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KEY=SCIENCE - JULISSA WILLIAMSON

Project Scheduling

A Research Handbook

Springer Science & Business Media Our objectives in writing Project Scheduling: A Research Handbook are threefold: (1) Provide a unified scheme for classifying the numerous project scheduling problems occurring in practice and studied in the literature; (2) Provide a unified and up-to-date treatment of the state-of-the-art procedures developed for their solution; (3) Alert the reader to various important problems that are still in need of considerable research effort. Project Scheduling: A Research Handbook has been divided into four parts. Part I consists of three chapters on the scope and relevance of project scheduling, on the nature of project scheduling, and finally on the introduction of a unified scheme that will be used in subsequent chapters for the identification and classification of the project scheduling problems studied in this book. Part II focuses on the time analysis of project networks. Part III carries the discussion further into the crucial topic of scheduling under scarce resources. Part IV deals with robust scheduling and stochastic scheduling issues. Numerous tables and figures are used throughout the book to enhance the clarity and effectiveness of

the discussions. For the interested and motivated reader, the problems at the end of each chapter should be considered as an integral part of the presentation.

Introduction to Management Science

A Modeling and Case Studies Approach with Spreadsheets

Introduction to Management Science, 2e offers a unique case study approach and integrates the use of Excel. Each chapter includes a case study that is meant to show the students a real and interesting application of the topics addressed in that chapter. This most recent revision has been thoroughly updated to be more "user-friendly" and more technologically advanced. These changes include, a completely new chapter on the art of modeling with spreadsheets. This unique chapter goes far beyond anything found in other textbooks and are based on the award winning methodologies used by Mark Hillier in his own course. The technology package has also been greatly enhanced to include, Crystal Ball 2000 (Professional Edition) a Management Science Online Learning Center, and an Excel add-in called Alver Table for performing sensitivity analysis. Crystal Ball is the most popular Excel add-in for computer simulation and includes OptQuest (an optimizer with simulation) as well as a forecasting module. The Management Science Online Learning Center (website) includes several modules that enable students to interactively explore certain management science techniques in depth. Solver Table is an Excel add-in developed by the author to help perform sensitivity analysis systematically, as well as substantially expanded coverage of computer simulation, including Crystal Ball. We now have two chapters on computer simulation instead of one, where the second chapter features the use of Crystal Ball.all.

Smart Cities as a Solution for Reducing Urban Waste and

Pollution

IGI Global The exponential growth of urban settings has led to an increase in pollutants and waste management issues around the world. As the environment continues to falter under the weight of these pressing issues, it has become increasingly imperative to develop new technologies and methodologies that have the potential to improve the overall sustainability and cleanliness of these cities. Smart Cities as a Solution for Reducing Urban Waste and Pollution examines emergent research on smart innovations within built urban environments. Featuring best practices and theoretical frameworks, as well as potential issues in the implementation of smart and green technology in urban settings, this publication is a vital reference source for graduate students, researchers, academics, engineers, architects, facility managers, and government officials.

Management Science

Issues for Feb. 1965-Aug. 1967 include Bulletin of the Institute of Management Sciences.

Open Design

A Stakeholder-oriented Approach in Architecture, Urban Planning, and Project Management ; Collecting the Following Works: Open Design, a Collaborative Approach to Architecture, Open Design and Construct

Management, [and] Open Design, Cases and Exercises

IOS Press Open Design refers to a stakeholder-oriented approach in Architecture, Urban Planning, and Project Management, as developed by the Chair of Computer Aided Design and Planning of Delft University of Technology. This edition collects the following three volumes on Open Design: Open Design, a Collaborative Approach to Architecture, offers concepts and methods to combine technical and social optimisation into one integrated design process. Open Design and Construct Management, Managing Complex Construction Projects through Synthesis of Stakeholder Interests, offers a new approach to managing complexity by distinguishing best management practices for complex projects involving considerable uncertainty and risk and best practices for straightforward predictable projects. Open Design, Cases and Exercises, enables the reader to become familiar with the decision-oriented design tools of Open Design, and their application in practice.

Conceptual Modeling--ER ...

Open Design, a Stakeholder-oriented Approach in Architecture, Urban Planning, and Project Management

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Natural Catastrophe Risk Management and Modelling

A Practitioner's Guide

John Wiley & Sons This book covers both the practical and theoretical aspects of catastrophe modelling for insurance industry practitioners and public policymakers. Written by authors with both academic and industry experience it also functions as an excellent graduate-level text and overview of the field. Ours is a time of unprecedented levels of risk from both natural and anthropogenic sources. Fortunately, it is also an era of relatively inexpensive technologies for use in assessing those risks. The demand from both commercial and public interests—including (re)insurers, NGOs, global disaster management agencies, and local authorities—for sophisticated catastrophe risk assessment tools has never been greater, and contemporary catastrophe modelling satisfies that demand. Combining the latest research with detailed coverage of state-of-the-art catastrophe modelling techniques and technologies, this book delivers the knowledge needed to use, interpret, and build catastrophe models, and provides greater insight into catastrophe modelling’s enormous potential and possible limitations. The first book containing the detailed, practical knowledge needed to support practitioners as effective catastrophe risk modellers and managers Includes hazard, vulnerability and financial material to provide the only independent, comprehensive overview of the subject, accessible to students and practitioners alike Demonstrates the relevance of catastrophe models within a practical, decision-making framework and illustrates their many applications Includes contributions from many of the top names in the field, globally, from industry, academia, and government Natural Catastrophe Risk Management and Modelling: A Practitioner’s Guide is an important working resource for catastrophe modelling analysts and developers, actuaries, underwriters, and those working in compliance or regulatory functions related to catastrophe risk. It is also valuable for scientists and engineers seeking to gain greater insight into catastrophe risk management and its applications.

Beyond Downscaling

"A Bottom-up Approach to Climate Adaptation for Water Resources Management "

World Bank Publications Climate change adds uncertainty to already complex global water challenges. Because climate change affects poorer countries and vulnerable populations the most, the World Bank strives to mainstream climate change considerations into its operations to inform investment and water resources management decisions. Although no standard method has been adopted yet by the Bank, common practice used downscaled projected precipitation and temperature from Global Climate Models (GCMs), as input to hydrologic models. While this has been useful in some applications, they often give too wide a dispersion of readings to provide useful guidance for site-specific water resources management and infrastructure planning and design. Rather than design for an uncertain situation selected a priori, the so-called “bottom-up” approaches explore the sensitivity of a chosen project to the effects of uncertainties caused by climate change. This book summarizes alternatives explored by a group of organizations (such as the U.S. Corps of Engineers, Conservation International, the University of Massachusetts and the Bank) all belonging to the Alliance for Global Water Adaptation (AGWA), to provide practitioners with the tools to adapt to the realities of climate change by following a decision-making process that incorporates bottom-up thinking.

Intelligent Agrifood Chains and Networks

John Wiley & Sons Food has a fundamental position in society, ensuring health, happiness and political stability. Consequently, the management of food chains and networks is one of the most important aspects of the modern food industry. Yet food is difficult to handle along long supply chains, with a limited window for storage and handling time, and the risk of spoiling if incorrectly handled or processed. These issues can lead to logistical problems that can severely affect product quality and freshness. Intelligent Agrifood Chains and Networks offers a timely discussion of the current state of food logistics, and indicates the major ICT problems that can occur during production, warehousing, transportation and retailing. Emphasis is given to new technologies and intelligent systems that are able to process time-dependent information, handle emergencies, and support logistics operations in food management. In particular, the authors show how telematics and RFID can be implemented in the supply chain. The book also includes real-life case studies, in which actual food logistics problems and their solutions are presented, demonstrating how systemic and logistics approaches may be combined. The book is directed at academics, researchers, and students seeking the necessary background in

terms of the interplay between the food supply chain and ICT. Its comprehensive review of current issues in the food supply chain will be of interest to managers and technicians working in the food industry, while its technological focus will be invaluable to food scientists and technologists working in research and industry environments.

Introduction to Operations Research

This operations research text incorporates a wealth of state-of-the-art, user-friendly software and more coverage of modern operations research topics. This edition features the latest developments in operations research.

Introduction to Operations Research

"Available July 31, 2004" The 8th edition of" Introduction to Operations Research" remains the classic operations research text while incorporating a wealth of state-of-the-art, user-friendly software and more coverage of business applications than ever before. The hallmark features of this edition include clear and comprehensive coverage of fundamentals, an extensive set of interesting problems and cases, and state-of-the-practice operations research software used in conjunction with examples from the text. This edition will also feature the latest developments in OR, such as metaheuristics, simulation, and spreadsheet modeling.

New Methods and Applications in Multiple Attribute Decision Making (MADM)

Springer Nature This book presents 27 methods of the Multiple Attribute Decision Making (MADM), which are not discussed in the existing books, nor studied in details, using more applications. Nowadays, decision making is one of the most important and fundamental tasks of management as an organizational goal achievement that depends on its quality. Decision making includes the correct expression of objectives, determining different and possible solutions, evaluating their feasibility, assessing the consequences, and the results of implementing each solution, and finally, selecting and implementing the solution. Multiple Criteria Decision Making (MCDM) is sum of the decision making techniques. MCDM is divided into the Multiple Objective Decision Making (MODM) for designing the best solution and MADM for selecting the best alternative. Given that the applications of MADM are mostly more than MODM, wide various techniques have been developed for MADM by researchers over the last 60 years, and the current book introduces some of

the other new MADM methods.

The Sciences of the Artificial, third edition

MIT Press Continuing his exploration of the organization of complexity and the science of design, this new edition of Herbert Simon's classic work on artificial intelligence adds a chapter that sorts out the current themes and tools—chaos, adaptive systems, genetic algorithms—for analyzing complexity and complex systems. There are updates throughout the book as well. These take into account important advances in cognitive psychology and the science of design while confirming and extending the book's basic thesis: that a physical symbol system has the necessary and sufficient means for intelligent action. The chapter "Economic Reality" has also been revised to reflect a change in emphasis in Simon's thinking about the respective roles of organizations and markets in economic systems.

Benchmarking with DEA, SFA, and R

Springer Science & Business Media This book covers recent advances in efficiency evaluations, most notably Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) methods. It introduces the underlying theories, shows how to make the relevant calculations and discusses applications. The aim is to make the reader aware of the pros and cons of the different methods and to show how to use these methods in both standard and non-standard cases. Several software packages have been developed to solve some of the most common DEA and SFA models. This book relies on R, a free, open source software environment for statistical computing and graphics. This enables the reader to solve not only standard problems, but also many other problem variants. Using R, one can focus on understanding the context and developing a good model. One is not restricted to predefined model variants and to a one-size-fits-all approach. To facilitate the use of R, the authors have developed an R package called Benchmarking, which implements the main methods within both DEA and SFA. The book uses mathematical formulations of models and assumptions, but it de-emphasizes the formal proofs - in part by placing them in appendices -- or by referring to the original sources. Moreover, the book emphasizes the usage of the theories and the interpretations of the mathematical formulations. It includes a series of small examples, graphical illustrations, simple extensions and questions to think about. Also, it combines the formal models with less formal economic and organizational thinking. Last but not least it discusses some larger applications with significant practical impacts, including the design of benchmarking-based regulations of energy companies in different European countries, and the development of merger control programs for competition authorities.

Space Is the Machine

A Configurational Theory of Architecture

Since The Social Logic of Space was published in 1984 Bill Hillier and his colleagues at University College London have been conducting research on how space features in the form and functioning of buildings and cities. A key outcome is the concept of 'spatial configuration' - meaning relations which take account of other relations in a complex. New techniques have been developed and applied to a wide range of architectural and urban problems. The aim of this book is to assemble some of this work and show how it leads the way to a new type of theory of architecture: an 'analytic' theory in which understanding and design advance together. The success of configurational ideas in bringing to light the spatial logic of buildings and cities suggests that it might be possible to extend these ideas to other areas of the human sciences where problems of configuration and pattern are critical.

Handbook of Healthcare Operations Management

Methods and Applications

Springer Science & Business Media From the Preface: Collectively, the chapters in this book address application domains including inpatient and outpatient services, public health networks, supply chain management, and resource constrained settings in developing countries. Many of the chapters provide specific examples or case studies illustrating the applications of operations research methods across the globe, including Africa, Australia, Belgium, Canada, the United Kingdom, and the United States. Chapters 1-4 review operations research methods that are most commonly applied to health care operations management including: queuing, simulation, and mathematical programming. Chapters 5-7 address challenges related to inpatient services in hospitals such as surgery, intensive care units, and hospital wards. Chapters 8-10 cover outpatient services, the fastest growing part of many health systems, and describe operations research models for primary and specialty care services, and how to plan for patient no-shows. Chapters 12 – 16 cover topics related to the broader integration of health services in the context of public health, including optimizing the location of emergency vehicles, planning for mass vaccination events, and the coordination among different parts of a health system. Chapters 17-18 address supply chain management within hospitals, with a focus on pharmaceutical supply management, and the challenges of

managing inventory for nursing units. Finally, Chapters 19-20 provide examples of important and emerging research in the realm of humanitarian logistics.

Social Innovation

Blurring Boundaries to Reconfigure Markets

Springer Focusing on social innovation broadly conceived in the context of social entrepreneurship and social enterprise in their global context this book is organised to address three of the most important themes in social innovation: strategies and logics, performance measurement and governance, and finally, sustainability and the environment.

RFID Technology Integration for Business Performance Improvement

IGI Global The development of radio-frequency electromagnetic fields for wireless data transmission has presented several new opportunities for sharing, tracking, and reading digital information in various industries. RFID Technology Integration for Business Performance Improvement presents emerging research surrounding the use and value of Radio Frequency Identification (RFID) technology for cost reduction, supply chain improvement, inventory management, and partner relationship management. This publication is ideal for use by business managers, researchers, academics, and advanced-level students seeking research on the management strategies, operational techniques, opportunities, and challenges of implementing and using this new technology in a business setting.

Security Science

The Theory and Practice of Security

Butterworth-Heinemann Security Science integrates the multi-disciplined practice areas of security into a single structured body of knowledge, where each chapter takes an evidence-based approach to one of the core knowledge categories. The authors give practitioners and students the underlying scientific perspective based on robust underlying theories, principles, models or frameworks. Demonstrating the relationships and underlying concepts, they present an approach to each core security function within the context of both organizational security and homeland security. The book is unique in its application of the scientific method to the increasingly challenging tasks of preventing crime and foiling terrorist attacks. Incorporating the latest security theories and principles, it considers security from both a national and corporate perspective, applied at a strategic and tactical level. It provides a rational basis for complex decisions and begins the process of defining the emerging discipline of security science. A fresh and provocative approach to the key facets of security Presentation of theories and models for a reasoned approach to decision making Strategic and tactical support for corporate leaders handling security challenges Methodologies for protecting national assets in government and private sectors Exploration of security’s emerging body of knowledge across domains

The Palgrave Encyclopedia of Interest Groups, Lobbying and Public Affairs

Springer Nature A transnational encyclopedia on interest groups, lobbying and public affairs designed to satisfy a growing global need for knowledge and in depth understanding of these key political and corporate activities for the researcher, student, policy maker and modern manager.

Essentials of Business Analytics

An Introduction to the Methodology and its Applications

Springer This comprehensive edited volume is the first of its kind, designed to serve as a textbook for long-duration business analytics programs. It can also be used as a guide to the field by practitioners. The book has contributions from experts in top universities and industry. The editors have taken extreme care to ensure continuity across the chapters. The material is organized into three parts: A) Tools, B) Models and C) Applications. In Part A, the tools used by business analysts are described in detail. In Part B, these tools are applied to construct models used to solve business problems. Part C contains detailed applications in various functional areas of business and several case studies. Supporting material can be found in the appendices that develop the pre-requisites for the main text. Every chapter has a business orientation. Typically, each chapter begins with the description of business problems that are transformed into data questions; and methodology is developed to solve these questions. Data analysis is conducted using widely used software, the output and results are clearly explained at each stage of development. These are finally transformed into a business solution. The companion website provides examples, data sets and sample code for each chapter.

Fueling Resistance

The Contentious Political Economy of Biofuels and Fracking

Oxford University Press, USA "This book explores how and why controversies over liquid biofuels (bioethanol and biodiesel) and hydraulic fracturing ("fracking") unfolded in surprisingly similar ways in the global North and South. In the early 2000s, the search was on for fuels that would reduce greenhouse gas emissions, spur economic development in rural regions, and diversify national energy supplies. Biofuels and fracking took centre stage as promising commodities and technologies. But controversy quickly erupted. Global enthusiasm for these fuels, and the widespread projections for their production around the world, collided with local politics. Rural and remote places, such as coastal east Africa and Canada's Yukon territory, became hotbeds of contention in these new energy politics. Opponents of biofuels in Kenya and of fracking in the Yukon activated specific identities, embraced scale shifts across transnational networks, brokered relationships between disparate communities and interests, and engaged in contentious performances with

symbolic resonance. To explain these convergent dynamics of contention and resistance, the book argues that the emergence of grievances and the mechanisms of mobilization that are used to resist new fuel technologies depend less on the type of energy developed than on intersecting elements of the political economy of energy--specifically finance, ownership, and trade relations. Taken together, the intersecting elements of the political economy of energy shape patterns of resistance in new energy frontiers"--

Mapping, Managing, and Crafting Sustainable Business Strategies for the Circular Economy

IGI Global As the planet’s natural resources continue to be depleted, society’s environmental awareness has grown. Businesses especially are being coerced into incorporating more sustainable approaches to carrying out their activities. Organizations that develop sustainable business strategies that deliver enhanced value by radically reducing material inputs and engaging consumers on circular economy will be well-positioned for success. Mapping, Managing, and Crafting Sustainable Business Strategies for the Circular Economy is an essential reference source that discusses implementing sustainable business strategies as well as economic policies for the modern business era. Featuring research on topics such as global business, urban innovation, and cost management, this book is ideally designed for managers, operators, manufacturers, academics, practitioners, policymakers, researchers, business professionals, and students seeking coverage on utilizing natural resources in the most sustainable way.

Evolution of Supply Chain Management

Symbiosis of Adaptive Value Networks and ICT

Springer Science & Business Media In the last half of the twentieth century industry encountered a revolutionary change brought about by the harnessed power of seemingly ever-increasing capacity, speed and functionality of computers and microprocessors. This strength provided management and workers within industries with new capabilities for management, planning and control, design, quality assurance and customer support. Organized information flow became the mainstay of industrial companies. New tools and information technology systems emerged and evolved to enable companies to integrate the various departments (Design, Procurement, Manufacturing, Sales and Finance) within companies, particularly the lager ones, including international corporations.

This was to give them a chance to meet new demands for product time to market, just in time supply of orders, and customer support. To the smaller company these changes were not so apparent. Neither the tools nor systems nor indeed their economic value seemed appropriate to them except for special cases. While all this was happening the structure of the larger companies began to disintegrate. Strong competitive pressures and globalization of the market place brought this about. Shedding unwanted competence and subcontracting it to others became common practice. Regional market pressures triggered companies to reorganize to create, produce, and distribute goods and services. Greater dependency on chains of supply from external companies became the norm. Medium and smaller sized companies began to gain some advantage and at the same time some were sucked into management and control systems governed by the larger companies.

Principles of Sustainable Finance

Oxford University Press, USA Combining theory, empirical data, and policy this book provides a fresh analysis of sustainable finance. It explains the sustainability challenges for corporate investment and shows how finance can steer funding to certain companies and projects without sacrificing return, speeding up the transistion to a sustainable economy.

Instruments of Planning

Tensions and challenges for more equitable and sustainable cities

Routledge Instruments of Planning: Tensions and Challenges for more Equitable and Sustainable Cities critically explores planning's instrumentality to deliver important social and environmental outcomes in neoliberal planning landscapes. Because each instrument is unique and may be tailored to its own jurisdictional needs, Instruments of Planning is a compendium of case studies from urban regions in Australia, Canada, the United States and Europe, providing readers with a collection that critically challenges the role and potential of planning instruments and instrumentality across a range of contexts. Instruments of Planning captures the political, institutional, and economic challenges that confront planning. It examines planning instruments designed to assist with strategic planning and implementation, and considers the role that technology plays in unpacking and understanding complexity in planning.

Written by Rebecca Leshinsky and Crystal Legacy of RMIT University in Melbourne, Australia, this book fills the gap in planning theory about the instrumentality of planning in the neoliberal urban context. It is essential reading for students, urban researchers, policy analysts and planning practitioners.

Agriculture, Livestock Production and Aquaculture

Advances for Smallholder Farming Systems Volume 2

Springer Nature This two-volume set discusses recent approaches and technological innovations for sustainable agriculture in smallholder farming systems impacted by climate change. The systems covered include crop-based agricultural production, as well as aquaculture and livestock production as related systems using similar techniques to combat food security issues brought about by climate change and resource overuse. The chapters detail innovations involving crop diversification, soil resilience management, geoinformatics and land suitability monitoring for smart farming, information technology in livestock production, and nutrient resource management in fishery aquaculture. Researchers, practitioners and industries will be able to use this information to implement socially and economically sustainable practices to achieve food security in impoverished areas vulnerable to climate change, while also learning about the rapid evolution in information technology that is applicable for and available to small holder farmers. Volume 2 focuses on trends and technologies in food security within the context of sustainable practices, drone technology, microwave data, molecular farming, machine learning, agricultural economics, spatial modeling and agricultural policy. These chapters discuss advancements in fishery resource and aquaculture practices, and also the challenges facing these areas due to climate change.

Complexity and Planning

Systems, Assemblages and Simulations

Routledge Complexity, complex systems and complexity theories are becoming increasingly important within a variety disciplines. While these issues are less well known within the discipline of spatial planning, there has been a recent growing awareness and interest. As planners grapple with how to consider the vagaries of the real world when putting together proposals for future development, they question how complexity, complex systems and complexity theories might prove useful with regard to spatial

planning and the physical environment. This book provides a readable overview, presenting and relating a range of understandings and characteristics of complexity and complex systems as they are relevant to planning. It recognizes multiple, relational approaches of dynamic complexity which enhance understandings of, and facilitate working with, contingencies of place, time and the various participants' behaviours. In doing so, it should contribute to a better understanding of processes with regard to our physical and social worlds.

Forest Systems

Sustainable Societies: Transition from theories to practice

Universitätsverlag der TU Berlin The national economic situation, rapidly changing societies, increasing environment pollution amidst global warming around us are some of the most burning topics in day-to-day discussions, news and scholarly discourses. What we see are only the consequences of protracted actions, policies and decisions. The issues associated with these phenomena are highly complex that challenge a direct interpretation of their root causations, indications, results and long-term impacts. For instance, is the issue of managing natural resources for industry & business operations within a country an economic problem? Or is it an ecological one? Or rather a social one? Could it be resolved with theories and techniques of either of these fields? Well, the issue and its redressal requires a combination of all the three disciplines. And yet actions to integrate all of these fields have typically by-passed one or more. The framework that has over the years most commonly explained the convergence of different spheres of disciplinary knowledge has been sustainability. At the same time, its pursuit in practice, the dominant public perception, political agendas and the mainstream media remains elusive. In absence of a critical theory on ‘sustainable societies’, the contemporary development model is misinformed by vague notions of greening, green growth, eco-development, ecotourism, smart cities, etc. largely steered by corporates and vested business groups. The contemporary societies exist and continue to develop without genuine knowledge about sustainability that lies fragmented in its contributing disciplinary streams. This book unfolds the inherent dilemmas, contradictions and paradoxes within the current sustainability paradigm to form a rather nuanced and inside view of what constitutes sustainability and how it could be realized with socio-technical, institutional, policy and management solutions. In the process, the research comprehensively reviews about a hundred environmental, social and economic theories to deliberate on the way forward. Considering

that sustainability is a politico-economic and socio-cultural challenge, the transitions need to be culturally diverse and inter-generational, requiring infusion of fresh values, messaging and leadership while conserving traditional knowledge, prevailing institutions. The book culminates with a transition architecture bearing policy recommendations for governing without governmentality with plausible regulatory instruments, capacitating mechanisms, planning and voluntary measures that can be implemented in practice. Die nationale wirtschaftliche Situation, sich schnell verändernde Gesellschaften, die zunehmende Umweltverschmutzung inmitten der globalen Erwärmung um uns herum sind einige der brennendsten Themen in täglichen Diskussionen, Nachrichten und wissenschaftlichen Diskursen. Was wir sehen, sind nur die Folgen langwieriger Handlungen, Richtlinien und Entscheidungen. Die mit diesen Phänomenen verbundenen Fragen sind hochkomplex, die eine direkte Interpretation ihrer Ursachen, Indikationen, Ergebnisse und langfristigen Auswirkungen herausfordern. Ist zum Beispiel die Bewirtschaftung natürlicher Ressourcen für Industrie- und Geschäftsbetriebe innerhalb eines Landes ein wirtschaftliches Problem? Oder ist es ein ökologisches? Oder eher ein soziales? Könnte es mit Theorien und Techniken eines dieser Gebiete gelöst werden? Nun, das Problem und seine Abhilfe erfordert eine Kombination aller drei Disziplinen. Und dennoch haben Maßnahmen zur Integration all dieser Felder in der Regel eines oder mehrere umgangen. Der Rahmen, der im Laufe der Jahre am häufigsten die Konvergenz verschiedener Bereiche des disziplinären Wissens erklärt hat, war Nachhaltigkeit. Gleichzeitig bleibt ihre Verfolgung in der Praxis, die vorherrschende öffentliche Wahrnehmung, die politischen Agenden und die Mainstream-Medien schwer fassbar. In Ermangelung einer kritischen Theorie zu „nachhaltigen Gesellschaften“ wird das zeitgenössische Entwicklungsmodell durch vage Vorstellungen von Ökologisierung, grünem Wachstum, Öko-Entwicklung, Ökotourismus, Smart Cities usw., die größtenteils von Unternehmen und Konzernen gesteuert werden, falsch informiert. Die zeitgenössischen Gesellschaften existieren und entwickeln sich weiter, ohne echtes Wissen über Nachhaltigkeit, das in seinen disziplinären Strömungen zersplittert ist. Dieses Buch entfaltet die inhärenten Dilemmata, Widersprüche und Paradoxien innerhalb des aktuellen Nachhaltigkeitsparadigmas, um eine eher nuancierte Innenansicht dessen zu schaffen, was Nachhaltigkeit ausmacht und wie sie mit soziotechnischen, institutionellen, politischen und Managementlösungen realisiert werden könnte. Dabei überprüft die Forschung umfassend etwa hundert Umwelt-, Sozial- und Wirtschaftstheorien, um über das weitere Vorgehen nachzudenken. Angesichts der Tatsache, dass Nachhaltigkeit eine politisch-ökonomische und soziokulturelle Herausforderung ist, müssen die Übergänge kulturell vielfältig und generationenübergreifend sein, was die Einführung neuer Werte, Botschaften und Führung erfordert, während traditionelles Wissen und vorherrschende Institutionen erhalten bleiben. Das Buch gipfelt in einer Übergangsarchitektur mit Politikempfehlungen für ein Regieren ohne Gouvernementalität mit plausiblen Regulierungsinstrumenten, kapazitiven Mechanismen, Planungen und in der Praxis umsetzbaren freiwilligen Maßnahmen.

Hydrology: Advances in Theory and Practice

IWA Publishing Hydrology: Advances in Theory and Practice, brings together contributions to both the theory and practice of hydrology, including chapters on (amongst other topics) flood estimation methods and hydrological modelling. The book also looks forward with a global hydrology research agenda fit for the 2030s, and explores how to make advances in hydrological modelling – based on almost 50 years of modelling experience. In Focus – a book series that showcases the latest accomplishments in water research. Each book focuses on a specialist area with papers from top experts in the field. It aims to be a vehicle for in-depth understanding and inspire further conversations in the sector.

An Introduction to Business Analytics

Lulu.com Business Analytics (BA) is about turning data into decisions. This book covers the full range of BA topics, including statistics, machine learning and optimization, in a way that makes them accessible to a broader audience. Decision makers will gain enough insight into the subject to have meaningful discussions with machine learning specialists, and those starting out as data scientists will benefit from an overview of the field and take their first steps as business analytics specialist. Through this book and the various exercises included, you will be equipped with an understanding of BA, while learning R, a popular tool for statistics and machine learning.

E-Mobility in Europe

Trends and Good Practice

Springer Focusing on technical, policy and social/societal practices and innovations for electrified transport for personal, public and freight purposes, this book provides a state-of-the-art overview of developments in e-mobility in Europe and the West Coast of the USA. It serves as a learning base for further implementing and commercially developing this field for the benefit of society, the environment and public health, as well as for economic development and private industry. A fast-growing, interdisciplinary sector, electric mobility links engineering, infrastructure, environment, transport and sustainable development. But despite the relevance of the topic, few publications have ever attempted to document or promote the wide range of electric mobility initiatives and projects

taking place today. Addressing this need, this publication consists of case studies, reports on technological developments and examples of successful infrastructure installation in cities, which document current initiatives and serve as an inspiration for others.

Feasibility and Infeasibility in Optimization:

Algorithms and Computational Methods

Springer Science & Business Media Written by a world leader in the field and aimed at researchers in applied and engineering sciences, this brilliant text has as its main goal imparting an understanding of the methods so that practitioners can make immediate use of existing algorithms and software, and so that researchers can extend the state of the art and find new applications. It includes algorithms on seeking feasibility and analyzing infeasibility, as well as describing new and surprising applications.

Quantitative Methods in Transportation

CRC Press Quantitative Methods in Transportation provides the most useful, simple, and advanced quantitative techniques for solving real-life transportation engineering problems. It aims to help transportation engineers and analysts to predict travel and freight demand, plan new transportation networks, and develop various traffic control strategies that are safer, more cost effective, and greener. Transportation networks can be exceptionally large, and this makes many transportation problems combinatorial, and the challenges are compounded by the stochastic and independent nature of trip-planners decision making. Methods outlined in this book range from linear programming, multi-attribute decision making, data envelopment analysis, probability theory, and simulation to computer techniques such as genetic algorithms, simulated annealing, tabu search, ant colony optimization, and bee colony optimization. The book is supported with problems and has a solutions manual to aid course instructors.

Logistics Operations and Management

Concepts and Models

Elsevier This book provides a comprehensive overview of how to strategically manage the movement and storage of products or materials from any point in the manufacturing process to customer fulfillment. Topics covered include important tools for strategic decision making, transport, packaging, warehousing, retailing, customer services and future trends. An introduction to logistics Provides practical applications Discusses trends and new strategies in major parts of the logistic industry

Plastic Waste and Recycling

Environmental Impact, Societal Issues, Prevention, and Solutions

Academic Press Plastic Waste and Recycling: Environmental Impact, Societal Issues, Prevention, and Solutions begins with an introduction to the different types of plastic materials, their uses, and the concepts of reduce, reuse and recycle before examining plastic types, chemistry and degradation patterns that are organized by non-degradable plastic, degradable and biodegradable plastics, biopolymers and bioplastics. Other sections cover current challenges relating to plastic waste, explain the sources of waste and their routes into the environment, and provide systematic coverage of plastic waste treatment methods, including mechanical processing, monomerization, blast furnace feedstocks, gasification, thermal recycling, and conversion to fuel. This is an essential guide for anyone involved in plastic waste or recycling, including researchers and advanced students across plastics engineering, polymer science, polymer chemistry, environmental science, and sustainable materials.

Economic Analysis of Oil and Gas Engineering

Operations

CRC Press Engineers seek solutions to problems, and the economic viability of each potential solution is normally considered along with the technical merits. This is typically true for the petroleum sector, which includes the global processes of exploration, production, refining, and transportation. Decisions on an investment in any oil or gas field development are made on the basis of its value, which is judged by a combination of a number of economic indicators. Economic Analysis of Oil and Gas Engineering Operations focuses on economic treatment of petroleum engineering operations and serves as a helpful resource for making practical and profitable decisions in oil and gas field development. Reflects major changes over the past decade or so in the oil and gas industry Provides thorough coverage of the use of economic analysis techniques in decision-making in petroleum-related projects Features real-world cases and applications of economic analysis of various engineering problems encountered in petroleum operations Includes principles applicable to other engineering disciplines This work will be of value to practicing engineers and industry professionals, managers, and executives working in the petroleum industry who have the responsibility of planning and decision-making, as well as advanced students in petroleum and chemical engineering studying engineering economics, petroleum economics and policy, project evaluation, and plant design.

Managing Energy Risk

An Integrated View on Power and Other Energy Markets

John Wiley & Sons An overview of today's energy markets from a multi-commodity perspective As global warming takes center stage in the public and private sectors, new debates on the future of energy markets and electricity generation have emerged around the world. The Second Edition of Managing Energy Risk has been updated to reflect the latest products, approaches, and energy market evolution. A full 30% of the content accounts for changes that have occurred since the publication of the first edition. Practitioners will appreciate this contemporary approach to energy and the comprehensive information on recent market influences. A new chapter is devoted to the growing importance of renewable energy sources, related subsidy schemes and their impact on energy markets. Carbon emissions certificates, post-Fukushima market shifts, and improvements in renewable energy generation are all included. Further, due to the unprecedented growth in shale gas production in recent years, a significant amount of material on gas markets

has been added in this edition. Managing Energy Risk is now a complete guide to both gas and electricity markets, and gas-specific models like gas storage and swing contracts are given their due. The unique, practical approach to energy trading includes a comprehensive explanation of the interactions and relations between all energy commodities. Thoroughly revised to reflect recent changes in renewable energy, impacts of the financial crisis, and market fluctuations in the wake of Fukushima Emphasizes both electricity and gas, with all-new gas valuation models and a thorough description of the gas market Written by a team of authors with theoretical and practical expertise, blending mathematical finance and technical optimization Covers developments in the European Union Emissions Trading Scheme, as well as coal, oil, natural gas, and renewables The latest developments in gas and power markets have demonstrated the growing importance of energy risk management for utility companies and energy intensive industry. By combining energy economics models and financial engineering, Managing Energy Risk delivers a balanced perspective that captures the nuances in the exciting world of energy.