Operations Research (Master's Degree Course)

9. Bibliographical Indications

Silvano Martello

DEI "Guglielmo Marconi", Università di Bologna, Italy



This work by is licensed under a Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License.

Based on a work at http://www.editrice-esculapio.com

Main texts for the various chapters

- Chapter 1: F.S. Hillier and G.J. Lieberman, Introduction to Operations Research, McGraw-Hill, 2010.
- Chapters 2-6: C.H. Papadimitriou and K. Steiglitz, Combinatorial Optimization: Algorithms and Complexity, Dover Publications, Mineola, NY, 1998, 2012
 - S. Martello and P. Toth, *Knapsack Problems: Algorithms and Computer Implementations*, Wiley, Chichester, 1990.
- Chapter 7: M.R. Garey and D.S. Johnson, Computers and Intractability: A Guide to the Theory of NP-Completeness, Freeman, San Francisco, CA, 1979.
- Chapter 8: S.M. Ross *Simulation*, Academic Press, 2012.
 - P. Toth, Simulazione Numerica, ETS, Pisa, 1980.

Riferimenti bibliografici

- [1] R.K. Ahuja, T.L. Magnanti, and J.B. Orlin. *Network Flows*. Prentice Hall, Englewood Cliffs, NJ, 1993.
- [2] E.M.L. Beale. Cycling in the dual simplex algorithm. *Naval Research Logistics Quarterly*, 2:269–275, 1955.
- [3] R. Bellman. Dynamic Programming. Princeton Univ. Press, Princeton, NJ, 1957.
- [4] C. Berge. *Graphs*. North-Holland, Amsterdam, 1989.
- [5] R.G. Bland. New finite pivoting rules for the simplex method. *Mathematics of Operations Research*, 2:103–107, 1977.
- [6] R. Burkard, M. Dell'Amico, and S. Martello. *Assignment Problems*. SIAM, Philadelphia, 2009.
- [7] N. Christofides. *Graph Theory: An Algorithmic Approach*. Academic Press, London, 1975.
- [8] N. Christofides. Worst-case analysis of a new heuristic for the travelling salesman problem. Report 388, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, PA, 1976.
- [9] S.A. Cook. The complexity of theorem-proving procedures. In *Proceedings of the third annual ACM symposium on Theory of computing*, STOC '71, pages 151–158, New York, NY, 1971. ACM.
- [10] G. Costa, C. D'Ambrosio, and S. Martello. A free educational Java framework for graph algorithms. *Journal of Computer Science*, 6:87–91, 2010.

- [11] C. D'Ambrosio, A. Lodi, and S. Martello. Combinatorial traveling salesman problem algorithms. In J.J. Cochran, editor, *Wiley Encyclopedia of Operations Research and Management Science*. Wiley, 2011.
- [12] G.B. Dantzig. Programming of interdependent activities: II Mathematical model. *Econometrica*, 17:200–211, 1949.
- [13] G.B. Dantzig. Discrete-variable extremum problems. Operations Research, 5:266-288, 1957.
- [14] G.B. Dantzig. *Linear Programming and Extensions*. Rand Corporation Research Study. Princeton Univ. Press, Princeton, NJ, 1963.
- [15] M. Dell'Amico. 120 Esercizi di Ricerca Operativa. Pitagora Editrice, Bologna, 2006.
- [16] E.W. Dijkstra. A note on two problems in connection with graphs. *Numerische Mathematik*, 1:269–271, 1959.
- [17] E.A. Dinic. An algorithm for the solution of the max-flow problem with the polynomial estimation. *Doklady Academii Nauk SSSR*, 194:1270–1272, 1970.
- [18] J. Edmonds and R.M. Karp. Theoretical improvements in algorithmic efficiency for network flow problems. *Journal of the ACM*, 19:248–264, 1972.
- [19] L. Euler. Solutio problematis ad geometriam situs pertinentis. *Commentarii Academiae Scientiarum Imperialis Petropolitanae*, 8:128–140, 1736.
- [20] J. Farkas. Über die theorie der einfachen ungleichungen. *Journal für die Reine und Angewandte Mathematik*, 124:1–24, 1902.
- [21] M. Fischetti. Lezioni di Ricerca Operativa. Edizioni Libreria Progetto, Padova, 1999.
- [22] R.W. Floyd. Algorithm 97: Shortest path. Communications of the ACM, 6:345, 1962.

- [23] L.R. Ford and D.L. Fulkerson. *Flows in Networks*. Princeton University Press, Princeton, NJ, 1956.
- [24] D.H. Gale, H.W. Kuhn, and A.W. Tucker. On symmetric games. In H.W. Kuhn and A.W. Tucker, editors, *Contributions to the Theory of Games*, volume 24 of *Ann. Math. Stud.*, pages 81–87. Princeton University Press, NJ, 1950.
- [25] M.R. Garey and D.S. Johnson. *Computers and Intractability: A Guide to the Theory of NP-Completeness*. Freeman, San Francisco, CA, 1979.
- [26] R.E. Gomory. Outline of an algorithm for integer solution to linear programs. *Bulletin Amer. Math. Soc.*, 64:275–278, 1958.
- [27] F.S. Hillier and G.J. Lieberman. Ricerca Operativa. McGraw-Hill, 2010.
- [28] M. Iori and S. Martello. Routing problems with loading constraints. TOP, 18:4-27, 2010.
- [29] N. Karmarkar. A new polynomial time algorithm for linear programming. *Combinatorica*, 4:373–395, 1984.
- [30] R.M. Karp. Reducibility among combinatorial problems. In R.E. Miller and J.W. Thacher, editors, *Complexity of Computer Computations*, pages 83–103. Plenum Press, New York, NY, 1972.
- [31] A.V. Karzanov. Determining the maximal flow in a network by the method of preflows. Doklady Academii Nauk SSSR, 215:434–437, 1974.
- [32] L. Khachiyan. A polynomial algorithm in linear programming. *Doklady Academii Nauk SSSR*, 244:1093–1096, 1979.

- [33] H.W. Kuhn. The Hungarian method for the assignment problem. *Naval Research Logistic Quarterly*, 2:83–97, 1955.
- [34] A.H. Land and A.G. Doig. An automatic method of solving discrete programming problems. *Econometrica*, 28:497–520, 1960.
- [35] E.L. Lawler, J.K. Lenstra, A.H.G. Rinnooy Kan, and D.B Shmoys (eds.). *The Traveling Salesman Problem*. Wiley, Chichester, 1985.
- [36] S. Martello. *Ricerca Operativa*. Esculapio, Bologna, 2021.
- [37] S. Martello and P. Toth. An upper bound for the zero-one knapsack problem and a branch and bound algorithm. *European Journal of Operational Research*, 1:169–175, 1977.
- [38] S. Martello and P. Toth. *Knapsack Problems: Algorithms and Computer Implementations*. Wiley, Chichester, 1990.
- [39] S. Martello and D. Vigo. *Esercizi di Simulazione Numerica*. Esculapio, Bologna, 1999.
- [40] S. Martello and D. Vigo. Esercizi di Ricerca Operativa. Esculapio, Bologna, 2003.
- [41] G.L. Nemhauser and L.A. Wolsey. *Integer and Combinatorial Optimization*. Wiley, New York, 1988.
- [42] C.H. Papadimitriou and K. Steiglitz. *Combinatorial Optimization: Algorithms and Complexity*. Dover Publications, Mineola, NY, 1998.
- [43] K.R. Popper. Conjectures and Refutations: The Growth of Scientific Knowledge. Routledge, 1963.
- [44] R.C. Prim. Shortest connection networks and some generalizations. *Bell System Technical Journal*, 36:1389–1401, 1957.

- [45] E.C. Russell. Building Simulation Models with SIMSCRIPT II.5. CACI, La Jolla, CA, 1999.
- [46] S. Sahni and T. Gonzalez. P-complete approximation problems. *Journal of the ACM*, 23:555–565, 1976.
- [47] P. Serafini. Ricerca Operativa. Springer, Milano, 2009.
- [48] E.-G. Talbi. Metaheuristics: From Design to Implementation. Wiley, Hoboken, NJ, 2009.
- [49] P. Toth. Simulazione Numerica. ETS, Pisa, 1980.
- [50] P. Toth and D. Vigo (eds.). The Vehicle Routing Problem. SIAM, Philadephia, PA, 2001.
- [51] S. Warshall. A theorem on Boolean matrices. Journal of the ACM, 9:11–12, 1962.