$$f(t) = \sum_{k=-(n-1)/2}^{(n-1)/2} A(k)f(k) ,$$

where

$$A(k) = \frac{\sin \pi(t-k)}{\pi}\left[\frac{1}{t-k} + \sum_{m=1}^{\infty} (-1)^m \frac{2(t-k)}{(t-k)^2 - (mn)^2}\right] = \frac{\sin \pi(t-k)}{n \sin \pi(t-k)/n} .$$

When n is even, a similar manipulation leads to the result

$$A(k) = \frac{\sin \pi(t-k)}{\pi}\left[\frac{1}{t-k} + \sum_{m=1}^{\infty} \frac{2(t-k)}{(t-k)^2 - (mn)^2}\right]$$
$$= \frac{\sin \pi(t-k) \cos \pi(t-k)/n}{n \sin \pi(t-k)/n} .$$

From this derivation of the formulas for the interpolation coefficients $A(k)$ it is evident that the author's descriptive phrase "folding, accordion style" is inaccurate in characterizing this type of interpolation.

J. W. W.

1. MATHEMATICAL TABLES PROJECT, WORK PROJECTS ADMINISTRATION, *Tables of Lagrangian Interpolation Coefficients,* Columbia Univ. Press, New York, 1944.

36[2.05, 2.10, 2.20, 2.25, 2.30, 2.35, 3, 5, 7, 8, 12].—ANTHONY RALSTON & HERBERT S. WILF, Editors, *Mathematical Methods for Digital Computers,* Vol. 2, John Wiley & Sons, Inc., New York, 1967, x + 287 pp., 27 cm. Price $11.95.

In a format similar to that of the first volume, but considerably improved, the editors have collected the contributions of experts in special areas of numerical analysis, calculation and programming languages. The first chapter gives a critical analysis of FORTRAN versus ALGOL and then makes comments about their limitations. Each subsequent writer presents a theoretical treatment of a method or class of methods for accomplishing a particular numerical calculation. In addition, flow charts, FORTRAN programs, estimates of running time and other practical hints are provided.

The depth of the analyses is variable, but appropriate to the complete understanding of the different methods. The list of the chapter headings and authors attests to the usefulness and the excellence of the exposition.

Part I. Programming Languages
1. An Introduction to FORTRAN and ALGOL Programming—Niklaus Wirth

Part II. The Quotient-Difference Algorithm
2. Quotient-Difference Algorithms—Peter Henrici

Part III. Numerical Linear Algebra
3. The Solution of Ill-Conditioned Linear Equations—J. H. Wilkinson
4. The Givens-Householder Method for Symmetric Matrices—James Ortega
5. The *LU* and *QR* Algorithms—B. N. Parlett

Part IV. Numerical Quadrature and Related Topics
6. Advances in Numerical Quadrature—Herbert S. Wilf
7. Approximate Multiple Integration—A. H. Stroud
8. Spline Functions, Interpolation, and Numerical Quadrature—T. N. E. Greville

Part V. Numerical Solution of Equations
9. The Solution of Transcendental Equations—J. F. Traub
10. The Numerical Solution of Polynomial Equations and the Resultant Procedures—Erwin H. Bareiss
11. Alternating Direction Methods Applied to Hear Conduction Problems—Jerome Spanier

Part VI. Miscellaneous Methods
12. Random Number Generation—Jack Moshman
13. Rational Chebyshev Approximation—Anthony Ralston

E. I.

37[2.05, 2.10, 2.20, 2.35, 3, 4, 5].—Royce Beckett & James Hurt, *Numerical Calculations and Algorithms*, McGraw-Hill Book Co., New York, 1967, xi + 298 pp., 24 cm. Price $9.95.

The purpose of this text is to train advanced undergraduate and beginning graduate engineers in numerical methods. The scope of the book may be indicated by listing the chapter headings: Introduction to Computers, The Flow Chart, Nonlinear Algebraic Equations, Simultaneous Linear Equations, Determinants and Matrices, Interpolation and Numerical Integration, Initial-Value Problems, Finite Differences and Boundary-Value Problems, and Data Approximation. Each chapter contains flow charts of suitable algorithms for implementing the numerical procedures and a large selection of problems.

The material in the book is carefully selected and appears to be well written.

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38[2.05, 3, 131].—S. I. Zukhovitskiy & L. I. Avdeyeva, *Linear and Convex Programming*, W. B. Saunders Co., Philadelphia, Pa., 1966, viii + 286 pp., 25 cm. Price $8.00.

What sets this book aside from most linear programming books are the two last chapters on Chebyshev approximation and convex programming. The simplex method is used for the solution of inconsistent linear systems (with or without constraints) and an algorithm is presented for Chebyshev approximation by rational functions. The chapter on convex programming gives a description, a convergence proof and a numerical example, worked out in detail, of an algorithm of feasible directions for solving convex programs. The case of quadratic programming is also discussed in detail including a finite algorithm. The first four chapters cover the basic material of linear programming and applications to production planning, optimal trimming problems, agricultural problems, allocation problems, military problems, game theory and transportation problems. There is a brief section on integer programming.

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