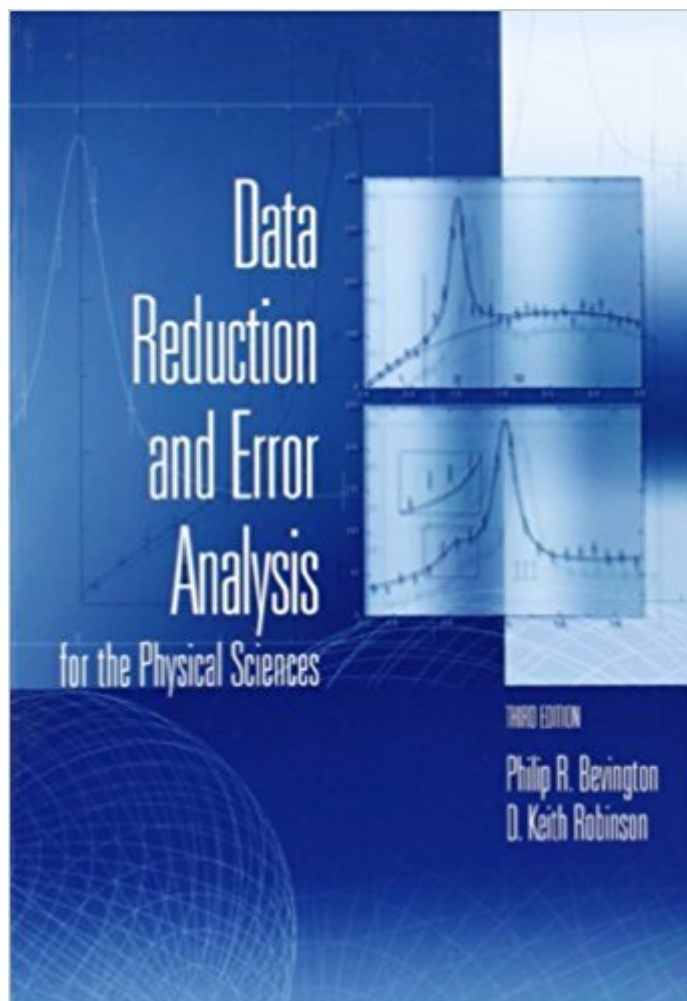The book was found

Data Reduction And Error Analysis For The Physical Sciences

Synopsis

The purpose of this book is to provide an introduction to the concepts of statistical analysis of data for students at the undergraduate and graduate level, and to provide tools for data reduction and error analysis commonly required in the physical sciences. The presentation is developed from a practical point of view, including enough derivation to justify the results, but emphasizing methods of handling data more than theory. The text provides a variety of numerical and graphical techniques. Computer programs that support these techniques will be available on an accompanying website in both Fortran and C++.

Book Information

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Customer Reviews

This is the standard text for data analysis in physics at an advanced undergraduate or graduate level. Using the chi-square fits and F test sections of this book, I was able to fit transit models to light curves for known transiting exoplanets and reconstruct the radius ratio of the planet and the star, as well as obtain the statistical significance of that detection. This book is a good first place to look for all your physics statistics needs.

This is a book that has been widely used by three generations of students and researchers. I used the 1969 edition as an undergraduate. The 2003 paperback edition would be an equally excellent publication except for the astounding number of editing errors in formulas and a few gross errors that seem to be outright mistakes. One particularly egregious error concerning multiplication of linear matrices appears in appendix B. I bought the text as a refresher and reference. Because I had

a working knowledge of the subject matter, most of the errors were immediately evident. However, someone new to the subject would find many of them confusing.In My opinion, McGraw Hill has done a terrible disservice to the authors and should be embarrassed at doing such a poor job of publishing an otherwise excellent book.

I had the good fortune to be trained by a physicist who, to my horror, left halfway through my bioinformatics PhD. (Imagine if Luke Skywalker were in the swamp, and Yoda told him he'd taken a job at the Broad.) Before he left, while I nearly collapsed in panic, he told me to get Bevington.I have stacks of statistics books that teach readers to plug things into formulas. This is not the way to learn or do statistics, and in anything but the most trivial of cases will lead to incorrect results. Bevington teaches the reader to think about what the data looks like, and specifically the error and uncertainty in the data. This is far more valuable than knowing the formula for a chi-square test or whatever other rubbish is generally taught in statistics classes.I would recommend this book as the first book that any scientist in training, in any field, read.

The revised addition is still the gold standard if you want a concise overview of standard data and error analysis techniques. A great reference.

Bevington's book "Data Reduction and Error Analysis" is an old war-horse that is now in its third edition, and looks a good intermediate-level, practical reference to have on the shelf. I bought my copy only recently to follow up a reference, so am less familiar with it than I'd like to be before writing a review.Unfortunately, following that reference led me to equation 4.22, which is wrong. When forming a weighted average of variances, one needs to square the weights in the numerator and square the sum of weights in the denominator. The equation as given has the first power of the weights and of the sum, just as found in the weighted mean. As I sort the matter out myself (with help from a friendly statistician) and look around at other treatments, this appears to be a common mistake, but mistake it is.Otherwise, it seems a good book clearly written.

Great way to get introduced to error analysis methods

Any older but still reliable book. Another perspective on data/uncertainty analysis.

Book arrived in a timely manner and the used material was just as the summary described. I found it

a good buy and satisfactory to my needs.

Data Reduction and Error Analysis for the Physical Sciences Analytics: Data Science, Data Analysis and Predictive Analytics for Business (Algorithms, Business Intelligence, Statistical Analysis, Decision Analysis, Business Analytics, Data Mining, Big Data) Data Analytics: What Every Business Must Know About Big Data And Data Science (Data Analytics for Business, Predictive Analysis, Big Data Book 1) Data Analytics: Applicable Data Analysis to Advance Any Business Using the Power of Data Driven Analytics (Big Data Analytics, Data Science, Business Intelligence Book 6) Analytics: Business Intelligence, Algorithms and Statistical Analysis (Predictive Analytics, Data Visualization, Data Analytics, Business Analytics, Decision Analysis, Big Data, Statistical Analysis) Big Data For Business: Your Comprehensive Guide to Understand Data Science, Data Analytics and Data Mining to Boost More Growth and Improve Business - Data Analytics Book, Series 2 Data Analytics For Beginners: Your Ultimate Guide To Learn and Master Data Analysis. Get Your Business Intelligence Right Ã¢â ¬â œ Accelerate Growth and Close More Sales (Data Analytics Book Series) Error Reduction in Health Care: A Systems Approach to Improving Patient Safety An Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements Introduction to Error Analysis: The Study of Uncertainties in Physical Measurements (Series of Books in Physics) Anti Inflammation: The 10 Day Inflammation Reduction Miracle: Beat Swelling, Lose Weight, Get Energized, Cure Pain, Optimal Nutrition for the Reduction of Inflammation Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data Data Analytics and Python Programming: 2 Bundle Manuscript: Beginners Guide to Learn Data Analytics, Predictive Analytics and Data Science with Python Programming Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking Discovering Knowledge in Data: An Introduction to Data Mining (Wiley Series on Methods and Applications in Data Mining) Data Analysis and Signal Processing in Chromatography, Volume 21 (Data Handling in Science and Technology) Analytics: Data Science, Data Analysis and Predictive Analytics for Business Statistics, Data Mining, and Machine Learning in Astronomy: A Practical Python Guide for the Analysis of Survey Data (Princeton Series in Modern Observational Astronomy) Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython Data Analytics for Beginners: Your Ultimate Guide to Learn and Master Data Analysis

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