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Book Reviews

Physics of Many Particle Systems: Methods and Problems, Volume I, Edited by E. Meeron, Gordon and Breach, Scientific Publishers, Inc., New York, 1966.

The stated purpose of this book is to increase the extent of communication and understanding between research scientists working in various aspects of many-body theory in many different disciplines. The catholic interests of the editor are revealed by the table of contents:

This is a distinguished group of experts whose chapters live up, in most instances, to their reputations. Particularly noteworthy are the longer chapters, which are valuable monographs in their own right. The scientific literature is covered in these chapters until 1965. Professor Moshinsky's chapter was also reprinted in 1968 as part of Gordon and Breach, Scientific Publishers, *Documents on Modern Physics Series*. The pedagogical purposes of this book would have been aided by some commentary by the editor connecting and introducing the various contributions.

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Statistical Dynamics of Sampled Data Systems, by P. D. Krut'ko, American Elsevier Publishing Co., New York, 1969, $25.00.

On the positive side, Krut'ko has prepared a fairly complete reference of current technology related to the examination of the characteristics of sampled data systems subjected to random driving functions. Linear, nonlinear, stationary, nonstationary, and optimal systems are covered. The material is well organized, and the presentation from an overall point of view is logical and clear. The extensive coverage of linear systems characteristics permits the reader to gain familiarity with the notations before the treatment of more complex systems is initiated.

On the negative side of the ledger, the book is occasionally difficult to read—in part due to the small print and the large number of equations given without sufficient explanation. One senses a lack of summarization of important results as well.

More specifically, the methods presented for obtaining output distributions (in Chapters 2–4) are quite long and tedious. One wonders whether the output obtained using these methods is worth all the effort. In addition, the analogy to continuous systems stressed in Chapters 1 and 2 is all but deleted in the remainder of the book, which contains the meat of the material. Finally, save for the first two chapters, there are insufficient examples to illustrate the concepts and results presented.

In summary, the book might be worthwhile principally for those workers doing direct research in the subject area of the statistical dynamics of sampled data systems, particularly in the methods of statistical linearization of nonlinear elements. Even for this purpose, the material is particularly difficult to extract due to the problems of readability. For the applications-oriented reader, the text will have limited usefulness since it must be digested almost in its entirety before a clear understanding of the methods can be obtained.

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