Book Review


This excellent tract provides some simple conditions for the infinite divisibility of probability densities. Also the problem of infinite divisible mixtures is examined in detail.

The very attractive chapter 2 is devoted to mixtures of Gamma distributions. The author proves, among other interesting things, that mixtures of Gamma distributions of degree not exceeding one are infinitely divisible, or, equivalently, that completely monotone densities are infinitely divisible. The next chapter contains information concerning mixtures of characteristic functions of the more general form:

\[ \frac{\lambda}{\lambda + h(t)} \]

The final chapter treats in an elegant manner some related subjects: waiting-time and renewal distributions, log-convex densities, zeros of infinitely divisible densities and moment inequalities.


A review and discussion of the general framework of deterministic dynamic decision-making problems from the control theoretic point of view is given. Recent results obtained by the author in developing new solution methods for nonclassical controller problems and in studying their applicability in practical regulator design is summarized. The summarized papers deal with nonlinear and game theoretic problems. The solution methods for nonlinear optimal control problems were based on the use of the theory of polynomial operators. Game theoretic design was considered in connection with two-controller problems and with a new worst case design method. Solution algorithms for general linear-quadratic two-player difference games with different solution concepts and information structure were developed. The practical examples studied include regulators for non-linear systems, control constrained regulators, and a worst case design approach. The systems considered were an analog simulation of a microbiological fermentation process and a laboratory pilot process representing the headbox of a paper machine. Direct digital control by a minicomputer and computer simulations were studied.

M. J. Goovaerts

NOW AVAILABLE

1976 Current index to statistics

Many readers of the "Journal of Computational and Applied Mathematics" and others who make substantial use of statistical methods will be interested in the 1976 edition of the CURRENT INDEX TO STATISTICS: APPLICATIONS, METHODS AND THEORY. This index provides comprehensive coverage of statistics and of statistical aspects of a variety of related fields such as: biostatistics, survey methodology, econometrics, education, sociology, psychology, engineering, quality control, stochastic modeling, and so on.

Articles from the "Journal of Computational and Applied Mathematics" and other journals, as well as conference proceedings, monographs, research volumes and related publications, are included. Each article is indexed in several ways: by each author, by non-trivial words in the titles (KWIC), and where available by key words.

Prices for the CURRENT INDEX TO STATISTICS, 1976, are: Individuals $12, Institutions $18. Copies of Volume 1, covering 1975, are also available at the same price. Copies may be ordered from The American Statistical Association, 806 15th St., N.W., Washington, D.C., 20005.

Editorial information may be obtained from Brian L. Joiner, Editor, CURRENT INDEX TO STATISTICS, University of Wisconsin, 1210 W. Dayton St., Madison, WI, 53706.