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Forecasting with exponential smoothing. The state space approach. (English) Zbl 1211.62165
Springer Series in Statistics. Berlin: Springer (ISBN 978-3-540-71916-8/pbk). xiii, 359 p. (2008).

This book is devoted to forecasting methods for complex stochastic systems, including stationary and some non-stationary processes. One of the goals is to show the power of exponential smoothing methods and the wide range of possible applications. The exponential smoothing allows to analyze innovations state space models, perform likelihood calculations, find predictions intervals and to describe procedures for model selections. The authors of the book have made their own contributions to this area, by theory and/or applications. It has been a great decision of the authors to join their efforts and give a systematic presentation of the main achievements in this area.

The material is well structured in 19 chapters. Some of the chapters provide more information and detailed explanations of the models, while others deal entirely with applications. The reader needs a serious paper-pencil work, perhaps sometimes to see the original sources. Quite useful are the exercises at the end of each chapter. The intention is to practice the theory, however the emphasis is on diverse applications. There is a comprehensive list of references, also author and subject indices. Additional information is also given, e.g., by a website providing supplementary material for this book, data sets, computer codes, more exercises and links to other useful resources.

Reviewer: [Jordan M. Stoyanov \(Newcastle upon Tyne\)](#)

MSC:

- [62M20](#) Inference from stochastic processes and prediction
- [62-01](#) Introductory exposition (textbooks, tutorial papers, etc.) pertaining to statistics
- [62M10](#) Time series, auto-correlation, regression, etc. in statistics (GARCH)
- [62-02](#) Research exposition (monographs, survey articles) pertaining to statistics
- [62P99](#) Applications of statistics

Cited in **29** Documents

Keywords:

[time series](#); [innovations state space models](#)

Software:

[AS 164](#); [expsmooth](#)