to an assembly language, for example, though translators and interpreters are mentioned briefly.

Like all others before him who have written a book on computer programming, the author was faced with the difficult question of which computer to use for illustrative purposes. The author solved this problem in a somewhat unusual manner by first deciding on an assembly program, FLAP (for Flores Assembly Program), and then defining the automatic computer which executes FLAP to be FLAPJAC. (Appropriately enough this reviewer first came across the book at a conference in Las Vegas).

The text assumes a basic knowledge of programming though no actual experience on a real computer is required. Problems are included with each chapter but no answers are given. The reviewer agrees with the statement on the front flap of the jacket that "It has no peer as an introduction for programmers entering the software field, or as a study of general principles applicable to all programming systems."

Charlotte Froese, University of British Columbia

Introduction to Basic FORTRAN Programming and Numerical Methods, by W. Prager. Blaisdell Publishing Company, New York, 1965. 203 pages.

As the title implies, this book gives an introduction to both computer programming in the Fortran language and numerical analysis. The author has succeeded in combining into one book a readable elementary account of both subjects.

Chapter I gives a very brief introduction to the use of digital computers in numerical analysis, and includes a detailed discussion of a simple program to sum the terms of an infinite series. Chapters II, III, IV, VI and VIII are devoted to a discussion of FORTRAN II for the IBM 7070. The remainder of the book gives a survey of the topics which are usually included in an elementary course in numerical analysis, viz., error analysis, polynomial calculations, polynomial and trigonometric interpolation, Newton-Cotes and Gaussian quadrature, solution of non-linear equations and systems of linear algebraic equations, and the numerical solution of ordinary differential equations. There are many problems both in numerical analysis and programming at the end of each chapter. The answers to the problems are not given.

The treatment of programming could have been much improved if Arithmetic Statement Functions and Function and Subroutine Subprograms were discussed. In addition, if FORTRAN IV rather than FORTRAN II could have been used, then the logical IF and Boolean expressions could have been included. However, it is possible that the omission of these topics is implied in the word "basic" appearing in the title. The discussion of sorting in Chapter X may have been omitted as this topic is not usually considered as a part of numerical analysis.

This reviewer has some reservations about attempting to introduce students to programming and to numerical analysis in the same course. He believes that it is better to defer the introduction of computers until the students have mastered some of the basic ideas of numerical analysis. However, this book could be most useful for those instructors who think otherwise, and would like to teach both subjects more or less simultaneously.

K. W. Smillie, University of Alberta

Théorie des Probabilitiés et Quelques Applications, by P. L. Hennequin and A. Tortrat. Masson et Cie., Paris, 1965. 458 pages. Price: 88 F.

This book breaks down into two parts. The first begins with a thorough and elegant presentation of the basic mathematical tools of probability theory, namely, measure and integration theory, the concept of compact pavings of sets, the Riemann-Stieltjes integral and the Radon-Nikodym theorem. This is followed by a careful exposition of characteristic functions including the application to the study of infinitely divisible laws. There is a chapter on conditional probabilities including Jirina's result on the existence of regular conditional probabilities (unfortunately stated only for σ-algebras of countable type). Finally there is a chapter on limit theorems for sequences of random variables including an exposition of the Prohorov convergence theorem which does not appear in any of the older texts on probability.

The second part is devoted to a study of a few more specialized topics. This begins with a short discussion of estimation, decision theory and hypothesis testing in statistics followed by a discussion of Kolmogorov-Smirnov statistics and the determination of their asymptotic distributions by the method of Doob. The book closes with one of the best discussions of Markov chains to be found in the literature including an introduction to the potential theory of Markov chains.

The book is well referenced and contains a modest supply of exercises. It would make a good text for a course in probability theory for the mathematically mature student.

Donald Dawson, McGill University

Elements of Finite Probability, by J. L. Hodges, Jr. and E. L. Lehmann. Holden-Day, Inc., San Francisco, London, Amsterdam, 1965. vi + 227 pages.

This book is Part I of the earlier book Basic Concepts of Probability and Statistics, written by the same two authors and is supplemented by two new sections on the law of large numbers and sequential stopping at the end of Chapter 6. It is an ideal text for a one quarter or one semester