

Erik B. Bajalinov

Linear-Fractional Programming: Theory, Methods, Applications and Software

Unlike other fractional programming related titles, this book offers a "direct" approach to LFP and to duality in LFP, which is new in many aspects. First, the original LFP problem is considered as it is, without reducing it to an LP problem. Moreover, LFP is considered to be a generalization of LP and so most of the results are formulated in such a way that appropriate results of LP may be obtained as a special case of LFP. On the other hand, this approach makes it possible to compare dual variables in LP and LFP and to describe the relationship between them. In this respect, important (and new) application possibilities of duality appear in different parts of the book.

The book provides readers with the basic knowledge necessary to build LFP models, to solve LFP problems and to utilize the optimal solution obtained. Moreover, the book contains detailed information on WinGULF, a software package developed by the author especially for linear-fractional programming. The package is designed to solve LFP problems with continuous as well as integer variables. The special "Student Edition" version of the package is free of charge and may be downloaded from the author's web page.

Audience

The book is suitable for researchers in mathematical programming, scientists and professionals who work in optimization, and also students who wish to expand their knowledge beyond a standard course of linear programming.

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