Residential Location Choice Models And Applications Advances In Spatial Science

Residential Location Choice Place-Based Redistribution in Location Choice Models On the Equivalence of Location Choice Models Residential Location Choice Residential Location Choice Residential Location Markets and Urban Transportation The Economy as a Complex Spatial System Discrete Choice Theory of Product Differentiation Discrete Choice Methods with Simulation Applied Discrete-Choice Modelling Choice Modelling Operations Research and Decision Aid Methodologies in Traffic and Transportation Management Spatial Interaction Theory and Planning Models Valuing Environmental Amenities Using Stated Choice Studies Data Analysis and Approximate Models Cognitive Choice Modeling The Econometrics of Multi-dimensional Panels Location Theory and Decision Analysis Discrete Choice Methods with Simulation Consumers' Spatial Choice Behavior Time, History, and Location Dependencies of Spatial Choice Discrete Choice Modelling and Air Travel Demand Stated Choice Methods Modeling Ordered Choices The Multi-Agent Transport Simulation MATSim Human Behaviour and Traffic Networks Modelling Transport Handbooks in Transport Choice Modelling Decision Modelling for Health Economic Evaluation Spatial Microsimulation with R Econometric Models For Industrial Organization Transportation Systems Engineering The Oxford Handbook of Land Economics Discrete Choice Analysis The Measurement and Analysis of Housing Preference and Choice Applied Text Analysis with Python The Public Health Effects of Food Deserts Why Families Move American Capitals

Eventually, you will very discover a further experience and deed by spending more cash. yet when? do you say yes that you require to get those all needs taking into consideration having significantly cash? Why dont you attempt to get something basic in the beginning? Thats something that will lead you to understand even more roughly the globe, experience, some places, subsequently history, amusement, and a lot more?

It is your enormously own times to measure reviewing habit. in the middle of guides you could enjoy now is Residential Location Choice Models And Applications Advances In Spatial Science below.

Data Analysis and Approximate Models Aug 18 2021 The First Detailed Account of Statistical Analysis That Treats Models as Approximations The idea of truth plays a role in both Bayesian and frequentist statistics. The Bayesian concept of coherence is based on the fact that two different models or parameter values cannot both be true. Frequentist statistics is formulated as the problem of estimating the "true but unknown" parameter value that generated the data. Forgoing any concept of truth, Data Analysis and Approximate Models: Model Choice, Location-Scale, Analysis of Variance, Nonparametric Regression and Image Analysis presents statistical analysis/inference based on approximate models. Developed by the author, this approach consistently treats models as approximations to data, not to some underlying truth. The author develops a concept of approximation for probability models with applications to: Discrete data Location scale Analysis of variance (ANOVA) Nonparametric regression, image analysis, and densities Time series Model choice The book first highlights problems with concepts such as likelihood and efficiency and covers the definition of approximation and its consequences. A chapter on discrete data then presents the total variation metric as well as the Kullback–Leibler and chi-squared discrepancies as measures of fit. After focusing on outliers, the book discusses the location-scale problem, including approximation intervals, and gives a new treatment of higher-way ANOVA. The next several chapters describe novel procedures of nonparametric regression based on approximation. The final chapter assesses a range of statistical topics, from the likelihood principle to asymptotics and model choice.

Modeling Ordered Choices Nov 08 2020 It is increasingly common for analysts to seek out the opinions of individuals and organizations using attitudinal scales such as degree of satisfaction or importance attached to an issue. Examples include levels of obesity, seriousness of a health condition, attitudes towards service levels, opinions on products, voting intentions, and the degree of clarity of contracts. Ordered choice models provide a relevant methodology for capturing the sources of influence that explain the choice made amongst a set of ordered alternatives. The methods have evolved to a level of sophistication that can allow for heterogeneity in the threshold parameters, in the explanatory variables (through random parameters), and in the decomposition of the residual variance. This book brings together contributions in ordered choice modeling from a number of disciplines, synthesizing developments over the last fifty years, and suggests useful extensions to account for the wide range of sources of influence on choice.

Decision Modelling for Health Economic Evaluation May 03 2020 In financially constrained health systems across the world, increasing emphasis is being placed on the ability to demonstrate that health care interventions are not only effective, but also cost-effective. This book deals with decision modelling techniques that can be used to estimate the value for money of various interventions including medical devices, surgical procedures, diagnostic technologies, and pharmaceuticals. Particular emphasis is placed on the importance of the appropriate representation of uncertainty in the evaluative process and the implication this uncertainty has for decision making and the need for future research. This highly practical guide takes the reader through the key principles and approaches of modelling techniques. It begins with the basics of constructing different forms of the model, the population of the model with input parameter estimates, analysis of the results, and progression to the holistic view of models as a valuable tool for informing future research exercises. Case studies and exercises are supported with online templates and solutions. This book will help analysts understand the contribution of decision-analytic modelling to the evaluation of health care programmes. ABOUT THE SERIES: Economic evaluation of health interventions is a growing specialist field, and this series of practical handbooks will tackle, in-depth, topics superficially addressed in more general health economics books. Each volume will include illustrative material, case histories and worked examples to encourage the reader to apply the methods discussed, with supporting material provided online. This series is aimed at health economists in academia, the pharmaceutical industry and the health sector, those on advanced health economics courses, and health researchers in associated fields.

The Economy as a Complex Spatial System Apr 25 2022 This book is open access under a CC BY-NC 4.0 license. This collected volume represents the final outcome of the COST Action IS1104 "The EU in the new complex geography of economic systems: models, tools and policy evaluation". Visualizing the EU as a complex and multi-layered network, the book is organized in three parts, each of them dealing with a different level of analysis: At the macro-level, Part I considers the interactions within large economic systems (regions or countries) involving trade, workers migration, and other factor movements. At the meso-level, Part II discusses interactions within specific but wide-ranging markets, with a focus on financial markets and banking systems. Lastly, at the micro-level, Part III explores the decision-making of single firms, especially in the context of location decisions.

Why Families Move Jul 25 2019

Discrete Choice Modelling and Air Travel Demand Jan 11 2021 In recent years, airline practitioners and academics have started to explore new ways to model airline passenger demand using discrete choice methods. This book provides an introduction to discrete choice models and uses extensive examples to illustrate how these models have been used in the airline industry. These examples span network planning, revenue management, and pricing applications. Numerous examples of fundamental logit modeling concepts are covered in the text, including probability calculations, value of time calculations, elasticity calculations, nested and non-nested likelihood ratio tests, etc. The core chapters of the book are written at a level appropriate for airline practitioners and graduate students with operations research or travel demand modeling backgrounds. Given the majority of discrete choice modeling advancements in transportation evolved from urban travel demand studies, the introduction first orients readers from different backgrounds by highlighting major distinctions between aviation and urban travel demand studies. This is followed by an in-depth treatment of two of the most common discrete choice models, namely the multinomial and nested logit models. More advanced discrete choice models are covered, including mixed logit models and generalized extreme value models that belong to the generalized nested logit class and/or the network generalized extreme value class. An emphasis is placed on highlighting open research questions associated with these models that will be of particular interest to operations research students. Practical modeling issues related to data and estimation software are also addressed, and an extensive modeling exercise focused on the interpretation and application of statistical tests used to guide the selection of a preferred model specification is included; the modeling exercise uses itinerary choice data from a major airline. The text concludes with a discussion of on-going customer modeling research in aviation. Discrete Choice Modelling and Air Travel Demand is enriched by a comprehensive set of technical appendices that will be of particular interest to advanced students of discrete choice modeling theory. The appendices also include detailed proofs of the multinomial and nested logit models and derivations of measures used to represent competition among alternatives, namely correlation, direct-elasticities, and cross-elasticities.

Transportation Systems Engineering Jan 29 2020 "This book provides a rigorous and comprehensive coverage of transportation models and planning methods and is a must-have to anyone in the transportation community, including students, teachers, and practitioners." Moshe Ben-Akiva, Massachusetts Institute of Technology.

Modelling Transport Aug 06 2020 Already the market leader in the field, Modelling Transport has become still more indispensible 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 is approached as a modelling exercise with discussion of the roles of theory, data, model specification, estimation, validation and application. The authors present the state of the art and its practical application in a pedagogic manner, easily understandable to both students and practitioners. Follows on from the highly successful third edition universally acknowledged as the leading text on transport modelling techniques and applications Includes two new chapters on modelling for private sector projects and activity based modeling, and numerous updates to existing chapters Incorporates treatment of recent issues and concerns like risk analysis and the dynamic interaction between land use and transport Provides comprehensive and rigorous information and guidance, enabling readers to make practical use of every available technique Relates the topics to new external factors and technologies such as global warming, valuation of externalities and global positioning systems (GPS).

Discrete Choice Methods with Simulation Apr 13 2021 Table of contents

The Public Health Effects of Food Deserts Aug 25 2019 In the United States, people living in low-income neighborhoods frequently do not have access to affordable healthy food venues, such as supermarkets. Instead, those living in "food deserts" must rely on convenience stores and small neighborhood stores that offer few, if any, healthy food choices, such as fruits and vegetables. The Institute of Medicine (IOM) and National Research Council (NRC) convened a two-day workshop on January 26-27, 2009, to provide input into a Congressionally-mandated food deserts study by the U.S. Department of Agriculture's Economic Research Service. The workshop, summarized in this volume, provided a forum in which to discuss the public health effects of food deserts.

The Measurement and Analysis of Housing Preference and Choice Oct 27 2019 What are the current trends in housing? Is my planned project commercially viable? What should be my marketing and advertisement strategies? These are just some of the questions real estate agents, landlords and developers ask researchers to answer. But to find the answers, researchers are faced with a wide variety of methods that measure housing preferences and choices. To select and value a valid research method, one needs a well-structured overview of the methods that are used in housing preference and housing choice research. This comprehensive introduction to this field offers just such an overview. It discusses and compares numerous methods, detailing the potential limitation of each one, and it reaches beyond methodology, illustrating how thoughtful consideration of methods and techniques in research can help researchers and other professionals to deliver products and services that are more in line with residents' needs.

The Econometrics of Multi-dimensional Panels Jun 15 2021 This book presents the econometric foundations and applications of multi-dimensional panels, including modern methods of big data analysis. The last two decades or so, the use of panel data has become a standard in many areas of economic analysis. The available models formulations became more complex, the estimation and hypothesis testing methods more sophisticated. The interaction between economics and econometrics resulted in a huge publication output, deepening and widening immensely our knowledge and understanding in both. The traditional panel data, by nature, are two-dimensional. Lately, however, as part of the big data revolution, there has been a rapid emergence of three, four and even higher dimensional panel data sets. These have started to be used to study the flow of goods, capital, and services, but also some other economic phenomena that can be better understood in higher dimensions. Oddly, applications rushed ahead of theory in this field. This book is aimed at filling this widening gap. The first theoretical part of the volume is providing the econometric foundations to deal with these new high-dimensional panel data sets. It not only synthesizes our current knowledge, but mostly, presents new research results. The second empirical part of the book provides insight into the most relevant applications in this area. These chapters are a mixture of surveys and new results, always focusing on the econometric problems and feasible solutions.

Operations Research and Decision Aid Methodologies in Traffic and Transportation Management Nov 20 2021 Every one relies on some kind of transportation system nearly every

day. Go ing to work, shopping, dropping children at school and many other cultural or social activities imply leaving home, and using some form of transportation, which we expect tobe efficient and reliable. Of course, efficiency and reliabil ity do not occur by chance, but require careful and often relatively complex planning by transportation system managers, both in the public and private sectors. It has long been recognized that mathematics, and, more specifically, op erations research is an important tool of this planning process. However, the range of skills required to cover both fields, even partially, is very large, and the opportunities to gather people with this very diverse expertise are too few. The organization of the NATO Advanced Studies Institute on "Opera tions Research and Decision Aid Methodologies in Traffic and Transportation Management" in March 1997 in Balatonfüred, Hungary, was therefore more than welcome and the group of people that gathered for a very studious two weeks on the shores of the beautiful lake Balaton did really enjoy the truly multidisciplinary and high scientific level of the meeting. The purpose of the present volume is to report, in a chronological order, the various questions that were considered by the lecturers and the' students at the institute. After a general introduction to the topic, the first week focused on issues related to traffic modeling, mostly in an urban context.

Residential Location Choice Jun 27 2022 The effective planning of residential location choices is one of the great challenges of contemporary societies and requires forecasting capabilities and the consideration of complex interdependencies which can only be handled by complex computer models. This book presents a range of approaches used to model residential locations within the context of developing land-use and transport models. These approaches illustrate the range of choices that modellers have to make in order to represent residential choice behaviour. The models presented in this book represent the state-of-the-art and are valuable both as key building blocks for general urban models, and as representative examples of complexity science.

Human Behaviour and Traffic Networks Sep 06 2020 How do people behave in different traffic situations? Are there general laws for mathematical modelling of decision dynamics? The answers, given at the first international workshop on "Human Behaviour in Traffic Networks", are presented in this volume. In 13 articles, well-known experts report about their current work on experiments and modelling in this area. The topics range from psychological behaviour in traffic situations, traffic simulations of various aspects and market analysis to experiments with human participants used in experimental economics. The articles filled with many illustrations are aimed at interested students as well as experts in this field.

Choice Modelling Jun 03 2020 Contains a selection of the best theoretical and applied papers from the inaugural International Choice Modelling Conference. The conference was organised by the Institute for Transport Studies at the University of Leeds and held in Harrogate, North Yorkshire on 30 March to 1 April 2009.

Location Theory and Decision Analysis May 15 2021 Employing state-of-the art quantitative models and case studies, Location Theory and Decision Analysis provides the methodologies behind the siting of such facilities as transportation terminals, warehouses, housing, landfills, state parks and industrial plants. Through its extensive methodological review, the book serves as a primer for more advanced texts on spatial analysis, including the monograph on Location, Transport and Land-Use by the same author. Given the rapid changes over the last decade, the Second Edition includes new analytic contributions as well as software survey of analytics and spatial information technology. While the First Edition served the professional community well, the Second Edition has substantially expanded its emphasis for classroom use of the volume. Extensive pedagogic materials have been added, going from the fundamental principles to open-ended exercises, including solutions to selected problems. The text is of value to engineering and business programs that offer courses in Decision and Risk Analysis, Muticriteria Decision-Making, and Facility Location and Layout. It should also be of interest to public policy programs that use geographic Information Systems and satellite imagery to support their analyses.

The Multi-Agent Transport Simulation MATSim Oct 08 2020 The MATSim (Multi-Agent Transport Simulation) software project was started around 2006 with the goal of generating traffic and congestion patterns by following individual synthetic travelers through their daily or weekly activity programme. It has since then evolved from a collection of stand-alone C++ programs to an integrated Java-based framework which is publicly hosted, open-source available, automatically regression tested. It is currently used by about 40 groups throughout the world. This book takes stock of the current status. The first part of the book gives an introduction to the most important concepts, with the intention of enabling a potential user to set up and run basic simulations. The second part of the book describes how the basic functionality can be extended, for example by adding schedule-based public transit, electric or autonomous cars, paratransit, or within-day replanning. For each extension, the text provides pointers to the additional documentation and to the code base. It is also discussed how people with appropriate Java programming skills can write their own extensions, and plug them into the MATSim core. The project has started from the basic idea that traffic is a consequence of human behavior, and thus humans and their behavior should be the starting point of all modelling, and with the intuition that when simulations with 100 million particles are possible in computational physics, then behavior-oriented simulations with 10 million travelers should be possible in travel behavior research. The initial implementations thus combined concepts from computational physics and complex adaptive systems with concepts from travel behavior research. The third part of the book looks at theoretical concepts that are able to describe important aspects of the simulation system; for example, under certain conditions the code becomes a Monte Carlo engine sampling from a discrete choice model. Another important aspect is the interpretation of the MATSim score as utility in the microeconomic sense, opening up a connection to benefit cost analysis. Finally, the book collects use cases as they have been undertaken with MATSim. All current users of MATSim were invited to submit their work, and many followed with sometimes crisp and short and sometimes longer contributions, always with pointers to additional references. We hope that the book will become an invitation to explore, to build and to extend agent-based modeling of travel behavior from the stable and well tested core of MATSim documented here.

Valuing Environmental Amenities Using Stated Choice Studies Sep 18 2021 This provides practical, research-based advice on how to conduct high-quality stated choice studies. It covers every aspect of the topic, from planning and writing the survey, to analyzing results, to evaluating quality. There is no other book on the market today that so thoroughly addresses the methodology of stated choice. Chapters are written by top-notch academics and practitioners in an accessible style, offering practical, tough advice.

Econometric Models For Industrial Organization Mar 01 2020 Economic Models for Industrial Organization focuses on the specification and estimation of econometric models for research in industrial organization. In recent decades, empirical work in industrial organization has moved towards dynamic and equilibrium models, involving econometric methods which have features distinct from those used in other areas of applied economics. These lecture notes, aimed for a first or second-year PhD course, motivate and explain these econometric methods, starting from simple models and building to models with the complexity observed in typical research papers. The covered topics include discrete-choice demand analysis, models of dynamic behavior and dynamic games, multiple equilibria in entry games and partial identification, and auction models.

Spatial Microsimulation with R Apr 01 2020 Generate and Analyze Multi-Level Data Spatial microsimulation involves the generation, analysis, and modeling of individual-level data allocated to geographical zones. Spatial Microsimulation with R is the first practical book to illustrate this approach in a modern statistical programming language. Get Insight into Complex Behaviors The book progresses from the principles underlying population synthesis toward more complex issues such as household allocation and using the results of spatial microsimulation for agent-based modeling. This equips you with the skills needed to apply the techniques to real-world situations. The book demonstrates methods for population synthesis by combining individual and geographically aggregated datasets using the recent R packages ipfp and mipfp. This approach represents the "best of both worlds" in terms of spatial resolution and person-level detail, overcoming issues of data confidentiality and reproducibility. Implement the Methods on Your Own Data Full of reproducible examples using code and data, the book is suitable for students and applied researchers in health, economics, transport, geography, and other fields that require individual-level data allocated to small geographic zones. By explaining how to use tools for modeling phenomena that vary over space, the book enhances your knowledge of complex systems and empowers you to provide evidence-based policy guidance.

The Oxford Handbook of Land Economics Dec 30 2019 What do economists know about land-and how they know? The Oxford Handbook of Land Economics describes the latest developments in the fields of economics that examine land, including natural resource economics, environmental economics, regional science, and urban economics. The handbook argues, first, that land is a theme that integrates these fields and second, that productive integration increasingly occurs not just within economics but also across disciplines. Greater recognition and integration stimulates cross-fertilization among the fields of land economics research. By providing a comprehensive survey of land-related work in several economics fields, this handbook provides the basic tools needed for economists to redefine the scope and focus of their work to better incorporate the contemporary thinking from other fields and to push out the frontiers of land economics. The first section presents recent advances in the analysis of major drivers of land use change, focusing on economic development and various land-use markets. The second section presents economic research on the environmental and socio-economic impacts of land use and land use change. The third section addresses six cutting-edge approaches for land economics research, including spatial econometric, simulation, and experimental methods. The section also includes a synthetic chapter critically reviewing methodological advances. The fourth section covers policy issues. Four chapters disentangle the economics of land conservation and preservation, while three chapters examine the economic analysis of the legal institutions of land use. These chapters focus on law and economic problems of permissible government control of land in the U.S. context.

On the Equivalence of Location Choice Models Aug 30 2022

Applied Discrete-Choice Modelling Jan 23 2022 Originally published in 1981. Discrete-choice modelling is an area of econometrics where significant advances have been made at the research level. This book presents an overview of these advances, explaining the theory underlying the model, and explores its various applications. It shows how operational choice models can be used, and how they are particularly useful for a better understanding of consumer demand theory. It discusses particular problems connected with the model and its use, and reports on the authors' own empirical research. This is a comprehensive survey of research developments in discrete choice modelling and its applications.

Residential Location Choice Jul 29 2022 The effective planning of residential location choices is one of the great challenges of contemporary societies and requires forecasting capabilities and the consideration of complex interdependencies which can only be handled by complex computer models. This book presents a range of approaches used to model residential locations within the context of developing land-use and transport models. These approaches illustrate the range of choices that modellers have to make in order to represent residential choice behaviour. The models presented in this book represent the state-of-the-art and are valuable both as key building blocks for general urban models, and as representative examples of complexity science.

Time, History, and Location Dependencies of Spatial Choice Feb 09 2021

Applied Text Analysis with Python Sep 26 2019 From news and speeches to informal chatter on social media, natural language is one of the richest and most underutilized sources of data. Not only does it come in a constant stream, always changing and adapting in context; it also contains information that is not conveyed by traditional data sources. The key to unlocking natural language is through the creative application of text analytics. This practical book presents a data scientist's approach to building language-aware products with applied machine learning. You'll learn robust, repeatable, and scalable techniques for text analysis with Python, including contextual and linguistic feature engineering, vectorization, classification, topic modeling, entity resolution, graph analysis, and visual steering. By the end of the book, you'll be equipped with practical methods to solve any number of complex real-world problems. Preprocess and vectorize text into high-dimensional feature representations Perform document classification and topic modeling Steer the model selection process with visual diagnostics Extract key phrases, named entities, and graph structures to reason about data in text Build a dialog framework to enable chatbots and language-driven interaction Use Spark to scale processing power and neural networks to scale model complexity

Residential Location Markets and Urban Transportation May 27 2022

Place-Based Redistribution in Location Choice Models Sep 30 2022 In many recent location choice models, households randomly vary with respect to their utility of living in a location. We demonstrate that the distribution generating this randomness is fundamentally not identifiable from location choice data and as a result the optimal allocation as chosen by a social planner is not identified. We propose an algorithm for setting the distribution generating the random utility across locations that implies a planner will optimally choose no redistribution in the absence of externalities or equity motives between different groups of people. Our algorithm preserves a planner's motives to redistribute due to equity considerations between different types of people and efficiency in production, the focus of many recent studies.

Discrete Choice Methods with Simulation Feb 21 2022 This book describes the new generation of discrete choice methods, focusing on the many advances that are made possible by simulation. Researchers use these statistical methods to examine the choices that consumers, households, firms, and other agents make. Each of the major models is covered: logit, generalized extreme value, or GEV (including nested and cross-nested logits), probit, and mixed logit, plus a variety of specifications that build on these basics. Simulation-assisted estimation procedures are investigated and compared, including maximum simulated likelihood, method of simulated moments, and method of simulated scores. Procedures for drawing from densities are described, including variance reduction techniques such as anithetics and Halton draws. Recent advances in Bayesian procedures are explored, including the use of the Metropolis-Hastings algorithm and its variant Gibbs sampling. The second edition adds chapters on endogeneity and expectation-maximization (EM) algorithms. No other book incorporates all these fields, which have arisen in the past 25 years. The procedures are applicable in many fields, including energy, transportation, environmental studies, health, labor, and marketing.

Consumers' Spatial Choice Behavior Mar 13 2021 The formation of spatial alternatives and the representation of agent-specific heterogeneity are prime issues in empirical studies of location choice. This study surveys microeconomic and microeconometric models of individual location choice that permit to analyze the determinants of individual choice among various combinations of location-specific goods. At the example of tourist's destination choice, it is shown how the market segmentation process can be endogenized and implemented in nested multinomial and universal logit models.

Discrete Choice Theory of Product Differentiation Mar 25 2022 "The discrete choice approach provides an ideal framework for describing the demands for differentiated products and can be used for studying most product differentiation models in the literature. By introducing extra dimensions of product heterogeneity, the framework also provides richer

models of firm location and product selection."--BOOK JACKET.

Cognitive Choice Modeling Jul 17 2021 The emerging interdisciplinary field of cognitive choice models integrates theory and recent research findings from both decision process and choice behavior. Cognitive decision processes provide the interface between the environment and brain, enabling choice behavior, and the basic cognitive mechanisms underlying decision processes are fundamental to all fields of human activity. Yet cognitive processes and choice processes are often studied separately, whether by decision theorists, consumer researchers, or social scientists. In Cognitive Choice Modeling, Zheng Joyce Wang and Jerome R. Busemeyer introduce a new cognitive modeling approach to the study of human choice behavior. Integrating recent research findings from both cognitive science and choice behavior, they lay the groundwork for the emerging interdisciplinary field of cognitive choice modeling.

Discrete Choice Analysis Nov 28 2019 Discrete Choice Analysis presents these results in such a way that they are fully accessible to the range of students and professionals who are involved in modelling demand and consumer behavior in general or specifically in transportation - whether from the point of view of the design of transit systems, urban and transport economics, public policy, operations research, or systems management and planning. The methods of discrete choice analysis and their applications in the modelling of transportation systems constitute a comparatively new field that has largely evolved over the past 15 years. Since its inception, however, the field has developed rapidly, and this is the first text and reference work to cover the material systematically, bringing together the scattered and often inaccessible results for graduate students and professionals. Discrete Choice Analysis presents these results in such a way that they are fully accessible to the range of students and professionals who are involved in modelling demand and consumer behavior in general or specifically in transportation - whether from the point of view of the design of transit systems, urban and transport economics, public policy, operations research, or systems management and planning. The introductory chapter presents the background of discrete choice analysis and context of transportation demand forecasting. Subsequent chapters cover, among other topics, the theories of individual choice behavior, binary and multinomial choice models, aggregate forecasting techniques, estimation methods, tests used in the process of model development, sampling theory, the nested-logit model, and systems of models. Discrete Choice Analysis is ninth in the MIT Press Series in Transportation Studies, edited by Marvin Manheim.

Stated Choice Methods Dec 10 2020 Multidisciplinary graduate and practitioner guide offering the theory and application of stated choice methods.

American Capitals Jun 23 2019 State capitals are an indelible part of the American psyche, spatial representations of state power and national identity. Learning them by heart is a rite of passage in grade school, a pedagogical exercise that emphasizes the importance of committing place-names to memory. But geographers have yet to analyze state capitals in any depth. In American Capitals, Christian Montès takes us on a well-researched journey across America—from Augusta to Sacramento, Albany to Baton Rouge—shedding light along the way on the historical circumstances that led to their appointment, their success or failure, and their evolution over time. While all state capitals have a number of characteristics in common—as symbols of the state, as embodiments of political power and decision making, as public spaces with private interests—Montès does not interpret them through a single lens, in large part because of the differences in their spatial and historical evolutionary patterns. Some have remained small, while others have evolved into bustling metropolises, and Montès explores the dynamics of change and growth. All but eleven state capitals were established in the nineteenth century, thirty-five before 1861, but, rather astonishingly, only eight of the fifty states have maintained their original capitals. Despite their revered status as the most monumental and historical cities in America, capitals come from surprisingly humble beginnings, often plagued by instability, conflict, hostility, and corruption. Montès reminds us of the period in which they came about, "an era of pioneer and idealized territorial vision," coupled with a still-evolving American citizenry and democracy.

Handbooks in Transport Jul 05 2020 Covering transportation research, this set is suitable for practitioners, researchers, and students.

Spatial Interaction Theory and Planning Models Oct 20 2021

Choice Modelling Dec 22 2021 'This collection of papers, by leading researchers in the field, provides an excellent view of the current state of research and applications. Exciting new techniques are presented, and realistic solutions are offered to issues that arise in applied work. It is an admirably rich volume, offering valuable insights for all readers of choice modeling.' Kenneth Train, University of California, Berkeley and NERA Economic Consulting, Inc., San Francisco, California, US 'I'm an enthusiastic fan of the ICMC, where researchers are friendly, genuinely interested in learning from and helping one another. There is much to learn because each discipline brings a different perspective to the field and to theoretical and applied problems in decision-making and choice behavior. The ICMC embodies the philosophy that most real choice problems are complex and require a cross-disciplinary approach. The papers in this volume represent an eclectic cross-section of the topics covered by key researchers in the field. I look forward to getting our PhD students and postdocs stuck into them.' Jordan Louviere, University of Technology Sydney, Australia Choice modelling has been one of the most active fields in economics over recent years. This valuable new book contains leading contributions from academics and practitioners from across the different areas of study where choice modelling is a key analytical technique, drawn from a recent international conference. Choice models explain the behaviour of individuals by quantifying their values, responses and perceptions of attributes describing the various options (alternatives) available to them. Policy makers and planners have long since recognised the potential of using choice models for guidance purposes, with applications in fields as diverse as transport analysis, healthcare, telecommunications, public service evaluation and energy. The unique mix of theoretical and applied chapters will appeal to academics, students, researchers and practitioners in various fields, as well as anyone with a general interest in the subject.

Residential Location Choice Nov 01 2022 The effective planning of residential location choices is one of the great challenges of contemporary societies and requires forecasting capabilities and the consideration of complex interdependencies which can only be handled by complex computer models. This book presents a range of approaches used to model residential locations within the context of developing land-use and transport models. These approaches illustrate the range of choices that modellers have to make in order to represent residential choice behaviour. The models presented in this book represent the state-of-the-art and are valuable both as key building blocks for general urban models, and as representative examples of complexity science.