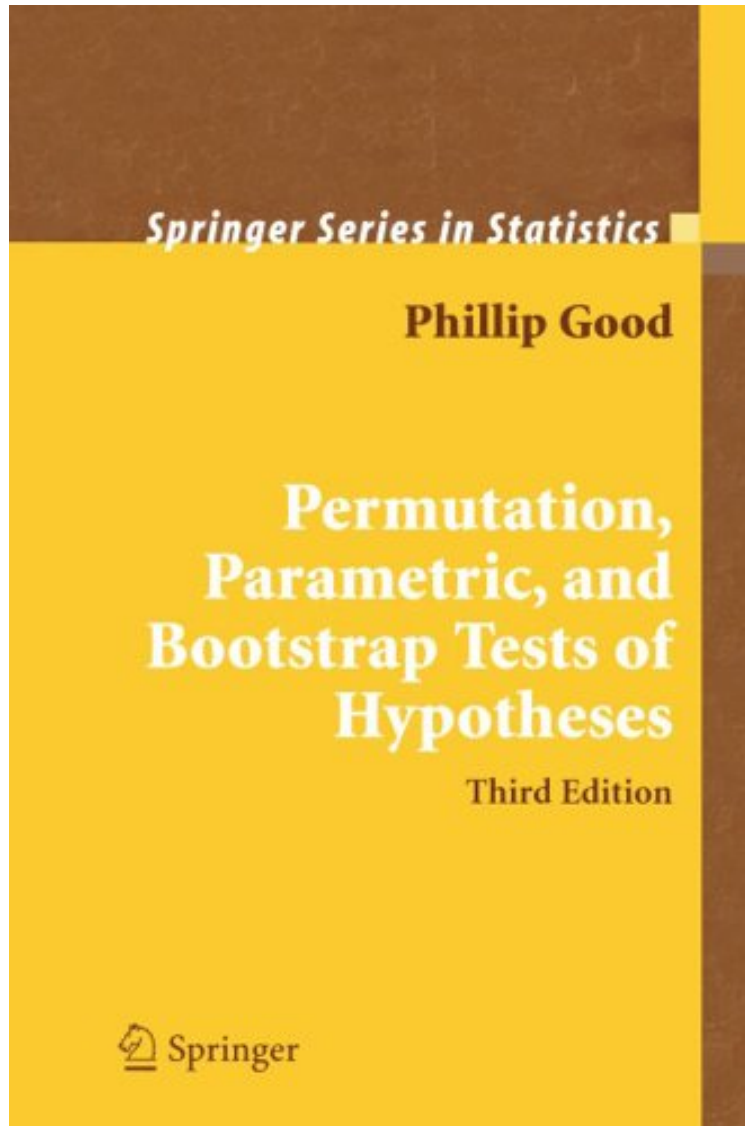



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Permutation, Parametric, and Bootstrap Tests of Hypotheses (Springer Series in Statistics)

Phillip I. Good

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Phillip I. Good : Permutation, Parametric, and Bootstrap Tests of Hypotheses (Springer Series in Statistics)

before purchasing it in order to gauge whether or not it would be worth my time, and all praised Permutation, Parametric, and Bootstrap Tests of Hypotheses (Springer Series in Statistics):

2 of 2 people found the following review helpful. Yes, I am also disappointed at the book. By W. YIP This book has an admirable goal - to teach hypothesis testing using permutation test as the center piece. The 3rd edition is supposed to be a replacement (not a supplement) for using as a graduate text book for hypothesis testing. For that purpose, the

book fails miserably. The book hardly explains anything. There is not a lot of connection between theorems and the tests. Bootstrap is in the title but it is minimally covered. However, it contains a lot of useful information about permutation tests that I can't find anywhere else. So, this book is perfect as a supplement for learning about permutation tests. Make sure that you learn hypothesis testing from somewhere else first (e.g. Casella Berger Chapter 8?). Since my purpose for reading this book is on permutation tests, I am giving it a 3 star. 6 of 9 people found the following review helpful. Synopsis of a JASA review By William A. Huber David Annis reviews this book in JASA 472 (December 2005). He begins by quoting the author's preface, where Good says he aims to "replace, rather than supplement, existing graduate level texts on testing hypotheses and decision theory." The key points Annis makes are: "This edition is considerably expanded, including a chapter on statistical distributions and a "measure theoretic appendix."* There is a new inclusive bibliography.* "The chapters stand alone." Topics include one-sample tests, multiple simultaneous tests, sequential procedures, testing categorical data, multivariate procedures, and even testing space-time data.* "The author does an admirable job presenting alternative resampling methods, most notably the bootstrap ... and classical parametric tests." Annis characterizes the book as readable, yet also as having mathematical rigor. He concludes that it "garners high marks for its scope and clarity," recommending it to graduate students (for "rigorous treatment of diverse topics and ample exercises") and also to scientists and statistical professionals as a good reference. 26 of 27 people found the following review helpful. good text and improved over first edition By Michael R. Chernick This is the second edition of a popular text on permutation methods which just came out in February 2000. Dr. Good has been an expert on permutation tests for over 25 years. In the 1980s he was the editor of a journal called Randomization which dealt specifically with the latest developments in permutation methods. He has also contributed to the scholarly research on this subject with a number of useful publications. In addition through his company he has done a great deal of consulting and has written many reviews on statistical software. He brings all of this valuable experience to the table in this book which emphasizes the wide variety of practical applications for this powerful tool. Permutation methods are gaining increasing popularity along with other resampling methods because of the amazing improvement in speed of digital computers over the past 15 years. This is emphasized in the book which is written at an elementary level for practitioners. It also is filled with practical advice and applications from Dr. Good's many years of experience in the pharmaceutical industry. The book has expanded from 228 to 270 pages with additional references and expansion of chapters 12 and 13 which incorporate computing advances over the 6 years since the publication of the first edition.

This book presents a readable introduction to the use of permutation methods for testing statistical hypotheses. The chief value in using such methods is that they may be applied in a wide variety of settings, to continuous, discrete, and categorical data, and to values from almost all probability distributions. In addition, permutation tests are generally robust in circumstances where there are problems with missing data. The emphasis of the book is on the practical use of such tests, and throughout examples are given to illustrate the techniques discussed. These examples are drawn from a wide range of settings including archaeology, biology, climatology, education, and the social sciences. An extensive bibliography is also included which provides references to over 500 articles related to the subject of permutation tests. As a result, many researchers will find this an invaluable reference work, as well as a handy desktop companion.

From the reviews of the third edition: "All told, Permutation, Parametric, and Bootstrap Tests of Hypotheses garners high marks for its scope and clarity. Graduate students will appreciate its rigorous treatment of diverse topics and ample exercises to reinforce ideas...this text deserves a place in any scientific library." Journal of the American Statistical Association, December 2005 "The book provides a good overview of hypotheses testing and decision theory. The book is well-written, concise and clearly organized. Many examples and figures illustrate the text. Each chapter is concluded by numerous exercises; to make the fundamental concepts more comprehensive. My overall impression of the book is very positive. the book is a valuable supplement to the existing literature and can be recommended to both practitioners and researchers in statistics." (Bernd Droge, *Metrika*, Vol. 64, 2006) "This is the third edition of a well known and respected book by Good. provides a very good overview on decision theory and hypothesis testing. It is well written and does cover permutation, parametric and bootstrap techniques very effectively. I would recommend this book for the statisticians as well as biostatisticians to practice the methodologies provided in this book. This book will be of interest to graduate students in statistics and biostatistics. In addition, this book would be a valuable asset for the library." (B. M. Golam Kibria, *Statistical Papers*, Vol. 47, 2006) "Although this third edition has only 45 more pages; the change in title suggests a change in focus from mainly dealing with permutation tests to put equal weight on parametric and bootstrap tests of hypotheses. It would be excellent as a supplemental text on testing hypotheses and decision theory. . it is excellent for those who want to learn about or to apply permutation methods. . It also has a good general overview of hypotheses testing and decision theory." (Andreas Karlsson, *Journal of the Royal Statistical Society*, Vol. 169 (1), 2006) "This is the third edition of a well known and highly praised book. It also includes material on parametric and bootstrap

tests but permutation tests take the centerstage. This revised edition has been enlarged by about 25 pages. . . . The number of exercises has been greatly increased. More interestingly, some of the essential results have now been given in the form of exercises." (Arup Bose, *Sankhya*, Vol. 67 (1), 2005) "From the start of the journey into testing hypotheses . . . the book refers to the author's personal experience. . . . This is supposed to benefit the students, instructors and autodidacts . . . the book is intended for a two-semester graduate course on hypotheses testing and decision theory. . . . to the best of judgment, it is a very interesting, profound, modern and useful book." (Gaj Vidmar, *ISCB News*, Vol. 144 (2), 2007) "In this book the author explores the use of computational methods for hypothesis testing, and he describes the great advantages that make these methods the most powerful tools among statistical procedures. . . . The book is clear, readable and very well focused . . . This is a book for graduate students and scientists. Practitioners can also take great advantage of it . . . In my view, this book should be present in all statistics departments and university libraries." (Ana F. Militino, *Journal of Applied Statistics*, Vol. 34 (10), 2007) "This book is the third edition of an evolving text that aims to provide a theoretical background on both parametric and resampling tests. It combines and compares these two approaches in a comprehensive manner, constituting a graduate-level text appropriate for researchers and practitioners. . . . the book is recommended to researchers who use advanced statistical tests, especially those having to work with uncommon and problematic data . . ." (Lefteris Angelis, *ACM Computing s*, Vol. 49 (5), 2008)

From the Back Cover This text will equip both practitioners and theorists with the necessary background in testing hypothesis and decision theory to enable innumerable practical applications of statistics. Its intuitive and informal style makes it suitable as a text for both students and researchers. It can serve as the basis a one- or two-semester graduate course as well as a standard handbook of statistical procedures for the practitioners' desk. Parametric, permutation, and bootstrap procedures for testing hypotheses are developed side by side. The emphasis on distribution-free permutation procedures will enable workers in applied fields to use the most powerful statistic for their applications and satisfy regulatory agency demands for methods that yield exact significance levels, not approximations. Algebra and an understanding of discrete probability will take the reader through all but the appendix, which utilizes probability measures in its proofs. The revised and expanded text of the 3rd edition includes many more real-world illustrations from biology, business, clinical trials, economics, geology, law, medicine, social science and engineering along with twice the number of exercises. Real-world problems of missing and censored data, multiple comparisons, nonresponders, after-the-fact covariates, and outliers are dealt with at length. New sections are added on sequential analysis and multivariate analysis plus a chapter on the exact analysis of multi-factor designs based on the recently developed theory of synchronous permutations. . . . The book's main features include: Detailed consideration of one-, two-, and k-sample tests, contingency tables, cluster analysis, multiple comparisons, multivariate analysis, and repeated measures. Numerous practical applications in archeology, biology, business, climatology, clinical trials, economics, education, engineering, geology, law, medicine, and the social sciences. Valuable techniques for reducing computation time. Practical advice on experimental design. Sections on sequential analysis. Comparisons among competing bootstrap, parametric, and permutation techniques. . . . From a review of the first edition: "Permutation Tests is a welcome addition to the literature on this subject and will prove a valuable guide for practitioners . . . This book has already become an important addition to my reference library. Those interested in permutation tests and its applications will enjoy reading it." (*Journal of the American Statistical Association*) From a review of the second edition: "Permutation Tests is superb as a resource for practitioners. The text covers a broad range of topics, and has myriad pointers to topics not directly addressed. . . . the book gives guidance and inspiration to encourage developing one's own perfectly tailored statistics . . . The writing is fun to read." (John I. Marden)

About the Author PHILLIP I. GOOD, PhD, is Operations Manager of Information Research, a consulting firm specializing in statistical solutions for private and public organizations and has published eighteen books. JAMES W. HARDIN, PhD, is Associate Research Professor in the Department of Epidemiology and Biostatistics at the University of South Carolina.