

14[65U05, 40A15, 65B10, 41A21].—K. O. BOWMAN & L. R. SHENTON, *Continued Fractions in Statistical Applications*, Statistics: Textbooks and Monographs, Vol. 103, Dekker, New York, 1989, x + 330 pp., $23\frac{1}{2}$ cm. Price \$89.75.

This book is a unique addition to the relatively small collection of books on continued fractions. It is also probably the only book devoted to the use of continued fractions in statistical applications. It presents a very readable and enticing account of the authors' extensive research involving application of continued fractions and Padé sequences to convergent and divergent series representations that occur in statistics. The emphasis throughout the book is on computational accuracy with modest computational resources. A valuable and unique feature of the book is that it points out the potential usefulness of computer algebra systems such as MACSYMA or REDUCE for obtaining expressions. Students will find the book very useful because many insightful comments are given as results are developed. Results are not just presented, but motivated and explained in a very personal style. The student reading through the many comments and examples will gain numerical analytic experience and knowledge that are usually only obtained through many hours or years of computational experiment.

The book is self-contained and incorporates the necessary results from many interesting references. It places a great amount of emphasis on the work of Stieltjes. It starts out with an introduction, using statistical examples, to continued fractions, summability theory, and the moment problem. These basic concepts are then successively extended to increasingly complex applications. Complete and computationally detailed examples are used extensively in the book and can serve as references for many applications in statistics. The book does not consider multivariate problems, as the authors found that there are many outstanding problems in the univariate situation. This book should be required reading for all statisticians, and will be informative reading for numerical analysts and engineers. For the mathematically inclined the book reads like a novel, a very good novel.

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15[62-04].—PETE DIGBY, NICK GALWEY & PETER LANE, *Genstat 5: A Second Course*, Clarendon Press, Oxford, 1989, xi + 233 pp., $24\frac{1}{2}$ cm. Price \$65.00 hardcover, \$29.95 paperback.

This book is a follow-up to *Genstat 5—An Introduction* [1]. It introduces the use of GENSTAT for advanced statistical techniques that the program can carry out directly, and describes how to write procedures in the GENSTAT com-