

in the notation appears excessive when the commonly known statistic "Students' t " (lower case t) is printed as T , as the latter symbol usually denotes a different (although related) statistic in more advanced biometrics ("Hotelling's T ").

These, however, are minor blemishes of the book which on the whole must be considered as a valuable addition to statistical-biological literature.

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Applied Dynamic Programming, by Richard E. Bellman and Stuart E. Dreyfus. Princeton University Press, Princeton, New Jersey, 1962. xxii + 363 pages.

Contents: One-dimensional allocation processes, multidimensional allocation processes, one-dimensional smoothing and scheduling processes, optimal search techniques, dynamic programming and the calculus of variations, optimal trajectories, multistage production processes utilizing complexes of industries, feedback control processes, linear equations and quadratic criteria, Markovian decision processes, numerical analysis. There are also five appendices: on a transcendental curve (O. Gross); a new approach to the duality theory of mathematical programming (S. Dreyfus and M. Freimer); a computational technique based on successive approximations in policy space (S. Dreyfus); on a new functional transform in analysis: the maximum transform (R. Bellman and W. Karush); the RAND Johnniac computer (S. Dreyfus).

Many readers will no doubt be familiar with the senior author's previous books on this subject: the basic Dynamic Programming (1957) and Adaptive Control Processes: A Guided Tour (1961), both published by Princeton University Press. During the past few years considerable effort has been devoted to exploiting the techniques of dynamic programming in a large variety of problems coming under the general heading of multi-stage processes. One of the major aims of the present work is to give detailed accounts of the application of dynamic programming techniques to the numerical solution of optimization problems. Computations were carried out on the RAND Johnniac computer.

The book contains a wealth of information which will be welcomed by the specialist. The authors' felicitous and unhurried style also makes the book eminently suitable as an introduction for those without previous knowledge of this subject. As we have come to expect from Bellman, each chapter terminates with some informative comments and a far-ranging bibliography. The publishers deserve praise for the excellent format.

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