Book Selection

Edited by JOHN M. WILSON

Advanced Calculus with Applications in Statistics

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This book is indeed a pleasure to read. It is simple to understand what the author is attempting to accomplish and to follow him as he proceeds. For one that is interested in statistics, this book is very useful as it brings together a number of topics that one usually does not have the time to cover in any depth during a course. However, as a text for a course in advanced calculus, the book is not well suited.

Statistics might well be characterized as a study of random variables. The organization of this book reminds one of the meaning of a random variable. Topics appear out of order. For example, in the chapter on differentiation, we find an integral. This is in Chapter 4. Integration is discussed in Chapter 6. Chapter 2 is about linear algebra. It might have been preferable to have left this chapter out entirely and merely refer the reader to the book often quoted in this chapter by Searle[1], or to place the chapter in an appendix. Things like this however can be forgiven. If budding statisticians are taking this course, they will by now have had their share of integration, and will find Khuri's discussions very useful. Even more so if they had read this book before taking their class in mathematical statistics. What cannot be forgiven, however, is the lack of the development of the real number system. This is a topic that statisticians should become aware of very early in their careers and carry this remembrance with them throughout their careers. Too often the wrong statistic is used because the one using statistics does not understand the real number system and its relationship to the calculus.

As was mentioned earlier, I thoroughly enjoyed reading this book. However, I would not recommend using it as a text for advanced calculus for the reasons mentioned in the preceding paragraph. On the other hand, I would reserve a special place on my bookshelf for this book and refer to it frequently. I would recommend it for ancillary reading in an advanced calculus or statistics course. I would also highly recommend the book for one's personal collection, or suggest your librarian purchases a copy.

CHARLES LEAKE

Reference

1. S. R. SEARLE (1982) *Matrix Algebra Useful for Statistics*. Wiley, New York.