

towards the goal of educating a wide audience in the computational aspects of interior-point methods. It will show a student that a simple implementation and a few numerical precautions suffice to produce software that works.

The book comes with a diskette containing a software package implementing three interior-point methods: a primal method, a dual method and a primal-dual method. The software is designed to be used on IBM compatibles under DOS, and its primary goal is to be educational. It is not sophisticated and, as the author points out from the outset, this software is neither as versatile nor as powerful as the leading codes currently being used to solve very large problems. The book is a self-contained and very readable manual for the software that provides sufficient background in linear programming and interior-point methods to be used for instruction or for self-education. The book can be understood by students and professionals with a minimum background in linear programming and mathematics.

The author succeeds in making the presentation clear and simple. However, the emphasis on clarity makes the presentation too repetitive at places. Also missing, in my view, is a clear explanation of the strengths of the primal-dual approach. But these relatively minor flaws do not prevent this book, and the accompanying software, from being a valuable educational tool in linear programming.

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**6[90C05, 90C10, 90C20, 90C30, 90C35].**—JORGE J. MORÉ & STEPHEN J. WRIGHT, *Optimization Software Guide*, Frontiers in Applied Mathematics, Vol. 14, SIAM, Philadelphia, PA, 1993, xii + 154 pp., 25½ cm. Price: Soft-cover \$24.50.

This is a very valuable book for anyone interested in using optimization codes, and for all those wishing to learn about the state-of-the-art in this field. The book lists most of the currently available software for solving various classes of optimization problems, such as linear programming, integer programming, network optimization and nonlinear optimization, and describes how the software can be obtained. Many readers will be pleasantly surprised to find that much of it is distributed freely on the Internet.

The book begins by classifying optimization problems in various categories, and gives a lucid and concise description of each of these categories. Readers with limited knowledge of optimization and numerical analysis will have very little difficulty reading through this summary, which gives a nice overview of the field. The book then proceeds to give a short description of each of the software packages, and a list of the software in each category. As explained by the authors, some areas of optimization, such as stochastic programming (or programming under uncertainty) are not included because general-purpose software is not yet readily available. Nevertheless, the book covers a wide range of problems, and one would hope that it finds wide dissemination in industry, where it can be extremely valuable. The book can also be used as a teaching aid in optimization courses.

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