

of problems and examples on fewer pages. There is a price which he has to pay for this. He cannot take the reader to the border of present day knowledge. But within its scope, it would be hardly possible to write a better book. The summary of contents (with my comments in brackets) follows.

Chapter I. Introduction (Properties of functions). II. Interpolation (Lagrange, Newton formulas). III. Remainder theory (Formulas with contour integrals, Peano's formula, convex functions, divided differences). IV. Convergence theorems for interpolatory processes (for analytic functions). V. Some problems of infinite interpolation (Pólya's theorem about infinite systems of equations, interpolation of entire functions. Here the author follows the bad tradition in the literature, and does not mention the paper of Eidelheit with necessary and sufficient conditions, which preceded Pólya's). VI. Uniform approximation (Theorem of Weierstrass, Bernstein polynomials, Féjer's proof, the theorem of Stone). VII. Best approximation (linear normed spaces, existence and uniqueness; Chebychev's theorem for polynomials). VIII. Least square approximation (Hilbert spaces, orthogonal systems, Gram determinants). IX. Hilbert space (Riesz-Fischer theorem, spaces of analytic functions, bounded linear functionals). X. Orthogonal polynomials (Properties of real and complex orthogonal polynomials, Jacobi polynomials). XI. The theory of closure and completeness (Hahn-Banach theorem, completeness of the trigonometric functions, Müntz's theorem, Runge's theorem, complete sequences in a Hilbert space). XII. Expansion theorems for orthogonal functions (Classical results about Fourier series, series for functions analytic in a strip, reproducing kernel functions). XIII. Degree of approximation (Bernstein's theorem for Banach spaces, Jackson's theorem). XIV. Approximation of linear functionals (Gauss' formula of approximate integration, equidistributed sequences, weak \* convergence).

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An Introduction to Probability and Mathematical Statistics, by Howard G. Tucker. Academic Press, New York, 1962. 228 pages. \$5.75.

This book is designed for the undergraduate university student majoring in mathematics. The emphasis is on the development of statistical theory through abstraction and the student hardly will get a feeling for the main subject "mathematical statistics and probability". While the author admits that the book is designed only for those students who love mathematics, it seems to the reviewer that this is no excuse for bringing together topics in the realm of probability theory and mathematical statistics with the sole purpose of proving them with

mathematical rigor while ignoring the purpose for which these topics are meant.

Characteristic functions and generating functions, which are always a delight to the mathematics minded student, are conspicuous by their absence. The section on multivariate normal distributions somehow does not fit into the book. Topics like the analysis of variance are treated scappily and no sufficient motivation for its inclusion is presented. On page 164 the author has a section on simple hypothesis vs. simple alternative. It is here that the term "simple" should be explained, but the disappointed reader does not get the meaning until he reaches page 183 where the terms "simple" and "composite" are defined.

A few misprints are found in the book. On page 32 line 7,  $a \in [X \leq x - 2^{-m}]$  should read  $w \in [X \leq x - 2^{-m}]$ . On page 52 line 8,  $y \leq \min \{n-x, r\}$  should read  $y \leq \min \{n-x, w\}$ .

Finally, the reviewer feels that the topics on random variables, the distinction between discrete and absolutely continuous distributions, and limit theorems have been treated exceedingly well and the author deserves praise.

V. Seshadri

The Essence of Biometry, by J. Stanley. McGill University Press, Montreal, 1963. xiii + 147 pages. \$5.00.

This book addresses biologists; they will be pleasantly surprised to see how little and how elementary mathematics is required to understand the simple statistical techniques which form the basis of the methods applied in all but the most refined research in biology. They will derive satisfaction from the surprising amount of information such simple methods can extract from their data.

While the book contains nothing of interest for the mathematician, the reviewer feels that it should be read by statisticians. It teaches them by its own example the language they should use in the discussion of problems with practical biologists who had only little training in analysis and algebra.

In order to achieve these aims the author often employs unconventional notation and, warning the reader about his unorthodoxy, adheres consistently to his own grammar of formulae. It might be pointed out that the avoidance of the avoidance of the well established notation  $\hat{\ }^{\wedge}$  (hat) above parameter symbols denoting the estimators could be a handicap for further reading (mainly the book by C. R. Rao and papers by E. S. Pearson and E. J. G. Pitman). The unorthodoxy