A SHORT COURSE OF
TIME SERIES ANALYSIS AND FORECASTING

At The Institute of Advanced Studies, Vienna
from March 22nd to April 2, 1993

Lecturer : D.S.G. Pollock

Queen Mary and Westfield College,
The University of London

This course is concerned with the methods of time-series modelling which are applicable in econometrics and throughout a wide range of disciplines in the physical and social sciences. The course is for nonspecialists who may be interested in pursuing this topic as an adjunct to their other studies and who might envisage employing the techniques of time-series analysis in empirical enquiries within the context of their own disciplines.

The course is mathematically self-contained in the sense that the requisite results are presented either in the lectures themselves or in the accompanying text. The techniques of the frequency domain and the time domain are given an equal emphasis in this course.

Week 1

Lecture 1 Trends in Time Series

Lecture 2 Cycles in Time Series

Lecture 3 Models and Methods of Time-Series Analysis

Lecture 4 Time-Series Analysis in the Frequency Domain

Lecture 5 ARMA Models

Week 2

Lecture 6 State-Space Analysis and Structural Time-Series Models

Lecture 7 Forecasting with ARIMA Models

Lecture 8 Identification and Estimation of ARIMA Models

Lecture 9 Identification and Estimation in the Frequency Domain

Lecture 10 Seasonality and Linear Filtering

In addition, there will be a public lecture on the topic of *The Methods of Time-Series Analysis* which is to take place on ***** in ***** at *****. This lecture will give a broad overview of the mathematical themes of time-series analysis and of the historical development of the subject; and it is intended for an audience without any significant knowledge of the subject.

LECTURES IN TIME-SERIES ANALYSIS AND FORECASTING

by

D.S.G. Pollock

Queen Mary and Westfield College,
The University of London

These two booklets contain the material of the lectures of the courses titled of *Methods of Time-Series Analysis* and *Economic Forecasting* which have been taught in the Department of Economics of Queen Mary College in recent years. The material is presented in the form of a series of ten lectures for a course at the Institute for Advanced Studies in Vienna titled *A Short Course in Time Series Analysis.*

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