attack nonlinear differential equations problems of great complexity, and thus has led to a renewed interest in the design and analysis of relevant computational methods. The present volume provides a well-balanced, and well-documented, survey of current research in this area.

W. G.

83[4, 6].—Louis Brand, *Differential and Difference Equations*, John Wiley & Sons, Inc., New York, 1966, xvi + 698 pp., 24 cm. Price $11.95.

This is a skillfully written introductory book on the more classical parts of the subject. Its distinguishing features are the conscious effort made to bring out the formal analogies and interplays between differential and difference equations, the generous consideration given to applications in the physical sciences, and the inclusion of Mikusiński's operational calculus, both for functions of a continuous and a discrete variable. The chapter headings are: 1. Differential equations of the first order, 2. Important types of first-order equations, 3. Linear equations of the second order, 4. Linear equations with constant coefficients, 5. Systems of equations, 6. Applications, 7. Laplace transform, 8. Linear difference equations, 9. Linear difference equations with constant coefficients, 10. Solutions in series, 11. Mikusiński's operational calculus, 12. Existence and uniqueness theorems, 13. Interpolation and numerical integration, 14. Numerical methods.

W. G.

84[7].—Aldo Ascari, *A Table of the Repeated Integrals of the Error Function*, Internal Report S/6339, Società Richerche Impianti Nucleari (SORIN), Nuclear Research Center, Saluggia, Vercelli, Italy, 1968, v + 104 pp., 31 cm. Deposited in UMT file.

This table consists of 10S unrounded values (in floating-point form) of the normalized repeated integrals, $A_n i^n$ erfc x, of the complementary error function $2\pi^{-1/2}\int_x^\infty e^{-t^2}\,dt$, for the range $n = 1(1)24$, $x = 0(0.01)5.20$.

The corresponding values of $A_n = 2^n\Gamma((n/2) + 1)$ and its reciprocal are listed to 12S (also unrounded) in a preliminary table.

We are informed in the introduction that this table evolved as a by-product of the numerical solution of a specific diffusion problem, obtained on an Olivetti-Elea 6001/S computer at the Center.

The computation of the successive integrals was performed by means of the standard three-term recurrence formula, which was decomposed into a system of two first-order recurrences. The author states that several recurrent checks were applied to random entries, and were found invariably to be satisfied to at least 9S.

At the conclusion of the introductory remarks it is stated that the tabular entries were all obtained by chopping the 14S computer results to 10S. This, of course, means that terminal-digit errors can range up to nearly a unit.

Included in the appended list of six references are the tables of Berlyand et al. [1], which the present author has found unreliable, confirming the evaluation thereof made by this reviewer. He also refers to the comparatively brief, but useful, table of Gautschi [2].

In the opinion of this reviewer, the present table supersedes all previous tables