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<<时间序列分析及其应用>>

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前言

The goals of this book are to develop an appreciation for the richness andversatility of modern time series analysis as a tool for analyzing data, and stillmaintain a commitment to theoretical integrity, as exemplified by the seminalworks of Brillinger （1981） and Hannan （1970） and the texts by Brockwell andDavis （1991） and Fuller （1995）. The advent of more powerful computing, es-pecially in the last three years, has provided both real data and new softwarethat can take one considerably beyond the fitting of simple time domain mod-els, such as have been elegantly described in the landmark work of Box andJenkins （see Box et al., 1994）. This book is designed to be useful as a textfor courses in time series on several different levels and as a reference workfor practitioners facing the analysis of time-correlated data in the physical,biological, and social sciences.We believe the book will be useful as a text at both the undergraduate andgraduate levels. An undergraduate course can be accessible to students with abackground in regression analysis and might include Sections 1.1-1.8, 2.1-2.9,and 3.1-3.8. Similar courses have been taught at the University of California（Berkeley and Davis） in the past using the earlier book on applied time seriesanalysis by Shumway （1988）. Such a course is taken by undergraduate studentsin mathematics, economics, and statistics and attracts graduate students fromthe agricultural, biological, and environmental sciences. At the master's degreelevel, it can be useful to students in mathematics, environmental science, eco-nomics, statistics, and engineering by adding Sections 1.9, 2.10-2.14, 3.9, 3.10,4.1-4.5, to those proposed above. Finally, a two-semester upper-level graduatecourse for mathematics, statistics and engineering graduate students can becrafted by adding selected theoretical sections from the last sections of Chap-ters 1, 2, and 3 for mathematics and statistics students and some advancedapplications from Chapters 4 and 5. For the upper-level graduate course, weshould mention that we are striving for a less rigorous level of coverage thanthat which is attained by Brockwell and Davis （1991）, the classic entry at thislevel.

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内容概要

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