV, G.; SCHETHAUER, G.. **A cutting plane algorithm for the one-dimensional cutting stock problem with multiple stock lengths.** European Journal of Operational Research, 141:274–294, 2002.
- [15] BELOV, G.; SCHETHAUER, G.. **A branch-and-cut-and-price algorithm for one- and two-dimensional two-staged cutting stock problems.** Technical Report MATH-NM-03-2003, Technische Universität Dresden, 2003.
- [16] BRAMEL, J.; SIMCHI-LEVI, D.. **On the effectiveness of the set partitioning formulation for the vehicle routing problem.** Operations Research, 45:295–301, 1997.
- [17] LONGO, H.; DE ARAGÃO, M. P. ; UCHOA, E.. **Solving capacitated arc routing problems using a transformation to the cvrp.** Technical Report PUC-RioInf. MCC10/04, PUC-Rio, Rio de Janeiro, Brazil, 2004.
- [18] CAMPOS, V.; CORBERÁN, A. ; MOTA, E.. **Polyhedral results for a vehicle routing problem.** European Journal of Operational Research, 52:75–85, 1991.

- [19] CHRISTOFIDES, N.; EILON, S.. **An algorithm for the vehicle-dispatching problem.** Operational Research Quarterly, 20:309–318, 1969.
- [20] CORNUÉJOLS, G.; HARCHE, F.. **Polyhedral study of the capacitated vehicle routing problem.** Mathematical Programming, 60:21–52, 1993.
- [21] CHRISTOFIDES, N.; MINGOZZI, A. ; TOTH, P.. **Exact algorithms for the vehicle routing problem, based on spanning tree and shortest path relaxations.** Mathematical Programming, 20:255–282, 1981.
- [22] CHRISTOFIDES, N.; MINGOZZI, A. ; TOTH, P.. **State-space relaxation procedures for the computation of bounds to routing problems.** Networks, 11:145–164, 1981.
- [23] CLARKE, G.; WRIGHT, J. V.. **Scheduling of vehicles from a central depot to a number of delivery points.** Operations Research, 12:568–581, 1964.
- [24] M. DESROCHERS, J. D.; SOLOMON, M.. **Vehicle routing problem with time windows.** Operations Research, 40:342–354, 1992.
- [25] DANTZIG, G.; RAMSER, R.. **The truck dispatching problem.** Management Science, 6:80–91, 1959.
- [26] DESROSIERS, J.; SOUMIS, F. ; DESROCHERS, M.. **Routing with time windows by column generation.** Networks, 14:545–565, 1984.
- [27] G. FINKE, A. C.; GUNN, E. A.. **A two-commodity network flow approach to the traveling salesman problem.** Congressus Numerantium, 41:167–178, 1984.
- [28] FEILLET, D.; DEJAX, P.; GENDREAU, M. ; GUEGUEN, C.. **An exact algorithm for the elementary shortest path problem with resource constraints: Application to some vehicle routing problems.** Unpublished manuscript, 2003.
- [29] FELICI, G.; GENTILE, C. ; RINALDI, G.. **Solving large MIP models in supply chain management by branch & cut.** Technical report, Istituto di Analisi dei Sistemi ed Informatica del CNR, Italy, 2000.

- [30] FUKASAWA, R.; LYSGAARD, J.; POGGI DE ARAGÃO, M.; REIS, M.; UCHOA, E. ; WERNECK, R. F.. **Robust branch-and-cut-and-price for the capacitated vehicle routing problem.** In: PROCEEDINGS OF THE X IPCO, volumen 3064 de **Lecture Notes in Computer Science**, p. 1–15, New York, June 2004.
- [31] FUKASAWA, R.; POGGI DE ARAGÃO, M.; PORTO, O. ; UCHOA, E.. **Robust branch-and-cut-and-price for the capacitated minimum spanning tree problem.** In: PROCEEDINGS OF THE INTERNATIONAL NETWORK OPTIMIZATION CONFERENCE, 2003.
- [32] FUKASAWA, R.; POGGI DE ARAGÃO, M.; REIS, M. ; UCHOA, E.. **Robust branch-and-cut-and-price for the capacitated vehicle routing problem.** Technical Report RPEP Vol.3 no.8, Universidade Federal Fluminense, Engenharia de Produção, Niterói, Brazil, 2003.
- [33] FISHER, M.. **Optimal solution of vehicle routing problem using minimum k-trees.** Operations Research, 42:626–642, 1994.
- [34] GOUVEIA, L.. **A result on projection for the vehicle routing problem.** European Journal of Operational Research, 85:610–624, 1995.
- [35] GILMORE, P.; GOMORY, R.. **A linear programming approach to the cutting-stock problem.** Operations Research, 9:849–859, 1961.
- [36] GILMORE, P.; GOMORY, R.. **A linear programming approach to the cutting-stock problem: Part ii.** Operations Research, 11:863–888, 1963.
- [37] GRÖTSCHEL, M.; PADBERG, M. W.. **On the symmetric travelling salesman problem i: inequalities.** Math. Program., 16:265–280, 1979.
- [38] GRÖTSCHEL, M.; PADBERG, M. W.. **On the symmetric travelling salesman problem ii: lifting theorems and facets.** Math. Program., 16:281–302, 1979.
- [39] GEOFFRION, A.. **Lagrangian relaxation for integer programming.** Mathematical Programming Study, 2:82—114, 1974.
- [40] HADJICONSTANTINOU, E.; CHRISTOFIDES, N. ; MINGOZZI, A.. **A new exact algorithm from the vehicle routing problem based**

- on q -paths and k -shortest paths relaxations.** In: Laporte, G.; Gendreau, M., editors, FREIGHT TRANSPORTATION, número 61 em Annals of Operations Research, p. 21–44. Baltzer Science Publishers, 1995.
- [41] IRNICH, S.; VILLENEUVE, D.. **The shortest path problem with k -cycle elimination ($k \geq 3$): Improving a branch-and-price algorithm for the VRPTW.** Unpublished manuscript, 2003.
- [42] BALAS, E.. **The prize collecting traveling salesman problem.** Networks, 19:621–636, 1989.
- [43] KIM, D.; BARNHART, C.; WARE, K. ; REINHARDT, G.. **Multimodal express package delivery: A service network design application.** Transportation Science, 33:391–407, 1999.
- [44] KOHL, N.; DESROSIERS, J.; MADSEN, O.; SOLOMON, M. ; SOUMIS, F.. **2-path cuts for the vehicle routing with time windows.** Transportation Science, 33:101–116, 1999.
- [45] LETCHFORD, A.; EGLESE, R. ; LYSGAARD, J.. **Multistars, partial multistars and the capacitated vehicle routing problem.** Mathematical Programming, 94:21–40, 2002.
- [46] LYSGAARD, J.; LETCHFORD, A. ; EGLESE, R.. **A new branch-and-cut algorithm for the capacitated vehicle routing problem.** Mathematical Programming, 100:423–445, 2004.
- [47] LAPORTE, G.; NORBERT, Y.. **A branch and bound algorithm for the capacitated vehicle routing problem.** Operations Research Spektrum, 5:77–85, 1983.
- [48] G. LAPORTE, Y. N.; DESROCHERS, M.. **Optimal routing under capacity and distance restrictions.** Operations Research, 33:1050–1073, 1985.
- [49] LETCHFORD, A.; REINELT, G. ; THEIS, D.. **A faster exact separation algorithm for blossom inequalities.** In: PROCEEDINGS OF THE X IPCO, volumen 3064 de **Lecture Notes in Computer Science**, p. 196–205, New York, 2004.
- [50] LETCHFORD, A. N.; SALAZAR, J. J.. **Projection results for vehicle routing.** Mathematical Programming, 2004. To appear.

- [51] LUCENA, A.. **Exact Solution Approaches for the Vehicle Routing Problem.** PhD thesis, Imperial College, University of London, 1986.
- [52] LYSGAARD, J.. **CVRPSEP: A package of separation routines for the capacitated vehicle routing problem**, 2003. Available at *www.asb.dk/~lys*.
- [53] MARTINHON, C.; LUCENA, A. ; MACULAN, N.. **A relax and cut algorithm for the vehicle routing problem.** Technical Report rt 05-00, Instituto de Computação, Universidade Federal Fluminense, Niterói, Brazil, 2000.
- [54] MARTINHON, C.; LUCENA, A. ; MACULAN, N.. **A relax and cut algorithm for the vehicle routing problem.** European Journal of Operational Research, 2003. To appear.
- [55] MARTELLO, S.; TOTH, P.. **Knapsack problems: Algorithms and computer implementations.** 1990.
- [56] MEHROTRA, A.; TRICK, M.. **A column generation approach for graph coloring.** INFORMS Journal on Computing, 8:344–354, 1996.
- [57] MILLER, D.. **A matching based exact algorithm for capacitated vehicle routing problems.** ORSA Journal on Computing, 7:1–9, 1995.
- [58] NEMHAUSER, G.; PARK, S.. **A polyhedral approach to edge coloring.** Operations Research Letters, 10:315–322, 1991.
- [59] NADDEF, D.; RINALDI, G.. **Branch-and-cut algorithms for the capacitated VRP.** In: Toth, P.; Vigo, D., editors, THE VEHICLE ROUTING PROBLEM, chapter 3, p. 53–84. SIAM, 2002.
- [60] PADBERG, M.; RAO, M.. **Odd minimum cut-sets and b-matchings.** Mathematics of Operations Research, 7(1):67–80, 1982.
- [61] POGGI DE ARAGÃO, M.; UCHOA, E.. **Integer program reformulation for robust branch-and-cut-and-price.** Manuscript submitted to IPCO X, available at *www.inf.puc-rio.br/~poggi*, 2003.
- [62] PIGATTI, A.. **Modelos e algoritmos para o problema de alocação generalizada e aplicações.** Master's thesis, Pontifícia Universidade Católica do Rio de Janeiro, Brazil, July 2003.

- [63] RALPHS, T.; KOPMAN, L.; PULLEYBLANK, W. ; JR., L. T.. **On the capacitated vehicle routing problem.** Mathematical Programming, 94:343–359, 2003.
- [64] RALPHS, T.. **Symphony version 2.8 user's guide**, 2002. Available at www.branchandcut.org/SYMPHONY.
- [65] RALPHS, T.. **Parallel branch and cut for capacitated vehicle routing.** Parallel Computing, 29:607–629, 2003.
- [66] TOTH, P.; VIGO, D.. **Models, relaxations and exact approaches for the capacitated vehicle routing problem.** Discrete Applied Mathematics, 123:487–512, 2002.
- [67] TOTH, P.; VIGO, D.. **The Vehicle Routing Problem.** Monographs on Discrete Mathematics and Applications. SIAM, 2002.
- [68] VAN DEN AKKER, J.; HURKENS, C. ; SAVELSBERGH, M.. **Time-indexed formulation for machine scheduling problems: column generation.** INFORMS Journal on Computing, 12:111–124, 2000.
- [69] VANDERBECK, F.; WOLSEY, L.. **An exact algorithm for IP column generation.** Operations Research Letters, 19:151–159, 1996.
- [70] VALÉRIO DE CARVALHO, J.. **Exact solution of bin packing problems using column generation and branch-and-bound.** Annals of Operations Research, 86:629–659, 1999.
- [71] VALÉRIO DE CARVALHO, J.. **Lp models for bin packing and cutting stock problems.** Technical report, Universidade do Minho, Portugal, 2000.
- [72] VANDERBECK, F.. **Decomposition and Column Generation for Integer Programs.** PhD thesis, Université Catholique de Louvain, 1994.
- [73] VANDERBECK, F.. **Lot-sizing with start-up times.** Management Science, 44:1409–1425, 1998.
- [74] VANDERBECK, F.. **Computational study of a column generation algorithm for bin packing and cutting stock problems.** Mathematical Programming, 86:565–594, 1999.

- [75] VANDERBECK, F.. **On dantzig-wolfe decomposition in integer programming and ways to perform branching in a branch-and-price algorithm.** Operations Research, 48:111–128, 2000.
- [76] WERNECK, R. F.; SETUBAL, J. C.. **Finding minimum congestion spanning trees.** ACM Journal of Experimental Algorithmics, 5, 2000.
- [77] WENGER, K.. **Generic Cut Generation Methods for Routing Problems.** PhD thesis, University of Heidelberg, 2003.
- [78] WILHELM, W.. **A technical review of column generation in integer programming.** Optimization and Engineering, 2:159–200, 2001.