

formation and greater attention to technical detail are needed in order to substantiate the numerous generalizations made.

In this reviewer's opinion, the book misses the mark and does not even meet its own aims. The largest part of the work deals with the principles of computer-building, and appears to be too technical for the business-oriented reader, while not being technical enough for the professional engineer or scientist. The rest of the book is simply too general to be useful.

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**53 [X].**—P. G. GUEST, *Numerical Methods of Curve Fitting*, Cambridge University Press, New York, 1961, xiv + 422 p., 23 cm. Price \$15.00.

This book offers a solid treatment of curve fitting or, if preferred, regression analysis. It is intended primarily for students and graduates in Physics. Chapters 1 through 4 constitute a quick course in requisite statistical inference; Chapters 5 and 6 introduce regression theory and the fitting of a straight line; Chapters 7 through 12 cover a range of topics, including polynomial regression, standard deviations of estimates, grouping of observations, special functions regression, and multiple regression.

The emphasis is certainly on the practical side, although "it is intended that the book should cover the theoretical aspects of curve fitting and full derivations of all formulae are given." For these aspects, a knowledge of calculus is assumed.

The book is quite complete in its treatment of the problems under consideration. Calculating schemes are given (primarily for a desk machine) and great care is taken in the carrying out of specific problems drawn from physics. Chapter 12 contains a guide to the more important calculating schemes for the problems considered and provides extra illustrations of commonly occurring problems. These traits should be greatly appreciated by the worker who seeks procedural method.

Some minor comments seem appropriate. Although the accomplishment of all derivations is commendable, while the stress is laid on practicality, the usual problems arise. Thus on page 3, the statement "it will often be true that the value obtained for  $\eta$  does not depend on the value  $x$  of  $\xi$ " launches the reader into the notion of statistical independence. More generally, it may be expected that considerable difficulty will be met in reading through the book, unless the reader has more maturity than is indicated by the background expected. For dealing with specific sections this difficulty should be considerably reduced, especially with the aid of the guide in Chapter 12.

Some notation and terminology is disturbing to a statistician. For example, this reader would prefer some stress on the linearity of estimators in the statements of Gauss-Markov theorems.

These are small criticisms of what appears to be an excellent storehouse of information for the practical curve fitter.

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