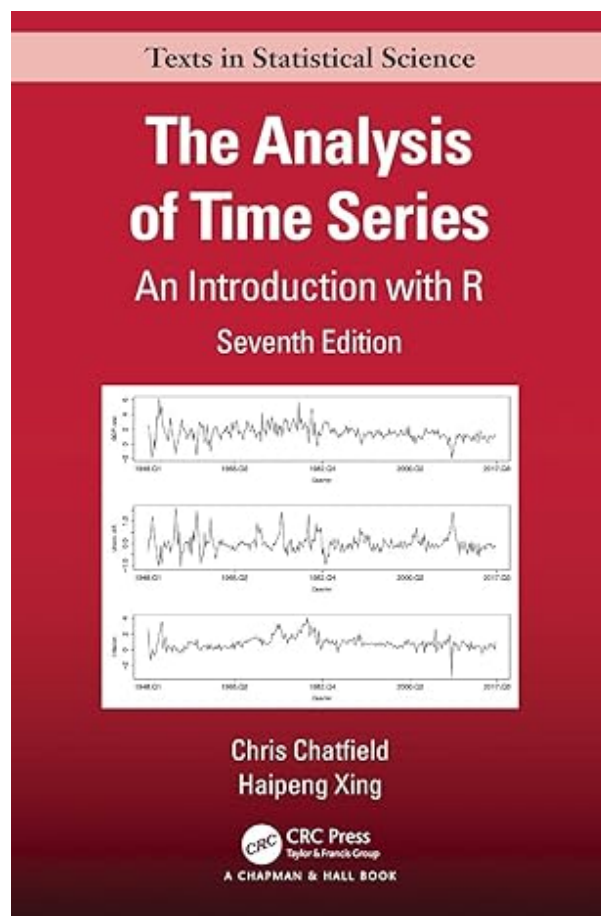


Notes for The Analysis of Time Series Seventh Edition by Chris Chatfield & Haipeng Xin

Gallant Tsao

August 5, 2025



Contents

1	Introduction	2
1.1	Some Representative Time Series	2
2	Basic Descriptive Techniques	3
3	Some Linear Time Series Models	4
4	Fitting Time Series Models in the Time Domain	5
5	Forecasting	6
6	Stationary Processes in the Frequency Domain	7
7	Spectral Analysis	8
8	Bivariate Processes	9
9	Linear Systems	10
10	State-Space Models and the Kalman Filter	11
11	Non-Linear Models	12
12	Volatility Models	13
13	Multivariate Time Series Modeling	14
14	Some More Advanced Topics	15

1 Introduction

1.1 Some Representative Time Series

We begin with some examples of the sort of time series that arise in practice.

2 Basic Descriptive Techniques

3 Some Linear Time Series Models

4 Fitting Time Series Models in the Time Domain

5 Forecasting

6 Stationary Processes in the Frequency Domain

7 Spectral Analysis

8 Bivariate Processes

9 Linear Systems

10 State-Space Models and the Kalman Filter

11 Non-Linear Models

12 Volatility Models

13 Multivariate Time Series Modeling

14 Some More Advanced Topics