Sequential Decoding, by John M. Wozencraft and Barney Reiffen. The Technology Press of the Massachusetts Institute of Technology and John Wiley and Sons, Inc., New York, 1961. v + 74 pages. $3.75.

Shannon's pioneering work on information theory has shown that codes exist which permit efficient communication with an arbitrary degree of reliability. The practical implementation of this theory has not yet been fully achieved. The present monograph, based on work done at Lincoln Laboratory and at the Research Laboratory for Electronics (M. I. T.) is an exposition of a probabilistic approach to the problem, as contrasted to what may be called algebraic coding (see for example the book by W. W. Peterson, Error-Correcting Codes).

The book is for the specialist and not for the casual reader. Even for the expert a more leisurely exposition would be appreciated. The reviewer recommends a fairly thorough acquaintance with the relevant portions of Fano's book, Transmission of Information, as a prerequisite.

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Operational Calculus in Two Variables and its Applications, by V.A. Ditkin and A.P. Prudnikov. Translated from the Russian by D.M.G. Wishart. Pergamon Press, New York, 1962. x + 167 pages. $8.50.

This book provides a carefully written summary of the basic properties of the two-dimensional Laplace transform and a fairly comprehensive set of tables of transform pairs. The tables include sections on rational, irrational, exponential, logarithmic, hyperbolic, cylinder, and confluent hypergeometric functions. Some applications (regrettably too brief) are given to the evaluation of integrals and the solution of differential equations. It should be noted that the tables are based on the Laplace-Carson transform

$$F(p, q) = pq \int_0^\infty \int_0^\infty \exp(-px - qy) \, f(x, y) \, dx \, dy \ .$$

A good bibliography is included but there is no index. The latter deficiency is however not serious in the present case.

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