

Book Reviews

Chance Encounters: A First Course in Data Analysis and Inference
By Christopher J Wild and George A F Seber
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This book, with just over 600 pages, is both long and physically heavy, two factors which have contributed to a lengthy time lag between receiving the book for review and writing this. The content of the book is far from heavy, however, and I have enjoyed reading it and have made use of it in my teaching.

The 12 chapters in the book take us in turn through a discussion of what statistics is, tools for exploring univariate data and relationships, probability, discrete and continuous random variables, sampling distributions, confidence intervals and significance testing, tables of counts, and regression and correlation. Two further chapters on control charts and time series are available from web sites. It was written as a one-semester pre-calculus text but the authors realise that instructors might need to select topics. No prior knowledge of statistics is assumed.

In addition to the two extra chapters there are a number of other resources including chapter supplements, data files, additional exercises, PowerPoint slides, and a solutions manual. Some of these are only for adopters of the book but some are publicly available from Chris Wild's site (start with <http://www.stat.auckland.ac.nz/PEOPLE>) or the Wiley site (<http://jws-edcv.wiley.com/college>). I found Chris' site far easier to use than Wiley's. Resources in the book itself include quizzes for sections, answers to selected problems, and useful chapter summaries.

According to the preface the book is distinctive as it is an "intuitive, data-oriented, graphical, and computer-oriented introduction to making sense of the world through statistics". By an intuitive approach the authors appear to mean that concepts are explained with words and graphics as much as possible. The book is certainly high on words and relatively low on mathematical symbols, and this should appeal to less numerate students who are frightened of mathematics, whilst not deterring the more mathematically inclined. Diagrams are used to good effect. I agree that the book is data-oriented, with real

and interesting examples from many disciplines used both in the text and in the many exercises for the reader. It is not obviously a computer-oriented book, but it contains a sprinkling of computer output, mainly from Minitab and Excel, and an indication of how to obtain this. The authors say that they did not want to turn the text into a tutorial manual for a particular software package, and given the rate at which packages change, I think their approach was wise.

The authors are renowned statisticians and experienced teachers. Stage 1 statistics at their university (Auckland) involves approximately 2500 students (Wild 1995) and Chris Wild is the president-elect of the International Association for Statistical Education, IASE. We can therefore be confident that the book is reliable and is based on good teaching principles and practice. Parts I particularly like are: the chapter on probability where the presentation is based on two-way tables, and the careful discussion of significance tests and the difference between them and confidence intervals in chapter 9. The book includes matters that are glossed over in many texts, for example a short section on how many significant figures to quote, and a section on the comparison of proportions where three sampling situations are covered. I highly recommend it. Obtain a copy for yourself, even if you are unable at present to use it with a group of students.

Reference:

C.J.Wild (1995) *Continuous improvement of teaching: a case study in a large statistics class*. International Statistical Review, 63, 1, 49-68.