9. Software and Further Reading

LP-solvers. The most famous (and expensive) software package for solving linear programs and integer programs is called CPLEX. Freely available codes with similar functionality, although not quite as strong as CPLEX, are `lp_solve`, GLPK, and CLP. The website

`www-neos.mcs.anl.gov/neos`

contains a guide to many other optimization software systems, and it also provides an overview of web solvers, to which one can send an input of an optimization problem and, with a bit of luck, be returned an optimum.

The *computational geometry algorithms library* CGAL (`www.cgal.org`) contains software for solving linear and convex quadratic programs using exact rational arithmetic. We refer to the website of this book (`http://www.inf.ethz.ch/personal/gaertner/lpbook`) for further information.

Books. The web bookstore Amazon offers more books with "linear programming" in the title than with "astrology," and so it is clear that we can mention only a very narrow selection from the literature.

A reasonably recent, accessible, and quite comprehensive (but not exactly cheap) textbook of linear programming is

D. Bertsimas and J. Tsitsiklis: *Introduction to Linear Optimization*, Athena Scientific, Belmont, Massachusetts, 1997.

Both linear and integer programming are treated on an excellent theoretical level in

A. Schrijver: *Theory of Linear and Integer Programming*, Wiley-Interscience, New York 1986.

The book

V. Chvátal: *Linear Programming*, W. H. Freeman, New York 1983,

was considered one of the best textbooks in its time and it is still used widely. And those liking classical sources may appreciate

G. B. Dantzig: *Linear Programming and Extensions*, Princeton University Press, Princeton 1963.