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Nota di contenuto	MODELLING TRANSPORT; Contents; About the Authors; Preface; 1 Introduction; 1.1 Transport Planning and Modelling; 1.1.1 Background; 1.1.2 Models and their Role; 1.2 Characteristics of Transport Problems; 1.2.1 Characteristics of Transport Demand; 1.2.2 Characteristics of Transport Supply; 1.2.3 Equilibration of Supply and Demand; 1.3 Modelling and Decision Making; 1.3.1 Decision-making Styles; 1.3.2 Choosing Modelling Approaches; 1.4 Issues in Transport Modelling; 1.4.1 General Modelling Issues; 1.4.2 Aggregate and Disaggregate Modelling; 1.4.3 Cross-section and Time Series 1.4.4 Revealed and Stated Preferences 1.5 The Structure of the Classic Transport Model; 1.6 Continuous Transport Planning; 1.7 Theoretical Basis Versus Expediency; 2 Mathematical Prerequisites; 2.1 Introduction; 2.2 Algebra and Functions; 2.2.1 Introduction; 2.2.2 Functions and Graphs; 2.2.3 Sums of Series; 2.3 Matrix Algebra; 2.3.1 Introduction; 2.3.2 Basic Operations of Matrix Algebra; 2.4 Elements of

Calculus; 2.4.1 Differentiation; 2.4.2 Integration; 2.4.3 The Logarithmic and Exponential Functions; 2.4.4 Finding Maximum and Minimum Values of Functions  
2.4.5 Functions of More Than One Variable  
2.4.6 Multiple Integration; 2.4.7 Elasticities; 2.4.8 Series Expansions; 2.5 Elementary Mathematical Statistics; 2.5.1 Probabilities; 2.5.2 Random Variables; 2.5.3 Moments around Zero; 2.5.4 More Advanced Statistical Concepts; 3 Data and Space; 3.1 Basic Sampling Theory; 3.1.1 Statistical Considerations; 3.1.2 Conceptualisation of the Sampling Problem; 3.1.3 Practical Considerations in Sampling; 3.2 Errors in Modelling and Forecasting; 3.2.1 Different Types of Error; 3.2.2 The Model Complexity/Data Accuracy Trade-off; 3.3 Basic Data-Collection Methods  
3.3.1 Practical Considerations  
3.3.2 Types of Surveys; 3.3.3 Survey Data Correction, Expansion and Validation; 3.3.4 Longitudinal Data Collection; 3.3.5 Travel Time Surveys; 3.4 Stated Preference Surveys; 3.4.1 Introduction; 3.4.2 The Survey Process; 3.4.3 Case Study Example; 3.5 Network and Zoning Systems; 3.5.1 Zoning Design; 3.5.2 Network Representation; Exercises; 4 Trip Generation Modelling; 4.1 Introduction; 4.1.1 Some Basic Definitions; 4.1.2 Characterisation of Journeys; 4.1.3 Factors Affecting Trip Generation; 4.1.4 Growth-factor Modelling; 4.2 Regression Analysis  
4.2.1 The Linear Regression Model  
4.2.2 Zonal-based Multiple Regression; 4.2.3 Household-based Regression; 4.2.4 The Problem of Non-Linearity; 4.2.5 Obtaining Zonal Totals; 4.2.6 Matching Generations and Attractions; 4.3 Cross-Classification or Category Analysis; 4.3.1 The Classical Model; 4.3.2 Improvements to the Basic Model; 4.3.3 The Person-category Approach; 4.4 Trip Generation and Accessibility; 4.5 The Frequency Choice Logit Model; 4.6 Forecasting Variables in Trip Generation Analysis; 4.7 Stability and Updating of Trip Generation Parameters; 4.7.1 Temporal Stability  
4.7.2 Geographic Stability

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#### Sommario/riassunto

Already the market leader in the field, Modelling Transport has become still more indispensable following a thorough and detailed update. Enhancements include two entirely new chapters on modelling for private sector projects and on activity-based modelling; a new section on dynamic assignment and micro-simulation; and sizeable updates to sections on disaggregate modelling and stated preference design and analysis. It also tackles topical issues such as valuation of externalities and the role of GPS in travel time surveys. Providing unrivalled depth and breadth of coverage, each topic

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