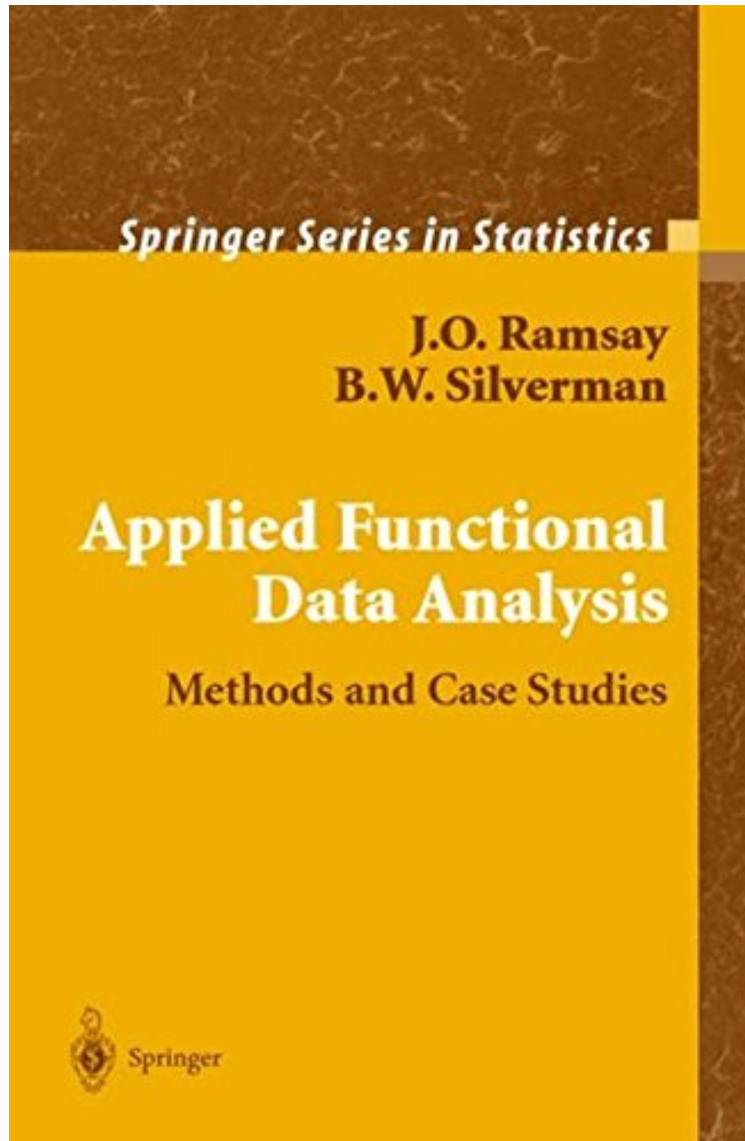


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# Applied Functional Data Analysis: Methods and Case Studies (Springer Series in Statistics)

*J.O. Ramsay, B.W. Silverman*

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**J.O. Ramsay, B.W. Silverman : Applied Functional Data Analysis: Methods and Case Studies (Springer Series in Statistics)** before purchasing it in order to gage whether or not it would be worth my time, and all praised Applied Functional Data Analysis: Methods and Case Studies (Springer Series in Statistics):

22 of 22 people found the following review helpful. teaching functional data analysis through examples By Michael R. Chernick In 1997 Ramsay and Silverman wrote a standard text that stands out as a classic book teaching the functional approach. With this new book they take the approach of teaching by example. Each of chapters 2-12 present a case study first. The one on childhood growth is standard fair but they also present unusual cases such as modeling a juggler and analyzing handwriting. In each case they show how special characteristics of the data are best portrayed by treating curves or functions as individual data points. The application is presented first. Then the authors show how as consultants they formulated a functional data approach to the problem. Sometimes transformations are applied first. In another case principal component curves are constructed. After each problem is presented with the approach taken, the authors go back and present a "what we have seen" section that reviews the key points and lessons learned from the examples. This is a wonderful way to make the material very accessible to practitioners as well as statisticians and it illustrates the variety of problems and that can be handled by this approach to data analysis. 5 of 5 people found the following review helpful. Optional complement for 'Functional Data Analysis' By Dimitri Shvoro A nice, if overpriced, book, but not one that you need to keep, unlike Ramsay and Silverman's "Functional Data Analysis" (FDA). AFDA elaborates several examples introduced in FDA. The examples cover about 60% of FDA's material: smoothing is given much less space than in FDA, and regression (cf. FDA's Chapters 12-15) is left out. If you are choosing between the two books, go for FDA.

This book contains the ideas of functional data analysis by a number of case studies. The case studies are accessible to research workers in a wide range of disciplines. Every reader should gain not only a specific understanding of the methods of functional data analysis, but more importantly a general insight into the underlying patterns of thought. There is an associated web site with MATLAB and S-PLUS implementations of the methods discussed.

From the reviews: "Analysis of functional data has become a very active area of research in statistics. Examples discussed in the book are extremely well chosen. They really make the book a very enjoyable reading. This book will surely attract more people into the area of functional data analysis. The authors have done a commendable job of exposing functional data analysis through a wide variety of examples chosen from diverse fields. I expect this book to be widely read and referenced in near future." (Probal Chaudhuri, *Sankhya*, Vol. 63 (4), 2003) "This book is a follow-up to the monograph *Functional Data Analysis (FDA)* by the same authors. This is an unusual book, an interesting book in a field which is still in expansion and where lots of data sets will come up in the future. The data sets and the data analyses are varied and thought-provoking. The appropriate audience would be graduate students, statistical researchers, and experienced applied statisticians." (Theo Gasser, *SIAM*, Vol. 45 (2), 2003) "The best-known opportunity for functional data analysis (FDA) is when the data are measurements of a continuous function of time, or some other continuous variable. However, the authors show that the range of application can be much wider. One of the attractions of this book is the range of examples. Overall, the book achieves well its main objective of showing what FDA can do. I hope that it succeeds in encouraging the use of powerful data analysis techniques in new application areas." (Tim Auton, *Journal of the Royal Statistical Society*, Vol. 157 (2), 2004) "This book deals with functional data analysis from a very applied point of view. The mentioned case studies are accessible to workers in a wide range of disciplines. Therefore, the nonmathematically oriented audience will enjoy reading through it." (Henri Schurz, *Zentralblatt MATH*, Vol. 1011, 2003) "The book complements the same authors book on *Functional Data Analysis* with a number of case studies from a wide range of subject areas. Examples are interestingly and well presented. The analysis methods are rooted in the previous book and are essentially descriptive. Most of them are very closely related to the methods that are widely used in the traditional function approximation theory." (V. V. Fedorov, *Short Book*, Vol. 23 (1), 2003) "This is one of the most interesting statistics texts I have read! The authors discuss different case studies using data in the form of curves (functions) rather than numbers normally considered by statisticians. Readers will find this text informative and easy to understand. I highly recommend this well-written and reasonably priced text for any statistician or mathematician who uses multivariate analyses and for anyone who may work with functional data. This text will provide a solid introduction to this field." (Henry W. Altland, *Technometrics*, Vol. 45 (1), February, 2003) "The present book introduces and explores the ideas of functional data analysis by the consideration of a number of case studies, many of them presented for the first time. The case studies are accessible to research workers in a wide range of disciplines. Every reader, whether experienced researcher or graduate student, should gain not only a specific understanding of the methods of functional data analysis, but, more importantly, a general insight into the underlying patterns of thought." (*L'Enseignement Mathématique*, Vol. 48 (3-4), 2002)