

<<统计推断原理>>

图书基本信息

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前言

Most statistical work is concerned directly with the provision and implementation of methods for study design and for the analysis and interpretation of data. The theory of statistics deals in principle with the general concepts underlying all aspects of such work and from this perspective the formal theory of statistical inference is but a part of that full theory. Indeed, from the viewpoint of individual applications, it may seem rather a small part. Concern is likely to be more concentrated on whether models have been reasonably formulated to address the most fruitful questions, on whether the data are subject to unappreciated errors or contamination and, especially, on the subject-matter interpretation of the analysis and its relation with other knowledge of the field. Yet the formal theory is important for a number of reasons. Without some systematic structure statistical methods for the analysis of data become a collection of tricks that are hard to assimilate and interrelate to one another, or for that matter to teach. The development of new methods appropriate for new problems would become entirely a matter of ad hoc ingenuity. Of course such ingenuity is not to be undervalued and indeed one role of theory is to assimilate, generalize and perhaps modify and improve the fruits of such ingenuity. Much of the theory is concerned with indicating the uncertainty involved in the conclusions of statistical analyses, and with assessing the relative merits of different methods of analysis, and it is important even at a very applied level to have some understanding of the strengths and limitations of such discussions. This is connected with somewhat more philosophical issues connected with the nature of probability. A final reason, and a very good one, for study of the theory is that it is interesting. The object of the present book is to set out as compactly as possible the key ideas of the subject, in particular aiming to describe and compare the main ideas and controversies over more foundational issues that have rumbled on at varying levels of intensity for more than 200 years.

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内容概要

本书是统计学名家名作，包含9章内容和两个附录，前面几章介绍一些基本概念，如参数、似然、主元等，然后介绍显著性检验、渐进理论以及比较复杂的统计推断问题。

还特别介绍了实验设计中基于随机化的统计推断。

核心概念的解释非常清晰，即使跳过其中的数学细节，也能使读者理解。

本书可作为工科、管理类学科专业本科生、研究生的教材或参考书，也可供教师、工程技术人员自学之用。

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作者简介

D.R.Cox, 世界著名统计学家, 英国皇家学会会员暨英国社会科学院院士, 美国科学院、丹麦皇家科学院外籍院士。
曾任国际统计协会、伯努利数理统计与概率学会、英国皇家统计学会主席。
主要学术贡献包括Cox过程和影响深远且应用广泛的Cox比例风险模型等。

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媒体关注与评论

“这是伟大统计学家的伟大著作。
千万不能错过！”

——Ronald Christensen。

Journal of the American Statistical Association

的内容，行文流畅、语言优美。

对所有从事统计工作的人来说，本书不可不读。

”——David Hand（伦敦大学帝国学院）

之间找到了绝好的平衡，给出不偏不倚的观点。

”——《应用统计》杂志

“本书是现代统计学之父的力作，深入阐述了统计推断

“非常优秀的一本教材，在频率学派和贝叶斯学派

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