

## 7. M. E. Schonbek, Some Results on the Fitzhugh-Nagumo Equation.

The articles of a more applied nature, including the numerical aspects of diffusion theory are:

1. J. R. Cannon and R. E. Ewing, Galerkin Procedures for Systems of Parabolic Partial Differential Equations Related to the Transmission of Nerve Impulses.
2. J. W. Evans, Transition Behavior at the Slow and Fast Impulses.
3. N. J. Kopell, Waves, Shocks, and Target Patterns in an Oscillating Chemical Reagent.
4. J. Rinzel, Repetitive Nerve Impulse Propagation: Numerical Results and Methods.
5. A. D. Snider and D. L. Akins, Calculations of Transients for some Nonlinear Diffusion Phenomena.

HOWARD A. LEVINE

Department of Mathematics  
College of Arts and Sciences  
University of Rhode Island  
Kingston, Rhode Island 02881

**24 [7.30].**—RALPH HELLER, *25D Table of the First One Hundred Values of  $j_{0,s}$ ,  $J_1(j_{0,s})$ ,  $j_{1,s}$ ,  $J_0(j_{1,s}) = J_0(j'_{0,s+1})$ ,  $j'_{1,s}$ ,  $J_1(j'_{1,s})$* , Department of Physics, Worcester Polytechnic Institute, Worcester, Massachusetts, 1976. Ms. of six pages deposited in the UMT file.

This is an attractively arranged, definitive table of the first 100 zeros of the Bessel functions  $J_0(x)$ ,  $J_1(x)$  and of their first derivatives,  $J'_0(x)$  and  $J'_1(x)$ , together with the associated turning values of  $J_0(x)$  and  $J_1(x)$  and the values of  $J_1(j_{0,s})$ , all to 25 decimal places.

It supersedes, particularly in precision, all previous related tables, such as those of Meissel (as reproduced in Gray, Mathews and MacRobert [1]), the British Association for the Advancement of Science [2], and Gerber [3].

J. W. W.

1. A. GRAY, G. B. MATHEWS & T. M. MACROBERT, *A Treatise on Bessel Functions*, 2nd ed., Macmillan, London, 1922.

2. BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, *Mathematical Tables*, v. 6: *Bessel Functions, Part I*, Cambridge University Press, Cambridge, 1950.

3. H. GERBER, "First one hundred zeros of  $J_0(x)$  accurate to 19 significant figures," *Math. Comp.*, v. 18, 1964, pp. 319–322.

**25 [10].**—JACOB T. B. BEARD, JR. & KAREN I. WEST, *Factorization Tables for Binomials over  $GF(q)$* , The University of Texas at Arlington, Arlington, Texas and Mobil Research & Development Corporation, Dallas, Texas, ms. of 42 pp.  $8\frac{1}{2}'' \times 14'' + 7$ pp.  $8\frac{1}{2}'' \times 11''$ , deposited in the UMT file.

The thirteen tables herein give the complete factorization over the Galois field  $GF(q)$  of each monic binomial  $B(x)$  of degree  $n$ ,  $2 \leq n \leq d$  as below, such that  $x \nmid B(x)$ , together with the generalized Euler  $\Phi$ -function whenever  $B(x)$  is not prime and  $\Phi[B(x)] < 10^8$ . Furthermore, the numerical exponent and the  $q$ -polynomial are given for each  $B(x)$  whenever  $2 \leq n \leq d_1$ . The numerical exponent assigned to a nonprime