

67[2.55].—E. HANSEN, Editor, *Topics in Interval Analysis*, Oxford Univ. Press, London, 1969, viii + 130 pp., 24 cm. Price \$8.00.

This book is a collection of papers presented at a symposium on Interval Analysis at Oxford University Computing Laboratory, 1967. The authors are Ramon Moore, Karl Nickel, Eldon Hansen, Jean Meinguet, F. Krückeberg and Michael Dempster. The papers are divided into two sections—algebraic problems and continuous problems—and topics include linear algebraic equations, zeros of polynomials, estimation of significance, two-point boundary value problems, ordinary and partial differential equations, and linear programming. There is also a brief description of Triplex-Algol, an extension of ALGOL 60 which facilitates the writing of programs involving interval arithmetic, and a short chapter by Hansen containing a proof of Moore's "centered form" conjecture.

The book is a useful addition to the literature of this field, and in fact is a suitable continuation of R. Moore's *Interval Analysis*, (Prentice-Hall, N. J., 1966). Hansen has done an excellent job of editing, so that the style of writing is uniform throughout. The papers are all reasonably self-contained, provided the reader is familiar with the Moore book. The paper on Triplex-Algol is the only English language discussion of this subject of which the reviewer is aware.

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68[3].—BEN NOBLE, *Applied Linear Algebra*, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1969, xvi + 523 pp., 24 cm. Price \$9.95.

One could quibble over certain features of this book (e.g., the style tends toward the prolix), but this reviewer knows of none on the market that could really compete. The topics covered are adequate for most applications; the applications are interspersed within the theory, but so separated that they can be included or omitted at the instructor's discretion; there are many exercises and a number of concrete examples; the bibliography is extensive (though theorems are not generally attributed); there is attention to numerical methods, including pitfalls; and there is a reasonably detailed index. Any competent instructor can supplement where he feels it necessary, but little would be needed. In most courses omissions would very likely be necessary, but the organization is such that this would not cause much trouble.

There are fourteen chapters, ending with one on "Abstract vector spaces," and including linear programming. The Jordan form is not neglected. Also, there is a chapter on "Norms and Error Estimates" (the thirteenth).

The text is now being used at the University of Tennessee, and quite successfully.

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