

riate analysis (Hoteling's en Mantel's), discriminant analysis en survival analysis aan de orde met opnieuw een heel groot accent op resampling methods zoals permutatietoetsen en de bootstrap. Het boek bevat lijvige appendices (vanaf bladzijde 208), handig voor zelf programmeren van de resampling methods danwel het hanteren van statistische software-pakketen, en een uitgebreide lijst referenties. De schrijver heeft een goed punt om (veel) aandacht te schenken aan resampling methods. Misschien krijgen resampling methods te weinig aandacht in het statistiekonderwijs (in Nederland). De schrijver draaft echter, wat mij betreft, te veel door. In dit leerboek lijden de resampling methods aan overbelichting in plaats van de gebruikelijke onderbelichting, vooral bij de meer ingewikkelde onderwerpen.

K. Poortema

M. Bronstein et al.

### Symbolic rewriting techniques

(Progress in computer science and applied logic; 15)

Basel: Birkhäuser-Verlag, 1998

288 p., prijs DM 148,-

ISBN 3-7643-5901-3

This volume contains a selection of 14 papers that were contributed to a workshop on *Symbolic Rewriting Techniques*, held in Ascona, Switzerland, from April 30 to May 4, 1995.

Symbolic rewriting techniques are of great use when investigating the structure of solutions of various systems of equations and they play a role in many areas of computer algebra research, like the Knuth-Bendix completion for groups and monoids, the Buchberger algorithm for Gröbner bases, the Ritt-Wu characteristic set method for ODE, and the Riquier-Janet method for PDE.

Though already some years have elapsed since this workshop was held, the 14 papers in this volume contain such a wealth of information that reading them will be profitable to anyone interested in computer algebra.

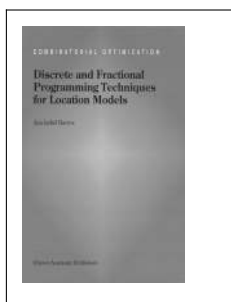
N.A. van Arkel

clearly, as well as the way the work was carried out. During the first two years she worked with one supervisor on location problems, and during the last two years she worked with a second supervisor interested in fractional programming techniques. It is not so strange that the author then tries to combine the two topics in order to complete a PhD thesis. The result is a broad thesis that reflects a lot of knowledge, but not quite a coherent textbook. In particular Chapter 2 on discrete location models forms a separate entity.

Chapter 2 is a survey of work on "traditional discrete location problems", whereas the models to which the fractional programming techniques are applied to (the content of the rest of the book) are quite different. Chapter 2 reads nicely but there are a few things I miss in such an overview. First, it completely concentrates on the maximization of profits. If one looks for approximate solutions to the problem of minimizing the cost of servicing clients, then this is essentially different from the problem of maximizing the profit of servicing the clients. This is not mentioned. Moreover, the minimization problem seems in many cases more natural than the maximization version. Second, referencing is not quite accurate. A book chapter published in 1990 is for instance given as a reference that the simple plant location problem is NP-hard, whereas this was stated much earlier. I also find the implicit statement that Manne [89], and Kuehn and Hamburger [86] originally stated the problem as a maximization problem not satisfactory. The description of the Kuehn and Hamburger heuristic is a perfect description of the greedy heuristic developed and analyzed by Cornuéjols et al. (reference [38]). Kuehn and Hamburger's heuristic is slightly different.

The remaining chapters form a more coherent piece and read nicely. My only reservation is that the models mentioned seem a bit constructed. For people not familiar with fractional programming it is a useful text, not difficult to read. The book certainly has its merits, but I still give preference to the author's research papers on the topic.

K. Aardal



A.I. Barros

### Discrete and fractional programming technique for location models

(Combinatorial Optimization; 3)

Dordrecht: Kluwer, 1998

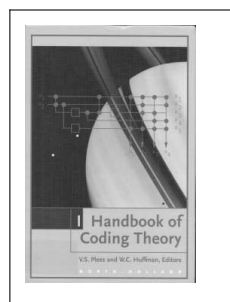
178 p., prijs NLG 180,-

ISBN 0-7923-5002-2

The book contains an introduction to discrete location models, and describes how fractional programming techniques can be applied to certain location models. The book is a revision of the author's PhD thesis completed in 1995 at the Tinbergen Institute, Rotterdam. The material handled in the book is interesting for a thesis, but the presentation is not mature enough for a textbook.

The above criticism reflects much more on the publisher Kluwer than on the author. Kluwer has a reputation of willingly publishing manuscripts as books, and I know of very few cases where the style of a PhD thesis and that of a textbook coincide. A publisher ought to recognize this.

In this case one can see the thesis character of the manuscript



V.S. Pless and W.C. Huffman

### Handbook of coding theory I, II

Amsterdam: Elsevier, 1998

2169 p., prijs NLG 650,-

ISBN 0-444-50088-X

This handbook is one of those that any library in Mathematics, Information Sciences, or Computer Science should have. The editors write, and I agree, that "the audience for this Handbook can range from an active researcher in coding theory to someone beginning to explore this far reaching subject". The handbook consists of two volumes. Volume I contains *Part 1: Algebraic Coding*, and deals with the algebraic structure of codes. The first chapter, by the editors, is a good introduction to the subject of coding, and provides the basics for the other chapters.

Volume II contains two parts: *Part 2: Connections* explores the connections between coding theory and other parts of mathematics and computer science (mainly other parts of combinatorics).