sional wave equation Kirchhoff's formula, Huygens' principle, retarded potentials, and similar matters are mentioned. The chapter concludes with a section on the partial differential equation $\Delta\Delta u=0$ and its applications.

Integral equations are the subject of Chapter IV. After a brief introduction, Fredholm-type integral equations with degenerate ("polynomial") kernels are discussed. Neumann's expansion (in the general case), Fredholm's theory, and the theory of symmetric kernels, with the classical theorems, follow. The sections on estimates, approximations, and numerical methods will be particularly useful. The two final sections establish connections with boundary value problems and show a number of applications. Reading this chapter one wonders if some of its sections are not too theoretical and if it is justifiable to devote, in a book of this nature, to integral equations about twice as much space as to functions of a complex variable.

Chapter V is on the calculus of variations, and in spite of its brevity is amply illustrated by examples. Euler's differential equation and Legendre's condition are derived, and so is Jacobi's condition. The section on Ritz's method and applications is especially valuable for the readers for whom the book is designed.

Chapter VI is a brief chapter on linear difference equations with constant coefficients and systems of such equations. The section on applications includes an example to show how difference equations can be used for the approximate solutions of differential equations.

The Appendix is a brief summary of some topics, mostly belonging to advanced calculus. It is designed principally to refresh one's memory, although some of its parts could be used to fill in gaps in the mathematical education of the reader.

A. Erdélyi

The preparation of programs for an electronic digital computer. With special reference to the EDSAC and the use of a library of subroutines. By M. V. Wilkes, D. J. Wheeler, and S. Gill. Cambridge, Massachusetts, Addison-Wesley, 1951. 10+170 pp. $5.00.

The EDSAC, designed and constructed at the Cambridge University Mathematical Laboratory, was one of the earliest high speed automatic digital computing machines in operation. It has a mercury delay line storage for 1024 words of 17 binary digits with photo-electrically read teletype tape input and teleprinter output. It is a one-