subtle aspects of Maple. The publishers must surely also take some blame for not ensuring adequate proofreading.

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19[49-02, 49K40, 65K05]—*Nonlinear programming*, by Olvi L. Mangasarian, Classics in Applied Mathematics, Vol. 10, SIAM, Philadelphia, PA, 1994, xvi+220 pp., 23 cm, softcover, $28.50

This influential book on the theory of nonlinear optimization was first published in 1969, and went out of print a few years ago. SIAM has now republished it as part of a series "Classics in Applied Mathematics".

This beautiful book contains a lucid exposition of the mathematical foundations of optimization. The presentation is always simple and concise, and contains complete and rigorous proofs of most of the results. This is a formative book, which can be read by a student with a good background of calculus of several variables, in that it exposes the reader to most of the basic mathematical ideas of nonlinear optimization. The book is self-contained: the excellent appendices and the introduction review all the mathematical concepts needed to understand the material of the book.

There is a very good treatment of convexity and its generalizations—quasi-convexity and pseudoconvexity. Optimality and duality are covered in great generality, and the exposition of theorems of the alternative is a pleasure to read. There is also an extensive discussion of constraint qualification. All of these results make the book a valuable reference.

Much work has been done in convexity and duality in the 25 years since this book was published, and our views of the foundations of mathematical programming have changed. Nevertheless, the theory developed in this book remains central to the foundations of nonlinear optimization, and the style remains as effective and delightful today as when the book was first published. Every person interested in nonlinear optimization should own this book.

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20[49-02, 49M35, 49M45, 65K05]—*Interior-point polynomial algorithms in convex programming*, by Yurii Nesterov and Arkadii Nemirovskii, SIAM Studies in Applied Mathematics, Vol. 13, SIAM, Philadelphia, PA, 1994, x+405 pp., 26 cm, $68.50[1]

The appearance of Karmarkar's method ten years ago opened a new chapter in the study of complexity in mathematical programming, which has since resulted

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[1] This is an abridged version of a review that appeared in OPTIMA, a newsletter of the Mathematical Programming Society.