

FOX, L. (Editor), *Numerical Solution of Ordinary and Partial Differential Equations* (Pergamon Press, 1962), x+509 pp., 70s.

This book is based on a Summer School held in Oxford in 1961. It is divided into four parts, entitled: Ordinary Differential Equations; Integral Equations; Introduction to Partial Differential Equations; Practical Problems in Partial Differential Equations. The first three parts, mostly written by Dr. Fox and Dr. D. F. Mayers, are principally expository, and are "written for scientists who have problems to solve, and who want to know what methods exist, why and in what circumstances some are better than others, and how to develop techniques for new problems." The standard of presentation is fairly advanced, so that the beginner, and even the diploma student, will need a fair amount of elementary reading and practice before he can use the book to advantage. The worker in the field will find much here that is not readily available elsewhere or is only scattered through the literature.

The fourth part is on a higher plane. Here are twelve chapters, written by experienced workers in the field, on specialised topics ranging from one-dimensional unsteady flow to numerical weather prediction. These are on the level of research papers, and will be of great value to those working in the same fields; others will gain less from them but will be impressed by the progress made with such seemingly intractable problems.

Editing and printing are of a high standard. The reviewer noticed only occasional inconsistencies, such as the use of both y^v and $y^{(v)}$ for fifth derivatives and $O(h^3)$ and $O(h^3)$ (the reviewer prefers y^v and $O(h^3)$ respectively). The use of the symbol \geq in place of the usual \geq seems to be due to the typesetters, who have not cut the latter for use with the Times New Roman type as used in this book. Use of the four-line system has enabled the publishers to produce this book at a very reasonable price, considering the nature of the material presented and the somewhat small audience, without detracting from the appearance of the pages.

The most lasting impression of this book is the obvious great experience of its authors in the field. It can be very strongly recommended to all who would benefit from this experience.

JOHN LEECH