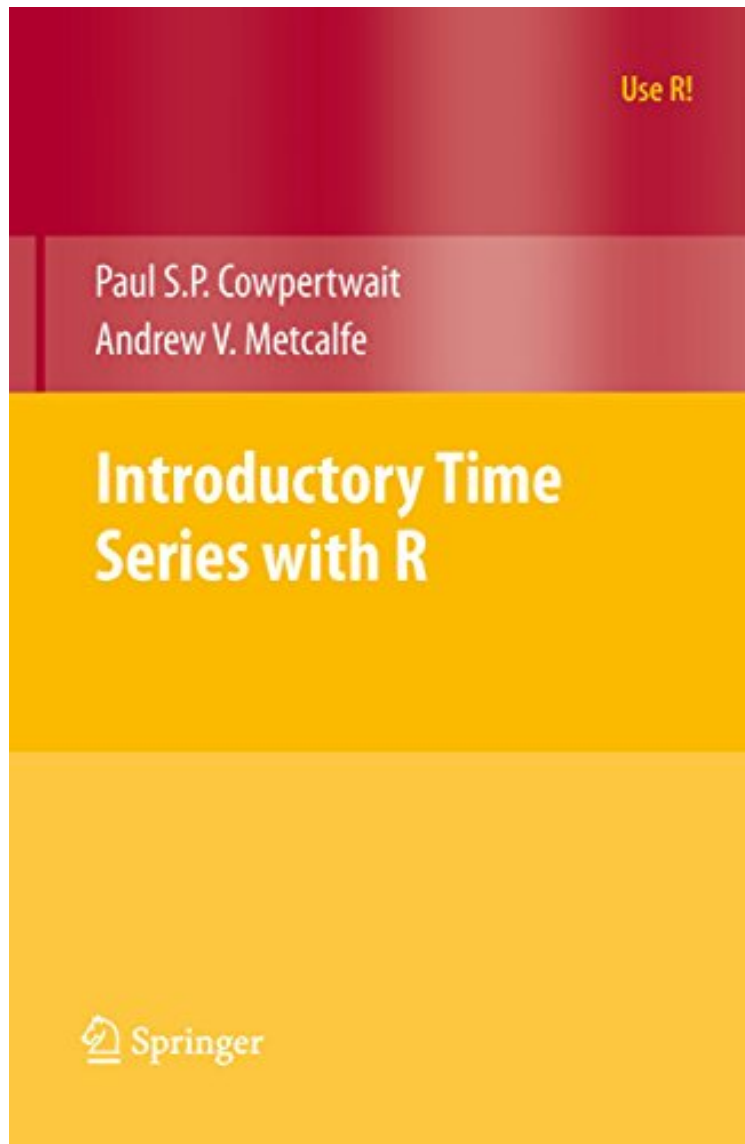


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Introductory Time Series with R (Use R!)

Paul S.P. Cowpertwait, Andrew V. Metcalfe
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Paul S.P. Cowpertwait, Andrew V. Metcalfe : Introductory Time Series with R (Use R!) before purchasing it in order to gage whether or not it would be worth my time, and all praised Introductory Time Series with R (Use R!):

1 of 1 people found the following review helpful. Some exercises and code does not work correctly as writtenBy Scott G.I like this book, but some of the exercises and code in the book is problematic such as exercise 4.6 and exercise 5.2. I had to fix the harmonic series code to get it to work, and there was still some code that still did not work. At times, it was difficult to follow. There were some enlightening exercises that helped me understand the content better.26 of 26 people found the following review helpful. A great book on R!By Pd FarleighThis is a cracking book on applying R to

time series analysis. The best parts of the book are all of the worked examples, the accompanying data sets and several different ways to calculate seasonality. The book is better than most on time series, because it does not neglect the de-trending process needed to get stationary residuals. If you use just the `lm()` command in R to do this before, then the real gem in this book is the advice to use the `gls()` command from the `nlme` library instead (to get the confidence intervals right). Overall, a very good book that is applied to R but has enough mathematical backing for the techniques presented. However, this is a book about applying time series analysis in R. If you seek a more algebraic treatment, then this is not the book I'm afraid, but it would be a great supplement! 0 of 0 people found the following review helpful. Overall I liked the book because it offer you as much insight ... By Mary This is anything except introductory in my point of view. There are lots of mathematical explanations and even proofing of theories about time series. Overall I liked the book because it offer you as much insight as you like to grasp, but I think the title is a little bit misleading.

This book gives you a step-by-step introduction to analysing time series using the open source software R. Each time series model is motivated with practical applications, and is defined in mathematical notation. Once the model has been introduced it is used to generate synthetic data, using R code, and these generated data are then used to estimate its parameters. This sequence enhances understanding of both the time series model and the R function used to fit the model to data. Finally, the model is used to analyse observed data taken from a practical application. By using R, the whole procedure can be reproduced by the reader. All the data sets used in the book are available on the website <http://staff.elena.aut.ac.nz/Paul-Cowpewartwait/ts/>. The book is written for undergraduate students of mathematics, economics, business and finance, geography, engineering and related disciplines, and postgraduate students who may need to analyse time series as part of their taught programme or their research.

From the reviews: "The book gives a very broad and practical overview of the most common models for time series analysis in the time domain and in the frequency domain, with emphasis on how to implement them with base R and existing R packages such as `Rnlme`, `MASS`, `tseries`, `fracdiff`, `mvtnorm`, `vars`, and `sspir`. The authors explain the models by first giving a basic theoretical introduction followed by simulation of data from a particular model and fitting the latter to the simulated data to recover the parameters. After that, they fit the class of models to either environmental, finance, economics, or physics data. There are many applications to climate change and oceanography. The R programs for the simulations are given even if there are R functions that would do the simulation. All examples given can be reproduced by the reader using the code provided in all chapters. Exercises at the end of each chapter are interesting, involving simulation, estimation, description, graphical analysis, and some theory. Data sets used throughout the book are available in a web site or come with base R or the R packages used. The book is a great guide to those wishing to get a basic introduction to modern time series modeling in practice, and in a short amount of time." (Journal of Statistical Software, January 2010, Vol. 32, Book 4) "Later year undergraduates, beginning graduate students, and researchers and graduate students in any discipline needing to explore and analyse time series data. This very readable text covers a wide range of time series topics, always however within a theoretical framework that makes normality assumptions. The range of models that are discussed is unusually wide for an introductory text. The mathematical theory is remarkably complete. This text is recommended for its wide-ranging and insightful coverage of time series theory and practice." (John H. Maindonald, International Statistical, Vol. 78 (3), 2010) "The authors present a textbook for students and applied researchers for time series analysis and linear regression analysis using R as the programming and command language. The book is written for students with knowledge of a first-year university statistics course in New-Zealand and Australia, but it also might serve as a useful tools for applied researchers interested in empirical procedures and applications which are not menu driven as it is the case for most econometric software packages nowadays." (Herbert S. Buscher, Zentralblatt MATH, Vol. 1179, 2010) From the Back Cover Yearly global mean temperature and ocean levels, daily share prices, and the signals transmitted back to Earth by the Voyager space craft are all examples of sequential observations over time known as time series. This book gives you a step-by-step introduction to analysing time series using the open source software R. Each time series model is motivated with practical applications, and is defined in mathematical notation. Once the model has been introduced it is used to generate synthetic data, using R code, and these generated data are then used to estimate its parameters. This sequence enhances understanding of both the time series model and the R function used to fit the model to data. Finally, the model is used to analyse observed data taken from a practical application. By using R, the whole procedure can be reproduced by the reader. All the data sets used in the book are available on the website <http://staff.elena.aut.ac.nz/Paul-Cowpewartwait/ts/>. The book is written for undergraduate students of mathematics, economics, business and finance, geography, engineering and related disciplines, and postgraduate students who may need to analyse time series as part of their taught programme or their research. Paul Cowpewartwait is an associate professor in mathematical sciences (analytics) at Auckland University of Technology with a substantial research record in both the theory and applications of time series and stochastic models. Andrew Metcalfe is an associate professor in the School of Mathematical Sciences at the University of Adelaide, and

an author of six statistics text books and numerous research papers. Both authors have extensive experience of teaching time series to students at all levels. About the Author Paul Cowpertwait is an associate professor in mathematical sciences (analytics) at Auckland University of Technology with a substantial research record in both the theory and applications of time series and stochastic models. Andrew Metcalfe is an associate professor in the School of Mathematical Sciences at the University of Adelaide, and an author of six statistics text books and numerous research papers. Both authors have extensive experience of teaching time series to students at all levels.