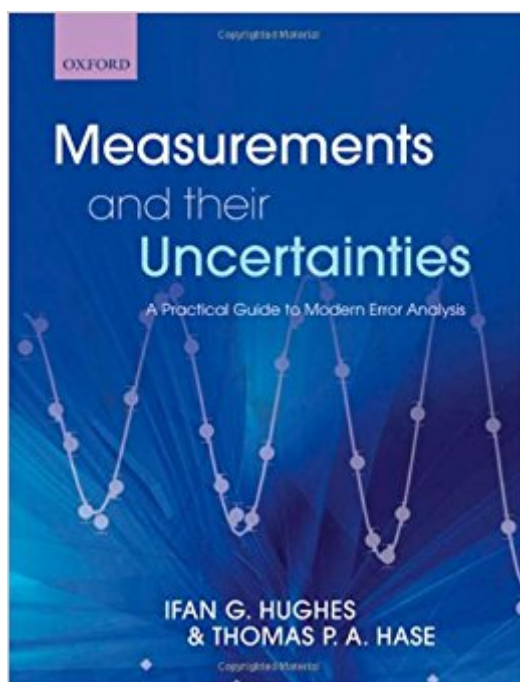**The book was found**

Measurements And Their Uncertainties: A Practical Guide To Modern Error Analysis

Synopsis

This hands-on guide is primarily intended to be used in undergraduate laboratories in the physical sciences and engineering. It assumes no prior knowledge of statistics. It introduces the necessary concepts where needed, with key points illustrated with worked examples and graphic illustrations. In contrast to traditional mathematical treatments it uses a combination of spreadsheet and calculus-based approaches, suitable as a quick and easy on-the-spot reference. The emphasis throughout is on practical strategies to be adopted in the laboratory. Error analysis is introduced at a level accessible to school leavers, and carried through to research level. Error calculation and propagation is presented though a series of rules-of-thumb, look-up tables and approaches amenable to computer analysis. The general approach uses the chi-square statistic extensively. Particular attention is given to hypothesis testing and extraction of parameters and their uncertainties by fitting mathematical models to experimental data. Routines implemented by most contemporary data analysis packages are analysed and explained. The book finishes with a discussion of advanced fitting strategies and an introduction to Bayesian analysis.

Book Information

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Customer Reviews

"With the shift from analytic methods to spreadsheet-based techniques, this book will enable students simultaneously to (a) become fluent in the choice and application of appropriate methods (b) understand the underlying principles." --David Saxon, University of Glasgow

Ifan Hughes took his BSc at Imperial College London, his DPhil at Oxford University, and undertook post-doctoral research at Oxford, Yale and Sussex. He has been at Durham University since 1999, where he is now a Senior Lecturer. Thomas Hase has been an Associate Professor at Warwick University since 2007. Prior to that, he did his BSc, PhD and post-doctoral research at Durham University.

This book is an excellent introduction to error analysis for 2nd/3nd year undergraduate students in science or technology. To understand the subject as presented in this book with enough depth, some prior knowledge of probablity theory, of descriptive statistics and of 2nd year level calculus are needed.The approach of the first 4 chapters is rather classical. The following chapters about data visualisation and reduction, least square fitting of complex functions, and computer minimalisation and the error matrx, give a good insight in the application of modern computer software in the field of error analysis. Chapter 8, about hypothesis testing, especially in connection with the chi-squared statistic will be rather difficult to follow for students that didn't follow an introductory statistics course. Though this chapter gives a good summery of the technics used for hypothesis testing by means of the chi-squared distribution. Chapter 9, topics forfurther study, mentions Monte Carlo and bootstrap methods and Bayesian inference, subjects you normally don't find in introductory courses in error analysis.In short: an excellent book for use in undergraduate studies

I have to agree with the other review. The textbook is inexpensive, well written, filled with examples and graphs, and keeps the math derivations to the bare minimum needed. I like it better than Taylor, which is long, and takes forever to get to the point. Hughes will get to the point immediately. Each chapter is fairly short and nice to read. I don't generally like long chapters for this type of thing, since the concepts are themselves very simple, they should be taught in a simple way, as this book does. There are of course some shortcomings (topics we'd like them to expand on, minor typos), but overall, this is the best book available at this time to teach or learn this kind of material at the undergraduate level.

good

GOOD BOOK

The book is good. I have a PDF version and all the figures and color boxes, conclusions, etc. are

produced using good quality vector graphics.However, the copy I received comes from the Printing Facility in San Bernardino, CA. It looks like a cheap photocopy, printed out with horrible quality. Since there is a lot of detail and math in this book it is necessary even for the text font to be printed in good quality.It looks as if the PDF was converted to JPEG format before printing it out, resulting in pixelated and/or blurry content. The plots, color boxes, and math fonts are the most affected by this.I won't bother returning it because most probably I will get another copy just as bad.I don't want to impact negatively the score of the book, or the reputation of the author. On the contrary, It would be good if the author did something so his work gets to the public the way it is supposed to.

I recently reviewed 10 current books on data and error analysis for undergraduate physics majors, and recommend this one by Hughes and Hase. I was looking for a book that students can read and understand on their own, is concise and easily used as a quick reference, is inexpensive, and follows a relatively modern approach. Hughes and Hase meet these criteria. Their book is written in an easy to understand style that uses a "visual" approach to explain concepts and derive formulas (using many thumbnail-sized plots in the margins). I also like the topical sequence: Look at real data before delving into probability. The book takes good departures from tradition by only presenting addition of uncertainties in quadrature and by including a computational approach to uncertainty estimation based on spreadsheets. Missing concepts that I would like to see included are GUM (Guide to the Expression of Uncertainty in Measurement) and bootstrapping. This is the shortest (

good product with high quality. This bread product is by far the best bread product I have ever owned! As a former Chef, kitchen tools are very important to me. I have an extensive collection of products and am always looking for the best tools. This is not only an excellent bread product, at a good price but a beautiful design and feels great in my hand. It is sharp and effective. I am so happy with it I bought two and have put it on my gift giving list for years to come. If you enjoy great kitchen tools this product should not be missed! very nice . send it to my grandmother, Very well.

This book was exactly as described. It was a course requirement, but I have yet to use it. Have not read any of it.

Measurements and their Uncertainties: A practical guide to modern error analysis 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) Pantry Stuffers

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