

BOOK REVIEW

Mohamed Almustafa Alsamarai, Department of Pathological Investigations, Samara University College of Applied Sciences,

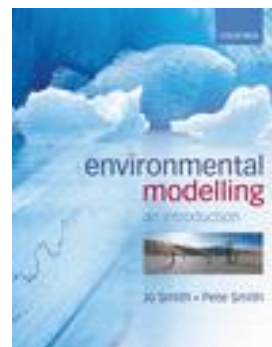
Environmental Modelling An Introduction

Authors: Jo Smith and Pete Smith

ISBN-13: 978-0-19-927206-8

Publication date: 18 January 2007

192 pages, numerous tables



The focus on modelling in practice encourages the reader to think like a researcher, and consider how modelling can be used to probe questions of interest

- Clear, articulate writing style gives clarity to an often daunting subject
- Case studies demonstrate the use of modelling in practice, to give the reader a real insight into the application of modelling in real situations
- Numerous end of chapter problems and web-based tasks encourage the student to engage with the subject more deeply, to build a better understanding of the concepts presented

Online Resource Centre features additional resources for lecturers and students, enhancing the value of the text as a teaching and learning tool

The global environment is a complex mix of interlinked processes, about which observation can tell us a great deal. But how can we use current observation to model future events, or to predict the consequences of scenarios that don't yet exist?

Environmental Modelling: An Introduction shows how modelling can be used to explain experimental observations, and how these observations - and the data gathered - can be extrapolated to help us understand new environments and processes, and to solve environmental problems.

The book begins by explaining why modelling is such a powerful experimental tool, before walking the reader through the process of constructing a model - what the key considerations are, and how different models should be used to probe different types of problem. It then illustrates how models are actively applied, before introducing a series of case studies to show how modelling has been used in real environmental and ecological studies.

Accompanied by an extensive Online Resource Centre to support active, hands-on learning on the part of the student, ***Environmental Modelling: An Introduction*** is the ideal resource for any student who needs to develop a working

understanding of modelling, and how to apply modelling in their own research.

Online Resource Centre:

- Figures from the book available to download, to facilitate lecture preparation
- Interactive spreadsheets to encourage learning through hands-on experience

Readership: Advanced undergraduates studying environmental science and ecology-related disciplines. Also of interest to beginning graduates looking for an overview of the subject

1. Introduction
2. Model Development
3. Model Evaluation
4. Application of Models
5. Environmental and Ecological Models in the Real World

Demographic Methods and Concepts



Author: Donald T. Rowland

ISBN-13: 978-0-19-875263-9

Publication date: 17 April 2003

546 pages, numerous tables and figures, 246x171 mm

"A key feature of the text is a diskette that contains Microsoft Excel-based programs for illustrating and doing fundamental demographic calculations (life tables, growth rates, standardization, and so forth)...The book is a very good compendium of basic demography that clearly is based on the author's practical teaching experience. It has re-opened for me the possibility of successfully teaching demographic methods to students not primarily interested in population studies. I look forward to using it'. Population Studies, Vol.58, No.2, 2004, pp255-256.' -

"Demographic Methods and Concepts is likely to have such a broader readership, since it is designed to serve also as a self-contained introduction and instructional manual on its subject. It is well written (enlivened with apt quotations from Graunt) and requires little mathematical background. The graphics are excellent.

Fully up-to-date in terms of 'desktop demography, it has bibliographies that cater to the internet generation as well as to old-style page turners, numerous spreadsheet exercises, and an attached CD-ROM containing excel modules linked to the text'. Population and Development Review 2003.' –

- Accompanied by a free CD-ROM with Excel modules demonstrating concepts and facilitating population projections and other commonly-needed techniques
- Clear, non-technical explanations of methods, with worked examples, enable students without a background in algebra, calculus or statistics to learn demographic methods
- For interpreting demographic data and indices, the book includes concepts and strategies not covered by any other methods texts
- Includes techniques for analysis of population at regional and local, as well as national, scales - of particular interest to geographers and planners but usually omitted from demographic texts
- Includes chapters on migration and applied demography
- The only text with fully integrated computer-based learning modules, providing visual demonstrations of the nature of demographic concepts and visual comparisons of demographic data

Spreadsheet exercises at the end of every chapter develop the relevant computer skills essential in working with demographic statistics

Demographic Methods and Concepts presents the methods most commonly needed to work with statistical materials on population at national, regional and local levels.

Unlike other textbooks in the field, clear non-technical language is used throughout to make demographic techniques accessible to a broad readership irrespective of background in mathematics. All the demographic techniques most relevant to the work of demographers, geographers, sociologists and planners are covered. Demographic concepts and practical strategies important in the interpretation of population statistics are also discussed.

The book takes a unique and innovative computer-based approach to the visualisation of demographic concepts and data. The fully integrated accompanying CD-ROM contains spreadsheet modules, with on-screen controls and menus, run in Microsoft Excel. The modules can be used without any knowledge of computing. Further Spreadsheet Exercises in the text enable the acquisition of computing techniques that enhance the breadth and depth of investigations, as well as enjoyment and proficiency in working with population statistics.

Readership: Undergraduate students in social sciences, geography, economics and statistics. Also of use as a reference work for planners and researchers who use population statistics in their employment

Contents

chapter contains study resources including glossary of key terms, further reading, internet resources, exercises, and spreadsheet exercises

Preface

Section 1. Population Dynamics

1. Population Change
2. Population Growth and Decline
3. Age-Sex Composition
- Section 2. Analytical Approaches**
4. Comparing Populations
5. Demographic Writing
- Section 3. Vital Processes**
6. Mortality and Health
7. Fertility and the Family
- Section 4. Demographic Models**
8. Life Tables
9. Stable and Stationary Models
- Section 5. Spatial Patterns and Processes**
10. Population Distribution
11. Migration
- Section 6. Applied Demography**
12. Population Projections and Estimates
13. Population Composition
- Appendices:**
- A: Basic maths**
- B: Using the Excel modules**
- C: Introduction to Excel**
- D: Answers to exercises**

Introduction to Applied Statistics: A Modelling Approach. Second Edition

Author: J K Lindsey

ISBN-13: 978-0-19-852894-4

Publication date: 27 November 2003

321 pages, numerous line figures, 234x156 mm

It is recommended as a text for a basic course in applied statistics, either as a first statistics course to mathematics students, or as a more advanced course to students in other disciplines.

Interdisciplinary across medicine, the biological sciences, and the social sciences

- Web-based data sets and R codes available
- Web-based instructor's manual with teaching hints and solutions
- Many examples and exercises relating statistical principles to research

More than 70 illustrations

New to this edition

- Expanded information and illustrative examples
- New sections on the Student t distribution and matched pairs designs

- More than 50% of material updated

Over 70 all new illustrations

This text is aimed at students in medicine, biology, and the social sciences, as well as those planning to specialize in applied statistics. It covers the basics of the design and analysis of surveys and experiments and provides an understanding of the basic principles of modelling and inference. Practical advice is provided on how to design a study, collect data, record observations accurately, detect errors, construct appropriate models, and interpret the results. The text contains many illustrative examples and exercises relating statistical principles to research. A companion website is available with links to data sets, R codes, and to an instructor's manual with teaching hints and solutions.

Readership: Upper level undergraduate students and research workers in statistics and related fields in medicine, biology, and the social sciences

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Basic concepts

2. Categorical data

3. Inference

4. Probability distributions

5. Normal regression and ANOVA

6. Dependent responses

7. Where to now?

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