The papers of the parts A and B are of general interest, giving an overall picture of the role of statistics in the society. These papers would be ideal reading for anybody wondering what statistics is for and what sort of things it might cover. One example is a huge biographical article on Issai Schur and the Schur complement (39 pages, including 174 references as well as photographs and footnotes). Examples of statistical research in contemporary real-world problems are highlighted by papers on Internet usage in Australia and SARS cases in China.

Part C is more theoretically oriented, although its title is also quite general. Nearly half of the papers belong to this part. They address a large variety of technical issues on topics such as Markov chains, linear models, regression diagnostics, and projectors. Part D and E include three papers each. Part D presents some applications of probabilistic models, and part E concerns numerical methods. The entity is supported by five abstracts that are listed briefly in part F.

I was happy to learn that conference proceedings may be useful and interesting as a book, as long as the book is well edited, has a clear structure and a wide variety of contents.

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Applied Asymptotics: Case Studies in Small-Sample Statistics
A.R. Brazzale, A.C. Davison, N. Reid
Cambridge University Press, 2007, viii + 236 pages, £ 35.00 / US$ 65, hardcover
ISBN: 978-0-521-84703-2

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1. Introduction
2. Uncertainty and approximation
3. Simple illustrations
4. Discrete data
5. Regression with continuous responses
6. Some case studies
7. Further topics
8. Likelihood approximations
9. Numerical implementation
10. Problems and further results
Appendices – Some numerical techniques

Readership: This is likely to be quite wide – academic statisticians and postgraduate students, of course, but also users of statistics in academia, research institutes, industry and commerce (in particular, the modern finance industry).

The theme of the book is to show how standard first-order asymptotics, which work well for "large" samples, can be refined to give more accurate results for "small" samples. The aim is to obtain improved approximations to the distributions of pivotal quantities and test statistics. A rival method is straightforward simulation, or "parametric bootstrapping" as it has come to be known nowadays. However, in some cases that can be computationally costly and even unfeasible for small samples.

The authors acknowledge the usual reservation that higher-order asymptotics place strong reliance on the correctness of the model: since "all models are wrong" and model checking is problematic with small samples, the whole exercise might be regarded as pointless. However, accepting that the models are pragmatically correct, the authors here show some impressive

results. The improved accuracy of higher-order asymptotics in the examples shown here is quite eye catching, even when applied to samples of size one. One is left with the uncomfortable feeling of laziness in routinely relying on the usual (first-order) theory, though the authors are too polite to put this into words.

The methods are very well exemplified, sensibly confining the treatment to simple, parametric, well-known models. Data, R-code and a website are given so that readers can try things out for themselves. There are illustrations in Chapters 3 and 7, focused case studies in Chapters 4 and 5, and three more detailed case studies in Chapter 6; the latter have the substance of brief journal articles. The theory is outlined in Chapter 2 and more detail is given in Chapter 8. Chapter 9 gives a detailed route map for implementing the techniques. Chapter 10 gives exercises, both theoretical and practical.

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The R Book
Michael J. Crawley
Wiley, 2007, viii + 942 pages, £ 55.00 / € 82.50, hardcover
ISBN: 978-0-470-51024-7

Table of contents

Readership: Undergraduates, postgraduates and professionals in science, engineering, statistics, economics, geography, social science and medicine.

This book is an introduction to the R environment for beginners and can be used as a reference text by more experienced users of R. The reader will need to have R installed on their machine to be able to try out the examples used in the text. This is a simple exercise and can be done via the website http://cran.r-project.org/ and following the instructions on screen. In chapter 1 the author gives instructions and explanations on how to do this, the running of R and how to get help.