

deals with vector stochastic equations in general and not only with stochastic equations that lead to Markov processes. Many of the concepts here are due to the authors. Chapter 2 specializes in stochastic equations without after-effect (i.e., Markov) but includes jump processes as well as diffusions. The existence, uniqueness, and regularity theory is not given in detail again since it is similar to that of Part I. The results are stated in full, however. The latter sections of Chapter 2 contain a wealth of information on the connections between functionals of solutions of stochastic equations and partial differential equations. Chapter 3 is perhaps the most important chapter in the book from the point of view of applications. A number of very strong results on asymptotic behavior for large time and as a parameter tends to a limiting value are obtained. Bogoliubov's averaging method is extended to stochastic equations.

This book, along with H. P. McKean's "Stochastic Integrals", Academic Press, New York, 1968, provide excellent foundations and up to date information on stochastic differential equations.

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37[7].—H. P. ROBINSON, *Tables of the Derivative of the Psi Function to 58 Decimals*, University of California, Lawrence Berkeley Laboratory, Berkeley, California, October 1973. Ms. of 11 pp. deposited in the UMT file.

This unpublished set of tables consists of 58D values of the trigamma function,  $\Psi'(x)$ , for  $x = n + a$ , where  $n = 0(1)50$  and  $a = 0, 1/2, 1/3, 2/3, 1/4, 3/4, 1/5, 2/5, 3/5, 4/5$ .

The tabular values were calculated on a Wang 720C electronic calculator by means of the (stable) backward recursion formula  $\Psi'(x-1) = \Psi'(x) + (x-1)^{-2}$ , starting with values corresponding to  $x = 1000 + a$ , which were calculated by the appropriate asymptotic series. The terminal values in this recurrence were checked by the reflection formula  $\Psi'(x) + \Psi'(1-x) = \pi^2 \csc^2 x$ .

It may be appropriate to remark here that these excellent tables possess much higher precision than published tables [1], [2] of this function, which extend to at most 19D.

J. W. W.

1. BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, *Mathematical Tables*, v. 1, third edition, Cambridge University Press, Cambridge, England, 1951.

2. H. T. DAVIS, *Tables of the Mathematical Functions*, second edition, v. 2, The Principia Press of Trinity University, San Antonio, Texas, 1963. (For references to additional tables, with lower precision, see A. FLETCHER, J. C. P. MILLER, L. ROSENHEAD, AND L. J. COMRIE, *An Index of Mathematical Tables*, second edition, v. 1, Addison-Wesley, Reading, Massachusetts, 1962, p. 298.)