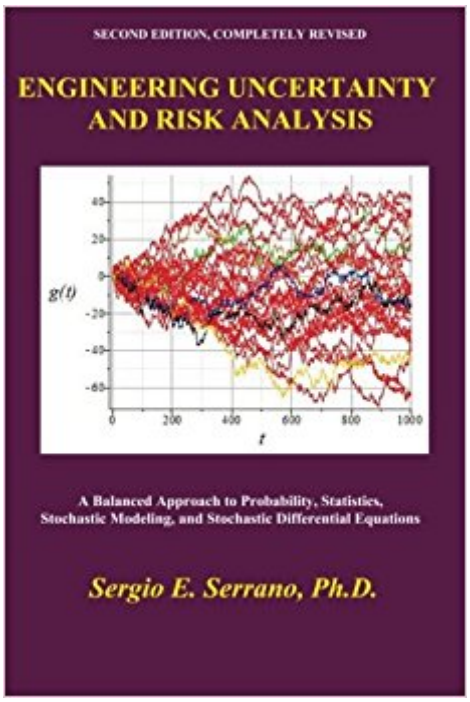
Engineering Uncertainty And Risk Analysis, Second Edition: A Balanced Approach To Probability, Statistics, Stochastic Models, And Stochastic Differential Equations



Synopsis

An integrated coverage of probability, statistics, Monte Carlo simulation, inferential statistics, design of experiments, systems reliability, fitting random data to models, analysis of variance, stochastic processes, and stochastic differential equations. The author for first time presents an introduction to the broad field of applied engineering uncertainty analysis in one comprehensive, friendly, coverage. Each concept is illustrated with several examples of relevance in engineering applications (no cards, colored balls, or dice). This edition includes new research advances in nonlinear stochastic equations; simple methods to solve and graph boundary-value problems in several dimensions; 478 pages; 177 solved examples; 147 proposed problems; 174 illustrations, 69 short computer programs; and 51 data and statistical tables. AEROSPACE (from the Royal Aeronautical Society): â œ...an integrated, balanced, and clear presentation to probability, statistics, stochastic models, and stochastic differential equations. The aim is to demonstrate to the reader that the fundamental principles are inherently simple and that the methods are practical and extremely useful in everyday engineering analysis or design. The book succeeds admirably in these aims.â • QUALITY AND RELIABILITY INTERNATIONAL: â œ...discusses uncertainty in engineering... The essential differences are beautifully explained, providing a philosophical and practical basis for the rest of the book. This essential introduction is lacking in most books on statistics applications in engineering ...Overall, the book presents clear and interesting descriptions and explanations. The level of mathematics is appropriate to reasonably numerate engineers, and the use of spreadsheets and Maple enhance the practical value to engineers. I strongly recommend this book to design and systems engineers...â • STOCHASTIC ENVIRONMENTAL RESEARCH ANS RISK ASSESSMENT: "...written in a clear and easy-to-understand manner. It requires no prior background in statistics... it has numerous solved practical examples... and a significant amount of new material. The emphasis is on concepts and their illustration, and the author has made a concerted effort in avoiding lengthy derivations and this is an attractive feature from a studentâ ™s perspective."

Book Information

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Customer Reviews

Bought for a class, and was useful in the class but would not suggest buying unless the book is a mandatory buy.

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