

mentioning and for nearly the same price the elementary mathematical statistics textbooks by American authors, such as, Freund, Brunk, Hoel, Tucker, and others, are preferable for a variety of reasons.

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**Systèmes Échantillonnés Non Linéaires.** BY PIERRE VIDAL. Gordon and Breach, New York (1968). xiv + 363 pp. U.S. \$27.50.

The first in a series of monographs devoted to various aspects of systems theory, the present volume is a substantial summary of the methods and techniques presently employed in the study of nonlinear sampled-data systems. The first two chapters on the calculus of finite differences and the  $z$ -transform lay the groundwork for a good portion of the text. Separate chapters treat the methods based on signal flow graphs, describing functions (method of the first harmonic), and the incremental phase plane. The major chapters are concerned with problems of stability, time response, and linear oscillations. Stability is discussed under the two broad headings of geometric criteria (Cypkin and Jury-Lee) and algebraic criteria based on Liapunov's method. The latter criteria are associated with the names Kalman-Bertram, Wegrzyn-Vidal, Shea, Puri-Drake, Szegö-Kalman. The book concludes with two major applications: pulse width modulation systems and quantized systems.

The treatment in places is highly abbreviated; for example, the brief statement of functional analysis techniques could stand substantial elaboration. Fortunately a well chosen bibliography is appended to each chapter. Even in this era of relative affluence the price is not quite right. Note: the preface indicates that the volumes in this series are published simultaneously in English and in French.

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**Combinatorial Methods in the Theory of Stochastic Processes.** BY LAJOS TAKACS. Wiley, New York (1967). vi + 262 pp.

This book is both interesting and useful for anyone concerned with queueing theory and other applications of stochastic processes. The main topic is the study