

occur in theorems or lemmas. Vector methods are used whenever applicable. Unfortunately some notation and terminology is introduced without sufficient explanation. For example $D(=d/dt)$ is used on page 42 without formal definition, and Theorem 1.6.2 refers to a matrix of "simple Structure" without defining "simple". The symbol $O(z^{-n})$ is used without explanation. Further, the proof of Picard's Theorem for $dx/dt = f(x, t)$ is incomplete in that it fails to show that the sequence of approximations lies within the region of boundedness and differentiability for $f(x, t)$. Problem 1, page 25, implies that $dy/dx = y^{1/2}$, $y(0) = 0$ has two solutions ($y = x^2/4$ and $y = 0$) when in fact it has an infinity of solutions ($y = 0$, $0 \leq x \leq a$; $y = (x-a)^2/4$ $x \geq a$).

This book, nevertheless, is well-conceived, very readable, and has an underlying continuity which make it an excellent text in applied mathematics.

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Probability Theory, by Klaus Krickeberg. Addison-Wesley Publishing Co., Reading, Mass., 1965. x + 230 pages. \$8.95.

Except for a few corrections and modifications, this is essentially unchanged from the original German edition (Teubner 1963). The book is a mathematically rigorous account of the "central, and partly already 'classic', area of the theory on which further developments are based". No prior knowledge of measure theory is assumed; the required concepts are introduced in suitable probabilistic dress. The first chapter covers the fundamental notions of events, probability, and random variables. The next three deal with expectations and distributions, sequences of independent random variables, conditional expectations. The final chapter gives a detailed account of Brownian motion and the Poisson process. Besides their importance in applications, these processes also serve to illustrate many typical features of the theory of processes with continuous time parameters. A useful Appendix gives a brief survey of developments in the foundations of probability theory, and certain topics not treated in the book. A minor irritation is the omission of publishers' names in referring to books or monographs.

Anyone planning a senior or graduate level course should seriously consider adopting this book as a text.

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