

removed, a regression curve was calculated to show how the accuracy of the forecasts improved with time, and how it depended on the degree of technical novelty and the duration of the development program.

The third approach is the construction of a theory of optimal strategy. This is the only section with any mathematical interest. It consists of manipulations of various combinations of conditional probabilities, with emphasis on the "expected least value". All of the distributions used are purely hypothetical. A number of "rules of thumb" for strategic choice which appear quite plausible intuitively are shown (by the use of some rather artificial counter-examples) to be not generally valid.

G.R. Lindsey, Defence Research Analysis Establishment, Ottawa

Bibliography on time series and stochastic processes, edited by H.O.A. Wold, published for the International Statistical Institute by Oliver and Boyd, Edinburgh and London, 1965. 516 + xiv pages. £5. 15s.

This bibliography was compiled by a very distinguished panel of collaborators. The main virtue of the bibliography is the great care which was taken in the selection of the entries. The titles are divided into three groups: up to 1930, 1931-1950 and 1951-1959. Included with each title is certain coded information on the type of process, scientific nature of the entry, group of problems, presence of empirical applications, field of application and language. The review number in the Mathematical Reviews is also given.

A graphic introduction to stochastic processes and time series is included. This introduction briefly reviews the history and rudiments of the subject and contains graphs of computer simulations of sequences of random variables which illustrate the law of large numbers, the law of the iterated logarithm, the arc sine law, correlograms, periodograms and Markov chains.

It is unlikely that a similar bibliography will be produced at the end of this century - before then there will be mechanized information retrieval methods of obtaining complete and up-to-date bibliographies on any specialized scientific subject at any time.

D.A. Dawson, McGill University

Optimization of stochastic systems, by M. Aoki. Academic Press, New York - London, 1967. xv + 354 pages.

The book, in essence, presents the optimal control and filtering problem of stochastic control systems in discrete-time. It also extends this to the parameter adaptive systems.

The Kalman filtering theory is the main theme in this book, but various derivations and extensions of that filtering theory have been worked out and scattered through different chapters. The order of the chapters seems to be mixed up and it is not surprising that very lengthy equations in discrete time are evolved. The author discusses the optimal Bayesian control of stochastic systems in great detail in Chapter II then suddenly in Chapter III he goes on to adaptive control systems. Chapter IV goes on to partially observe Markovian systems and in Chapter V the estimation problem. This appears to be the reversal of order since the estimation problem is normally derived before going on to partially observed systems. All the important results are derived from the Bayesian approach and