Linear Models and Time-Series Analysis: Regression, ANOVA, ARMA and GARCH
Marc S. Paolella

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**DESCRIPTION**

A comprehensive and timely edition on an emerging new trend in time series

*Linear Models and Time-Series Analysis: Regression, ANOVA, ARMA and GARCH* sets a strong foundation, in terms of distribution theory, for the linear model (regression and ANOVA), univariate time series analysis (ARMAX and GARCH), and some multivariate models associated primarily with modeling financial asset returns (copula-based structures and the discrete mixed normal and Laplace). It builds on the author’s previous book, *Fundamental Statistical Inference: A Computational Approach*, which introduced the major concepts of statistical inference. Attention is explicitly paid to application and numeric computation, with examples of Matlab code throughout. The code offers a framework for discussion and illustration of numerics, and shows the mapping from theory to computation.

The topic of time series analysis is on firm footing, with numerous textbooks and research journals dedicated to it. With respect to the subject/technology, many chapters in *Linear Models and Time-Series Analysis* cover firmly entrenched topics (regression and ARMA). Several others are dedicated to very modern methods, as used in empirical finance, asset pricing, risk management, and portfolio optimization, in order to address the severe change in performance of many pension funds, and changes in how fund managers work.

- Covers traditional time series analysis with new guidelines
- Provides access to cutting edge topics that are at the forefront of financial econometrics and industry
- Includes latest developments and topics such as financial returns data, notably also in a multivariate context
• Written by a leading expert in time series analysis

• Extensively classroom tested

• Includes a tutorial on SAS

• Supplemented with a companion website containing numerous Matlab programs

• Solutions to most exercises are provided in the book

*Linear Models and Time-Series Analysis: Regression, ANOVA, ARMA and GARCH* is suitable for advanced masters students in statistics and quantitative finance, as well as doctoral students in economics and finance. It is also useful for quantitative financial practitioners in large financial institutions and smaller finance outlets.

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