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.

This book, Green Concrete for a Better Sustainable Environment, aims to cover recent advances in the development of green concrete solutions and discuss the best ways to leverage opportunities in this domain. Concrete can be described as green concrete if it has one of the following features; it uses waste material as at least one of its components, its production process does not lead to environmental destruction, or it has high performance and life cycle sustainability. At present, natural resources are running out. Cement and concrete made from industrial and construction waste can be regarded as valuable resources for civil infrastructure construction. Green concrete will not only contribute to a circular economy, but can also help to reduce the amount of embodied energy and CO2 emissions associated with cement manufacturing and aggregate quarrying. Using green concrete can also mitigate the environmental threats associated with industrial waste materials. This book covers the theoretical, experimental, applied and modelling research studies on the materials, products and structures related to sustainable cement-based composites.

Development of Ultra-High Performance Concrete against Blasts: From Materials to Structures presents a detailed overview of UHPC development and its related applications in an era of rising terrorism around the world. Chapters present case studies on the novel
development of the new generation of UHPC with nano additives. Field blast test results on reinforced concrete columns made with UHPC and UHPC filled double-skin tubes columns are also presented and compiled, as is the residual load-carrying capacities of blast-damaged structural members and the exceptional performance of novel UHPC materials that illustrate its potential in protective structural design. As a notable representative, ultra-high performance concrete (UHPC) has now been widely investigated by government agencies and universities. UHPC inherits many positive aspects of ultra-high strength concrete (UHSC) and is equipped with improved ductility as a result of fiber addition. These features make it an ideal construction material for bridge decks, storage halls, thin-wall shell structures, and other infrastructure because of its protective properties against seismic, impact and blast loads. Focuses on the principles behind UHPC production, properties, design and detailing aspects Presents a series of case studies and filed blast tests on columns and slabs Focuses on applications and future developments

This book presents select proceedings of National Conference on Advances in Sustainable Construction Materials (ASCM 2020) and examines a range of durable, energy-efficient, and next-generation construction materials produced from industrial wastes and by-products. The topics covered include sustainable materials and construction, innovations in recycling concrete, green buildings and innovative structures, utilization of waste materials in construction, geopolymer concrete, self-compacting concrete by using industrial waste materials, nanotechnology and sustainability of concrete, environmental sustainability and development, recycling solid wastes as road construction materials, emerging sustainable practices in highway pavements construction, plastic roads, pavement analysis and design, application of geosynthetics for ground improvement, sustainability in offshore geotechnics, green tunnel construction technology and application, ground improvement techniques and municipal solid waste landfill. Given the scope of contents, the book will be useful for researchers and professionals working in the field of civil engineering and especially sustainable structures and green buildings.

A New Decision-Making Model Based on Plithogenic Set for Supplier Selection

Advanced Microsystems for Automotive Applications 2015

Activity-based Travel Demand Models

Commuting Stress

Multimodal Transportation Systems : Convenient, Safe, Cost-effective, and Efficient : Proceedings of the 12th COTA International Conference of Transportation Professionals, August 3-6, 2012, Beijing, China

CICTP 2014

Liner Ship Fleet Planning

This comprehensive reference text is a collection of important research findings on the latest developments in network modeling for optimization of smart cities. Such models can be used from outlining the fundamental concepts of urban development to the description and optimization of physical networks, such as power, water or telecommunications. Networks help us understand city economics and various aspects of human interactions within cities with particular applications in quality of life and the flow of people and goods. Finally, the natural environment and even the climate
of cities can be modeled and managed as networks. This volume presents an international selection of invited contributions on policy and best practice in accessible tourism, reflecting current practices across a range of destinations and business settings. It brings together global expertise in planning, design and management to inform and stimulate providers of travel, transport, accommodation, leisure and tourism services to serve guests with disabilities, seniors and the wider markets that require good accessibility. Accessible tourism is not only about providing access to people with disabilities but also addresses the creation of universally designed environments, services and information that can support people who may have temporary disabilities, families with young children, the ever-increasing ageing population, as well as creating safer work places for employees. The book gives ample evidence that accessible tourism organisations and destinations can expand their target markets as well as improve the quality of their service offering, leading to greater customer satisfaction, loyalty and expansion of business.

The 27th EG-ICE International Workshop 2020 brings together international experts working at the interface between advanced computing and modern engineering challenges. Many engineering tasks require open-world resolutions to support multi-actor collaboration, coping with approximate models, providing effective engineer-computer interaction, search in multi-dimensional solution spaces, accommodating uncertainty, including specialist domain knowledge, performing sensor-data interpretation and dealing with incomplete knowledge. While results from computer science provide much initial support for resolution, adaptation is unavoidable and most importantly, feedback from addressing engineering challenges drives fundamental computer-science research. Competence and knowledge transfer goes both ways. Der 27. Internationale EG-ICE Workshop 2020 bringt internationale Experten zusammen, die an der Schnittstelle zwischen fortgeschrittener Datenverarbeitung und modernen technischen Herausforderungen arbeiten. Viele ingenieurwissenschaftliche Aufgaben erfordern Open-World-Resolutionen, um die Zusammenarbeit mehrerer Akteure zu unterstützen, mit approximativen Modellen umzugehen, eine effektive Interaktion zwischen Ingenieur und Computer zu ermöglichen, in mehrdimensionalen Lösungsräumen zu suchen, Unsicherheiten zu berücksichtigen, einschließlich fachspezifischen Domänenwissens, Sensordateninterpretation durchzuführen und mit unvollständigem Wissen umzugehen. Während die Ergebnisse aus der Informatik anfänglich viel Unterstützung für die Lösung bieten, ist eine Anpassung unvermeidlich, und am wichtigsten ist, dass das Feedback aus der Bewältigung technischer Herausforderungen die computer-wissenschaftliche Grundlagenforschung.
vorantreibt. Kompetenz und Wissenstransfer gehen in beide Richtungen.
Proceedings of the 15th COTA International Conference of Transportation Professionals (CICTP 2015), held in Beijing, China, July 24-27, 2015. Sponsored by the Chinese Overseas Transportation Association (COTA), Beijing Jiaotong University, the Transportation Research Board, the Institute of Transportation Engineers (ITE), and the Transportation and Development Institute of ASCE. This proceedings contains 369 papers covering current critical issues focusing on efficient, safe, and sustainable multimodal transportation. Topics include: traffic safety, security, and emergency response; high-speed rail safety; intelligent transportation systems; pavement and materials engineering; highway construction and maintenance; public transit; rail operations, management and control; traffic and driver behavior; transportation policy, planning, and modeling; and aviation, marine, and water transportation. These papers cover current trends in transportation science and will be of interest to researchers, practitioners, and students of transportation engineering.

Multiple Perspectives

Characteristics, Experimental Methods, and Numerical Techniques
Advances in Sustainable Construction Materials
The Evolving Impact of ICT on Activities and Travel Behaviour
Internet of Things and Artificial Intelligence in Transportation Revolution
Risk Assessment in Air Traffic Management

This book constitutes the refereed proceedings of the 4th IFIP TC 12 International Conference on Artificial Intelligence, IFIP AI 2015, Held as Part of WCC 2015, in Daejeon, South Korea, in October 2015. The 13 full papers presented were carefully reviewed and selected from 36 submissions. The papers are organized in topical sections on artificial intelligence techniques in biomedicine, artificial intelligence for knowledge management, computational intelligence and algorithms, and intelligent decision support systems.
The proceedings of the 1st AAGBS International Conference on Business Management 2014 (AiCoBM 2014), held in Penang, Malaysia, gathers 57 refereed papers. They cover areas relating to various aspects of business management and reflect the conference’s three main themes (management and marketing, economics and finance, and entrepreneurship) and present original papers contributed by researchers, scholars, professionals and postgraduate students. They address a range of disciplines that encompass each of the main themes. Using basic and applied research findings together with case studies they provide valuable information on current research trends in business management, international business, marketing, economics, finance, Islamic finance
This book is dedicated to user experience design for automated driving to address humane aspects of automated driving, e.g., workload, safety, trust, ethics, and acceptance. Automated driving has experienced a major development boost in recent years. However, most of the research and implementation has been technology-driven, rather than human-centered. The levels of automated driving have been poorly defined and inconsistently used. A variety of application scenarios and restrictions has been ambiguous. Also, it deals with human factors, design practices and methods, as well as applications, such as multimodal infotainment, virtual reality, augmented reality, and interactions in and outside users. This book aims at 1) providing engineers, designers, and practitioners with a broad overview of the state-of-the-art user experience research in automated driving to speed-up the implementation of automated vehicles and 2) helping researchers and students benefit from various perspectives and approaches to generate new research ideas and conduct more integrated research.

This book constitutes the refereed proceedings of the 12th International Conference on Computational Logistics, ICCL 2021, held in September 2021. Due to COVID-19 pandemic the conference was held virtually. The 42 full papers were carefully reviewed and selected from 111 submissions. They detail the interface of complex logistics systems and advanced computational methods from the fields of operations research, business analytics, and artificial intelligence. The papers are organized in topical sections named maritime and port logistics; supply chain and production management; urban transport and collaborative logistics; routing, dispatching, and scheduling; air logistics and multi-modal transport.

Proceedings of the 10th International Conference of Chinese Transportation Professionals, August 4-8, 2010, Beijing, China
Proceedings of SAE-China Congress 2016: Selected Papers
Artificial Intelligence in Theory and Practice IV
Traffic Flow Theory
Models and Algorithms

This three-volume set (CCIS 1367-1368) constitutes the refereed proceedings of the 5th International Conference on Computer Vision and Image Processing, CVIP 2020, held in Prayagraj, India, in December 2020. Due to the COVID-19 pandemic the conference was partially held online. The 134 papers were carefully reviewed and selected from 352 submissions. The papers present recent research on such topics as biometrics,
forensics, content protection, image enhancement/super-resolution/restoration, motion and tracking, image or video retrieval, image, image/video processing for autonomous vehicles, video scene understanding, human-computer interaction, document image analysis, face, iris, emotion, sign language and gesture recognition, 3D image/video processing, action and event detection/recognition, medical image and video analysis, vision-based human GAIT analysis, remote sensing, and more.

Intended to assist agencies responsible for incident management activities on public roadways to improve their programs and operations. Organized into three major sections: Introduction to incident management; organizing, planning, designing and implementing an incident management program; operational and technical approaches to improving the incident management process.

CICTP 2012 Multimodal Transportation Systems: Convenient, Safe, Cost-effective, and Efficient: Proceedings of the 12th COTA International Conference of Transportation Professionals, August 3-6, 2012, Beijing, China

This volume brings together state-of-the-art research on the development of infrastructure management, assessment, and rehabilitation techniques. It sheds light on pioneering work on innovative 3D-printed concrete, novel methods for assessment of bridge decks, and advanced computer vision-based maintenance of civil infrastructure. The book is essential reading for infrastructure owners, engineers, and contractors, allowing them to gain insights into groundbreaking research that is paving the way toward sustainable and resilient infrastructure.

Urban Informatics
The Multi-Agent Transport Simulation MATSim
12th International Conference, ICCL 2021, Enschede, The Netherlands, September 27–29,
This edited volume presents the proceedings of the AMAA 2015 conference, Berlin, Germany. The topical focus of the 2015 conference lies on smart systems for green and automated driving. The automobile of the future has to respond to two major trends, the electrification of the drivetrain, and the automation of the transportation system. These trends will not only lead to greener and safer driving but re-define the concept of the car completely, particularly if they interact with each other in a synergetic way as for autonomous parking and charging, self-driving shuttles or mobile robots. Key functionalities like environment perception are enabled by electronic components and systems, sensors and actuators, communication nodes, cognitive systems and smart systems integration. The book will be a valuable read for research experts and professionals in the automotive industry but the book may also be beneficial for graduate students.

Innovative and smart mobility systems are expected to make transportation systems more sustainable, inclusive, and safe. Because of changing mobility paradigms, transport planning and design require different methodological approaches. Over twelve chapters, this book examines and analyzes Mobility as a Service (MaaS), travel behavior, traffic control, intelligent transportation system design, electric, connected, and automated vehicles, and much more.

This book is the fourth volume of the sub series of the Lecture Notes in Mobility dedicated to Road Vehicle Automation. Its chapters have been written by researchers, engineers and analysts from all around the globe. Topics covered include public sector activities, human factors and challenges, ethical, legal, energy and technology perspectives, vehicle systems development, as well as transportation infrastructure and planning. The book is based on the Automated Vehicles Symposium which took place in San Francisco, California (USA) in July 2016.

This proceedings volume gathers outstanding papers submitted to the 2016 SAE-China Congress, the majority of which are from China, the biggest car maker as well as most dynamic car market in the world. The book includes insights into the current challenges that the whole industry is currently facing, and it offers possible solutions to problems such as emission controls, environmental pollution, the energy shortage, traffic congestion and sustainable development. It also presents the latest technical achievements in the automotive industry. Many of the approaches it presents can help technicians to solve the practical problems that most affect their daily work.

Infrastructure Management, Assessment and Rehabilitation
City Distribution and Urban Freight Transport
From Materials to Structures
This paper proposes an integrated multi-attribute border approximation area comparison (MABAC) based on the best-worst method (BWM), plithogenic set, and rough numbers. BWM is applied to regulate the weight vector of the measures in group decision-making problems with a high level of consistency. For the treatment of uncertainty, a plithogenic set and rough number (RN) are used to improve the accuracy of results. Plithogenic set operations are used to deal with information in the desired manner that handles uncertainty and vagueness. Then, based on the plithogenic aggregation and the results of BWM evaluation, we use MABAC to find the optimal alternative according to defined criteria. To examine the proposed integrated algorithm, an empirical example is produced to select an optimal supplier within five options in the healthcare industry.

This book is an empirically rich case-study of what is currently the most popular alternative-fuel vehicle in the history of motorization - the electric two-wheeler (e-bike). The book provides sociological insights into e-bike mobility in China and discusses politics, social practices and larger issues of mobility transition in urban China. Taking an accessible approach to the subject, the book identifies the main sociospatial conflicts regarding the use of e-bikes and discusses why electric two-wheeler mobility is important for the future of urban China and urban transportation globally. This book will be an invaluable read for urban geographers and transportation researchers, but also for academics and general readers interested in Chinese Studies, specifically in the area of urban mobility in China.

Congestion continues to grow in America’s urban areas. This report presents details on the 2004 trends, findings and what can be done to address the growing transportation problems. Trend data from 1982 to 2002 for 85 urban areas provides both a local view and a national perspective on the growth and extent of traffic congestion. The 2004 Report provides clear evidence that the time for improvements has arrived. Communicating the congestion levels and the need for improvements is a goal of this report. The decisions about which, and how much, improvement to fund will be made at the local level according to a variety of goals, but there are some broad conclusions that can be drawn from this database. Tables.

Liner Ship Fleet Planning: Models and Algorithms systematically introduces the latest research on modeling and optimization for liner ship fleet planning with demand uncertainty. Container shipping companies have struggled since the financial crisis of 2007-2008, making it critical for them to make informed decisions about their fleet planning and development. Current and future shipping professionals require systematic approaches for investigating and solving their fleet planning problems, as well as methodologies for
addressing their other shipping responsibilities. Liner Ship Fleet Planning addresses these needs, providing
the most recent quantitative research of liner shipping in maritime transportation. The research and methods
provided assist those tasked with optimizing shipping efficiency and fleet deployment in the face of uncertain
demand. Suitable for those with any level of quantitative background, the book serves as a valuable resource
for both maritime academics, and shipping professionals involved in planning and scheduling departments.
Introduces the latest research on maritime transportation problems Analyzes problems of liner ship fleet
planning, taking uncertainty into account Promotes the use of mathematics to manage uncertainty, using
stochastic programming models, and proposing solution algorithms to solve proposed models Includes case
studies that provide detailed examples of real-world examples of fleet optimization Explains how stochastic
programming modeling methods and solution algorithms can be applied to other research fields featuring
uncertainty, such as container yard planning, berth allocation and vehicle deployment problems
Road Vehicle Automation 4
Development of Ultra-High Performance Concrete against Blasts
User Experience Design in the Era of Automated Driving
CICTP 2015
Safe, Smart, and Sustainable Multimodal Transportation Systems : Proceedings of the 14th COTA
International Conference of Transportation Professionals, July 4-7, 2014, Changsha, China
Computer Vision and Image Processing
A Primer
This open access book is the first to systematically introduce the principles of urban informatics and its
application to every aspect of the city that involves its functioning, control, management, and future
planning. It introduces new models and tools being developed to understand and implement these
technologies that enable cities to function more efficiently – to become ‘smart’ and ‘sustainable’. The
smart city has quickly emerged as computers have become ever smaller to the point where they can be
embedded into the very fabric of the city, as well as being central to new ways in which the population
can communicate and act. When cities are wired in this way, they have the potential to become sentient
and responsive, generating massive streams of ‘big’ data in real time as well as providing immense
opportunities for extracting new forms of urban data through crowdsourcing. This book offers a
comprehensive review of the methods that form the core of urban informatics from various kinds of urban
remote sensing to new approaches to machine learning and statistical modelling. It provides a detailed
technical introduction to the wide array of tools information scientists need to develop the key urban
analytics that are fundamental to learning about the smart city, and it outlines ways in which these tools can be used to inform design and policy so that cities can become more efficient with a greater concern for environment and equity.

One of the most complex challenges for the future of aviation is to ensure a safe integration of the expected air traffic demand. Air traffic is expected to almost double its current value in 20 years, which cannot be managed without the development and implementation of a safe air traffic management (ATM) system. In ATM, risk assessment is a crucial cornerstone to validate the operation of air traffic flows, airport processes, or navigation accuracy. This book tries to be a focal point and motivate further research by encompassing crosswise and widespread knowledge about this critical and exciting issue by bringing to light the different purposes and methods developed for risk assessment in ATM.

Several people have asked what motivated us to write a book about commuting, something that we all do but over which we have very little control. As a matter of fact, the general reaction from professional colleagues and friends alike was first a sort of knowing smile followed by some story. Everyone has a story about a personal commuting experience. Whether it was a problem with a delayed bus, a late arrival, broken-down automobiles, hot trains or subways, during the past year we have heard it all. Many of these stories must be apocryphal because, if they were all true, it is amazing that anyone ever arrived at work on time, at home, or at some other destination. The interest for us likely stems from many factors that over the years have probably influenced our thinking. All of the authors studied and/or grew up in the New York City metropolitan area. For illustration, let's devote a few paragraphs to describing some of the senior author's (Koslowsky's) life experiences. As a young man in New York City, he was a constant user of the New York City subway system. The whole network was and still is quite impressive. For a relatively small sum, one can spend the whole day and night in an underground world (growing up in New York often makes one think that the whole world is contained in its five boroughs).

This book constitutes the proceedings of the 11th International Conference on Computational Logistics, ICCL 2020, held in Enschede, The Netherlands, in September 2020. The 49 papers included in this book were carefully reviewed and selected from 73 submissions. They were organized in topical sections named: maritime and port logistics; vehicle routing and scheduling; freight distribution and city logistics; network design and scheduling; and selected topics in logistics. Due to the Corona pandemic ICCL 2020 was held as a virtual event.
EG-ICE 2020 Workshop on Intelligent Computing in Engineering

Causes, Effects, and Methods of Coping

CICTP 2012

Select Proceedings of ASCM 2020

5th International Conference, CVIP 2020, Prayagraj, India, December 4-6, 2020, Revised Selected Papers, Part III

ICCTP 2010 Integrated Transportation Systems: Green, Intelligent, Reliable

Proceedings of the First International Conference, July 22-24, 2007, Southwest Jiaotong University, Chengdu, China

TRB's second Strategic Highway Research Program (SHRP 2) Report S2-C46-RR-1: Activity-Based Travel Demand Models: A Primer explores ways to inform policymakers' decisions about developing and using activity-based travel demand models to better understand how people plan and schedule their daily travel. The document is composed of two parts. The first part provides an overview of activity-based model development and application. The second part discusses issues in linking activity-based models to dynamic network assignment models.

City distribution plays a key role in supporting urban lifestyles, helping to serve and retain industrial and trading activities, and contributing to the competitiveness of regional industry. This book aims to improve knowledge in this area by recognizing and evaluating the problems within the urban freight transport system.

This collection contains 690 papers presented at the First International Conference on Transportation Engineering, held in Chengdu, China, July 22-24, 2007.

Creating Traffic Models is a challenging task because some of their interactions and system components are difficult to adequately express in a mathematical form. Traffic Flow Theory: Characteristics, Experimental Methods, and Numerical Techniques provide traffic engineers with the necessary methods and techniques for mathematically representing traffic flow. The book begins with a rigorous but easy to understand exposition of traffic flow characteristics including Intelligent Transportation Systems (ITS) and traffic sensing technologies. Includes worked out examples and cases to illustrate concepts, models, and theories Provides modeling and analytical procedures for supporting different aspects of traffic analyses for supporting different flow models Carefully explains the dynamics of traffic flow over time and space

4th IFIP TC 12 International Conference on Artificial Intelligence, IFIP AI 2015, Held as Part of WCC 2015, Daejeon, South Korea, October 4-7, 2015, Proceedings

Efficient, Safe, and Green Multimodal Transportation

International Conference on Transportation Engineering 2007

Network Design And Optimization For Smart Cities

Traffic Incident Management Handbook
This is the fifth volume of a sub series on Road Vehicle Automation published within the Lecture Notes in Mobility. Like in previous editions, scholars, engineers and analysts from all around the world have contributed chapters covering human factors, ethical, legal, energy and technology aspects related to automated vehicles, as well as transportation infrastructure and public planning. The book is based on the Automated Vehicles Symposium which was hosted by the Transportation Research Board (TRB) and the Association for Unmanned Vehicle Systems International (AUVSI) in San Francisco, California (USA) in July 2017.

The Evolving Impacts of ICT on Activities and Travel Behavior, Volume Three in the Advances in Transport Policy and Planning series, assesses both successful and unsuccessful practices and policies from around the world on the topic. This new volume highlights ICT as a Resilient Travel Behavior Alternative; The Past, Present and Future of Travel Time Use; The Intersection of Transportation and Telecommunications in Demand Forecasting and Traffic Management; International Journey Planning System to Welcoming MaaS; An Empirical Analysis of the Relationship Between Mobile Internet Usage and Activity-Travel Behavior; Travel Time Perception and Time Use in an Era of Automated Driving, and more. Provides the authority and expertise of leading contributors from an international board of authors Presents the latest release in the Advances in Transport Policy and Planning series Updated release includes the latest information on the evolving impact of ICT on activities and travel behavior

The advent of Internet of Things offers a scalable and seamless connection of physical objects, including human beings and devices. This, along with artificial intelligence, has moved transportation towards becoming intelligent transportation. This book is a collection of eleven articles that have served as examples of the success of internet of things and artificial intelligence deployment in transportation research. Topics include collision avoidance for surface ships, indoor localization, vehicle authentication, traffic signal control, path-planning of unmanned ships, driver drowsiness and stress detection, vehicle density estimation, maritime vessel flow forecast, and vehicle license plate recognition. High-performance computing services have become more affordable in recent years, which triggered the adoption of deep-learning-based approaches to increase the performance standards of artificial intelligence models. Nevertheless, it has been pointed out by various researchers that traditional shallow-learning-based approaches usually have an advantage in applications with small datasets. The book can provide information to government officials, researchers, and practitioners. In each article, the authors have summarized the limitations of existing works and offered valuable information on future research directions.

The Growth of the E-bike
Computational Logistics
Urban Mobility in Modern China
Best Practice in Accessible Tourism
Models and Technologies for Smart, Sustainable and Safe Transportation Systems