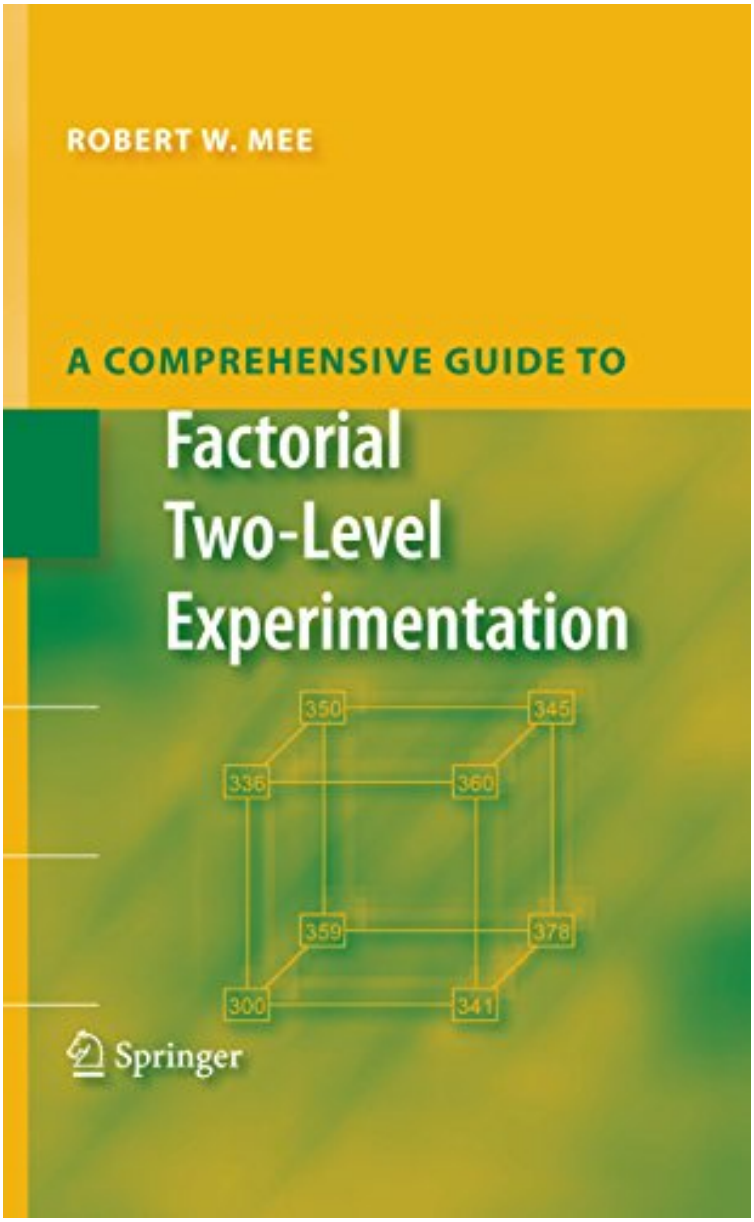
A Comprehensive Guide to Factorial Two-Level Experimentation

Robert Mee
**Download PDF | ePub | DOC | audiobook | ebooks*



2009-06-23 2009-06-23File Name: B00FB36J6U | File size: 18.Mb

Robert Mee : A Comprehensive Guide to Factorial Two-Level Experimentation before purchasing it in order to gage whether or not it would be worth my time, and all praised A Comprehensive Guide to Factorial Two-Level Experimentation:

2 of 3 people found the following review helpful. An excellent handbook for reserchers, engineers and marketersBy KLI bought this book to solve my questions about direct mail campaigns in marketing. I'm working for a consulting

firm with various projects in direct marketing. When we design the campaign, our clients always want us to test as many attributes as possible in one campaign to reduce cost. This book gave me good answers on how to arrange the multivariate tests and analyze the response data. I found the examples similar with what I needed.I'm pretty satisfied with this book because I can use it to solve my real problems. It gives me a thorough walk through in fractional factorial designs and their applications. Today it is hard to find such a comprehensive book like this one in the DOE book market. I think the most amazing part of this book is that there are extensive examples in it. There is always an example you can fit in. I also have a background in engineering. I wish I had read this book before I conducted my lab test. Using the designs will make your reports more beautiful and scientific.1 of 2 people found the following review helpful. Indispensable for QbD practitionerBy HS0I find this book has a wonderful balance of theory and practicality, with numerous examples and theoretical background researched thoroughly and presented clearly.As an industrial statistician working in a pharmaceutical industry, this is my textbook for constructing and analyzing more complex designs, e.g., split-plot designs. One of the biggest lessons I learned from Dr. Mee - don't get fooled by the noise, and this is what allowed me to be successful in my job in one of the leading RD organizations helping scientists and engineers to improve their processes - analytical methods, manufacturing, biological, chemical processes. Highly recommend for any Quality by Design practitioner.Disclaimer: I am a former student of Dr. Mee.

This book contains the most comprehensive coverage available anywhere for two-level factorial designs.The re-analysis of 50 published examples serves as a how-to guide for analysis of the many types of full factorial and fractional factorial designs.By focusing on two-level designs, this book is accessible to a wide audience of practitioners who use planned experiments.

From the reviews:ldquo;Robert Meersquo;s new work on two-level factorial designs is an unusually good statistics book, which should be bought and read by anyone with even a passing interest in the subject. This book covers almost everything users of two-level factorial designs need to know. Experimenters, statistical consultants, and researchers will all learn a lot and find plenty of new ideas to think about. hellip;Careful thought has been given to how to describe every single topic. The result is a book that deserves to become a classic.rdquo; (Biometrics)ldquo;Meersquo;s new book is hellip; a comprehensive guide to factorial two-level experimentation. hellip; I believe this book will help nonstatisticians and statisticians hellip; plan and analyze factorial experiments correctly. The breadth, depth, and clarity of this book make it a valuable asset for anyone using two-level of factorial designs. The large number of examples hellip; adds much to the bookrsquo;s utility. hellip; Overall, this is an excellent reference book hellip; . it should be in the library of anyone who uses two-level factorial designs.rdquo; (Lewis VanBrackle, Technometrics, Vol. 52 (4), November, 2010)From the Back CoverFactorial designs enable researchers to experiment with many factors. The 50 published examples re-analyzed in this guide attest to the prolific use of two-level factorial designs. As a testimony to this universal applicability, the examples come from diverse fields: Analytical Chemistry Animal Science Automotive Manufacturing Ceramics and Coatings Chromatography Electroplating Food Technology Injection Molding Marketing Microarray Processing Modeling and Neural Networks Organic Chemistry Product Testing Quality Improvement Semiconductor Manufacturing Transportation Focusing on factorial experimentation with two-level factors makes this book unique, allowing the only comprehensive coverage of two-level design construction and analysis. Furthermore, since two-level factorial experiments are easily analyzed using multiple regression models, this focus on two-level designs makes the material understandable to a wide audience. This book is accessible to non-statisticians having a grasp of least squares estimation for multiple regression and exposure to analysis of variance. Robert W. Mee is Professor of Statistics at the University of Tennessee. Dr. Mee is a Fellow of the American Statistical Association. He has served on the Journal of Quality Technology (JQT) Editorial Board and as Associate Editor for Technometrics. He received the 2004 Lloyd Nelson award, which recognizes the yearrsquo;s best article for practitioners in JQT. "This book contains a wealth of information, including recent results on the design of two-level factorials and various aspects of analysishellip; The examples are particularly clear and insightful." (William Notz, Ohio State University "One of the strongest points of this book for an audience of practitioners is the excellent collection of published experiments, some of which didnrsquo;t lsquo;come outrsquo; as expectedhellip; A statistically literate non-statistician who deals with experimental design will have plenty of motivation to read this book, and the payback for the effort will be substantial." (Max Morris, Iowa State University)