Review: Wolfgang M. Hartmann
Heidelberg, Germany

**SAS for Data Analysis: Intermediate Statistical Methods**

Mervyn G. Marasinghe and William J. Kennedy
[http://mervyn.public.iastate.edu/Book/](http://mervyn.public.iastate.edu/Book/)

The authors provide an easily readable introduction into the SAS language, some of its basic statistical methods, and many applications for statistical linear modeling. With the first three chapters of this book the authors show their excellence in teaching, with the remaining three chapters they show how to solve some more complicated problems in the statistical analysis of linear models. The book is designed for beginners in both, SAS language and statistics but assumes a steep learning curve or some prior knowledge of linear models. Very helpful are the many exercises in each chapter which make this book valuable for teaching at universities and colleges or just for teaching a very focused reader. As of today, almost all test examples and data sets are available from the Web page accompanying the book (see above).

The last chapters may also be useful for SAS consultants at colleges, universities, and research facilities to look up a scientifically sound approach to a specific statistical problem. The book does not cover how to write SAS macros. Only the BOXANNO macro by Friendly (1991) is mentioned in book and index. Also, I did not find anything about the very important importing or exporting of data from or into other environments, e.g., SPSS or Microsoft Excel.

There is, however, a discrepancy between the general title and the specific content of this book: The book covers only a small part of the SAS BASE, SAS GRAPH, and SAS STAT packages of SAS and not much is said about many other packages like SAS ETS, SAS OR, SAS IML, SAS QC, SAS Enterprise Miner, or even the financial software of SAS. Even for SAS STAT only some basic PROCs such as UNIVARIATE and FREQ and the linear modeling PROCs REG, ANOVA, GLM, and MIXED are covered. Many other SAS STAT PROCs, e.g., LOGISTIC, GENMOD, PHREG, ROBUSTREG, FACTEX, OPTEX, NLIN, PRINCOMP, imputation, PROCs for life and behavioral sciences etc. are not mentioned. A similar selection of SAS software is covered by Littell, Freund, and Spector (1991) and Littell, Milliken, Stroup, and Wolfinger (1996) but assuming more knowledge of SAS and less of statistics by the reader.

The book is divided into the following chapters:

1. **Introduction to the SAS Language**: This is written for beginners and should enable every reader to write DATA and PROC steps in the SAS language. The text makes a good
effort to explain the SAS way of record-wise dealing with data which is so difficult to understand for some beginners.

2. More on SAS programming and some applications: This chapter describes some necessary tools for data processing and provide a number of examples for basic PROCs from SAS/STAT: UNIVARIATE, FREQ, and from SAS/BASE: PLOT, CHART, and TABULATE.

3. Statistical graphics using SAS/GRAPH: The authors provide a thorough introduction into writing those tedious SAS/GRAPH scripts with many examples. On a funny note, two PROCs are considered “useful”: GLOT and GCHART. Also, a short introduction into some high resolution graphics with SAS is given here.

4. Statistical analysis of regression models: The chapter starts with simple and multiple linear regression models and illustrates the use of PROC REG with some examples. Forward, backward, stepwise and all-subsets methods are explained using PROC REG.

5. Analysis of variance models: This and the last chapter are probably the most valuable for readers who are already educated in SAS and statistics. Each of these two chapters covers about 100 pages of text. Here, one-way and two-way classification for fixed effects analysis of variance modeling are explained with examples specified for PROCs ANOVA and GLM.

6. Analysis of variance: Random and mixed effects models: One-way and two-way crossed and nested random and mixed effects models are estimated using PROCs GLM and MIXED.

7. Appendix (with SAS/GRAPH statements and tables)

That means the first three chapters are useful for readers inexperienced in both, the SAS language and statistics. The last three chapters, however, assume some more experience with SAS and a basic statistical education. Since the book contains so many examples, reading the first three chapters may enable the reader to go through the more advanced last chapters.

As a final remark, SAS Institute, the owner and distributor of SAS, does no longer (for several years) relate its name to the term “Statistical Analysis System” as noted by the authors.

References


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This study aimed for psychometric validation of the German version of the Supportive Care Needs Survey for Partners and Caregivers (SCNS-P&C-G). In- and outpatients with lung, urological and gastrointestinal cancer at Heidelberg University Hospital in Germany and in each case one relevant caregiver were asked to complete a set of questionnaires. See more ideas about heidelberg, germany, germany travel. "Heidelberg hillside" by Jim Hill. Hillside in Heidelberg, Germany near the famous castle. Notice the people on the stairs at the left of the shot. When I shot this I didn't realize they were in the picture. Heidelberg Instruments is a leading manufacturer of maskless laser lithography systems for the fabrication of micro-structures, serving the global photolithography community in both the direct writing field and in photomask fabrication. Please select region* Germany United States of America Switzerland China Japan Australia Austria Belgium Brazil Canada Czech Republic Denmark Egypt Finland France India Ireland Israel Italy Mexico Netherlands New Zealand Norway Poland Russia Singapore South Korea Spain Sweden Taiwan Turkey United Arab Emirates United Kingdom Others - Africa Others - America Others - Asia Others - Europe Others - Middle East Others - Oceania. Reviewer: Wolfgang M. Hartmann. Heidelberg, Germany. SAS for Data Analysis: Intermediate Statistical Methods. Mervyn G. Marasinghe and William J. Kennedy Springer-Verlag, New York, 2008. Journal of Statistical Software, published by the American Statistical Association Volume 28, Book Review 1 October 2008.