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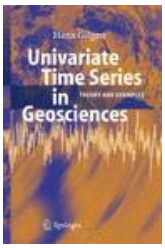
Univariate Time Series in Geosciences—*Theory and Examples*, by Hans Gilgen, 2006. Springer, Tiergartenstrasse 17, D-69121 Heidelberg, Germany. Hardbound, 718 pages, 220 figures. Price: EUR 149.95, GBP 115.50, USD 149.00. ISBN 3-540-23810-7.



In geosciences, space- and time-dependent variables are generally measured for several decades or even centuries, and the records constitute a time series. Statistical/mathematical analyses of these records are essential to get physically meaningful information out of the raw data. Time-series analyses of geological data are therefore of paramount importance. Although several books on statistical and mathematical analysis of geological data are available, books entirely devoted to time-series analysis of geological data are few. *Univariate Time Series in Geosciences - Theory and Examples* is therefore a welcome addition.

The book is subdivided into ten chapters. The first two chapters introduce time series and stochastic processes. Linear models for the Expectation function are discussed in Chapter 3. Interpolation and Linear processes are discussed in two subsequent chapters. The remaining chapters deal with various aspects of time-series analysis.

This is not a textbook but some kind of lecture notes. A number of very useful algorithms are presented throughout the book, and students will definitely find many of them useful. Most of the chapters are based on course material that the author had developed over the years, and this material will certainly be helpful for students who have a sound mathematical and statistical background.

I strongly disagree, however, with the author's claim that "*the text remains readable for non-mathematicians"* (preface)! The author tries his best to cite examples from different geoscience disciplines to make his points in a reader-friendly way, but his effort is, unfortunately, not very successful: he relies more on mathematical equations than on illustrations and graphical presentations, whereas geoscientists often find it easier to grasp ideas graphically than through formal mathematical treatment. Therefore Gilgen's main emphasis should have been more on explaining the concepts, procedures and problems and *not* on the details of mathematics in order to make the book more readable for non-mathematicians!

The organization of the book is somewhat difficult (I could not follow the statement of the author in the preface "*Chap. 3 should be read prior to tackling Chap. 4 or Chap. 5; it is, however not necessary to read Chap 4 prior to accepting the challenge of Chap. 5*") as also the referencing style and the way these references are cited in the text (it is certainly difficult for the reader to search for the reference number 118 or 143 cited in the 10th line in the first page!).

In conclusion, the book contains a wealth of information and therefore will be definitely useful for the students and researchers of applied mathematics and statistics, but certainly not for non-mathematician geoscientists.

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