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Nota di contenuto	Cover; Entropy in Urban and Regional Modelling; Title Page; Copyright Page; Preface; Table of Contents; 1 What is entropy?; 1.1 Introduction; 1.2 Three views of entropy; 1.2.1 The relationship of entropy to probability and uncertainty; 1.2.2 The entropy of a probability distribution; 1.2.3 Entropy and Bayesian statistics; 1.3 The application of the concept of entropy; 1.3.1 Summary of types of application; 1.3.2 Hypothesis generation; 1.3.3 Interpretation of theories; 1.3.4 The role of 'entropy' in the study of system dynamics 1.3.5 Review of interrelationship of entropy-maximising procedures and statistical analysis 1.3.6 Other applications of the concept of 'entropy'; 2 Transport models: the theory of trip distribution, mode split, and route split; 2.1 Introduction; 2.2 The gravity model of trip distribution; 2.2.1 Derivation of the gravity model; 2.2.2 Interpretation of terms; 2.2.3 Validity of the method; 2.3 Generalised distribution models; 2.4 Modal-split implications; 2.5 Review of underlying behavioral hypotheses; 2.6 An alternative modal-split model; 2.7 Alternative estimates of composite impedance 2.8 Route split 2.9 Concluding comments and discussion; 2.9.1 Introduction; 2.9.2 A simple example; 2.9.3 Alternative impedance functions; 2.9.4 Alternative allocation formulas; 2.9.5 Procedure for

estimating models; 2.9.6 A note on forecasting; 3 Interregional commodity flows; 3.1 Introduction; 3.1.1 The problems to be studied; 3.1.2 Relevance to other problems; 3.1.3 Notation; 3.2 Gravity models; 3.2.1 The Newtonian gravity model, and some heuristic developments; 3.2.2 The economists' gravity models; 3.2.3 Deficiencies of the gravity-model approach
3.3 Derivation of the family of gravity models using entropy-maximising methods
3.4 The input-output model; 3.4.1 Principles of the single-region input-output model; 3.4.2 The Leontief-Strout multiregional framework; 3.5 Integrating the gravity and input-output model approaches; 3.5.1 Introduction; 3.5.2 Case (i): the unconstrained gravity input-output model; 3.5.3 Case (ii): the production-constrained gravity input-output model; 3.5.4 Case (iii): the attraction-constrained gravity input-output model; 3.5.5 Case (iv): the production-attraction-constrained gravity input-output model
3.5.6 A hybrid model for different commodity types
3.6 Summary; 4 Location models; 4.1 Gravity models as location models; 4.2 Recreation; 4.3 Shopping; 4.4 Elementary models of residential location; 4.4.1 Introduction; 4.4.2 Gravity models to allocate households around workplaces; 4.4.3 A critical review; 4.4.4 Four types of location behaviour; quasi dynamics; 4.4.5 Disaggregation, with a simplifying assumption; 4.4.6 Removal of the simplifying assumption; 4.4.7 Modelling the supply side; 4.4.8 Further disaggregation; 4.4.9 Integrated models
5 Problems of missing or additional information in flow and location models

Sommario/riassunto

First published in 1970, this groundbreaking investigation into Entropy in Urban and Regional Modelling provides an extensive and detailed insight into the entropy maximising method in the development of a whole class of urban and regional models. The book has its origins in work being carried out by the author in 1966, when he realised that the well-known gravity model could be derived on the basis of an analogy with statistical, rather than Newtonian, mechanics. Subsequent investigation demonstrated that the entropy maximising method stems from an even higher level o
