

Henry Tucker; Computation of Power Spectra, Melvin Klerer; Random-Number Generation and Monte-Carlo Methods, T. E. Hull.

*Applications.* Symbolic Logic and Practical Applications, J. V. Wait; Information Theory and Codes, Harvey L. Garner; Linear Programming, Lloyd Rosenberg; Nonlinear Programming, E. M. L. Beale; Commercial Data Processing, Robert V. Head; Digital Computers for Logical Design, Richard E. Merwin and Jere L. Sanborn; Information Retrieval, Jack Belzer and Orrin E. Taulbee; Some Parameter-optimization Techniques, Robert B. McGhee; Scheduling and Inventory Control, Jerry L. Sanders; Real-time Operations with Small General-purpose Computers, Barbara W. Stephenson.

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**79[2.05, 2.10, 2.15, 2.35, 2.55, 3, 4].**—DAVID G. MOURSUND & CHARLES S. DURIS, *Elementary Theory and Application of Numerical Analysis*, McGraw-Hill Book Co., New York, 1967, xi + 297 pp., 24 cm. Price \$8.95.

The authors' objectives are to provide an introduction to modern numerical analysis at the sophomore-junior level, to describe a few selected but important methods and algorithms with mathematical rigor, paying due regard to error analysis, and concurrently, to review and solidify some basic relevant concepts of elementary calculus. These objectives have been attained to a remarkable degree, and the book can be highly recommended for its intended use. The chapter headings are: 1. Solution of equations by fixed-point iteration, 2. Matrix computations and solution of linear equations, 3. Iterative solution of systems of equations, 4. Polynomials, Taylor's series, and interpolation theory, 5. Errors and floating-point arithmetic, 6. Numerical differentiation and integration, 7. Introduction to the numerical solution of ordinary differential equations, 8. Numerical solution of ordinary differential equations. Each chapter contains numerous numerical examples, programs in FORTRAN with sample outputs, and a large number of exercises, mostly of the "drill" type.

W. G.

**80[2.05, 6, 7].**—MARTIN AVERY SNYDER, *Chebyshev Methods in Numerical Approximation*, Prentice-Hall, Inc., Englewood Cliffs, N. J., 1966, x + 114 pp., 24 cm. Price \$7.50.

This is another volume of the Prentice-Hall Series in Automatic Computation. It is concerned with methods for constructing polynomial and rational approximations to functions. Emphasis is given to those methods employing Chebyshev polynomials (Chebyshev series, economization of power series, Lanczos'  $\tau$ -method, Maehly's method, economization of continued fractions), although other miscellaneous methods are also considered (Padé approximation, Kopal's method, Thiele's continued fraction). Contrary to what the title might suggest, minimax approximation is discussed only incidentally. There are two introductory chapters, one de-