Stochastic Project Networks Temporal Analysis Scheduling And Cost Minimization Lecture Notes In Economics And Mathematical Systems

The Proceedings of the 1999 Summer Computer Simulation ConferenceAdvances in Project SchedulingProject Scheduling Under Resource ConstraintsEuropean Research Centres: A-NDeutsche Nationalbibliographie und Bibliographie der im Ausland erschienenen deutschsprachigen VeröffentlichungenHandbook of Mathematical GeosciencesGovernment Reports Annual IndexMarkov Processes for Stochastic ModelingPaperbound Books in PrintGlobal ChangeEuropean Research CentresBooks in Print, 2004-2005TIMS/ORSA BulletinINFOR.Perspectives on Operations ResearchScheduling of Resource-Constrained ProjectsModeling and Analysis Using Q-GERT NetworksUrban and Regional Transportation ModelingInternational Journal of Risk Assessment and ManagementProduction and Operations ManagementEkonomski pregledFoundations of Control EngineeringInteger Programming and Related AreasStochastic Programming, Algorithms and ModelsStatistical Analysis and Stochastic Modelling of Hydrological ExtremesBiospheric Aspects of the Hydrological Cycle (BAHC)International Books in PrintGuide To Temporal Networks, A (Second Edition)Stanford BulletinManagement Decision

MakingBehavior Analysis of Communication SystemsProbabilistic Foundations of Statistical Network AnalysisStochastic Project NetworksStatistics for Spatio-Temporal DataMathematical ReviewsWhitaker's Books in PrintTime-oriented Analysis of Projects Using Stochastic Network TechniquesProject SchedulingMining of Massive DatasetsWhitaker's Book List

The Proceedings of the 1999 Summer Computer Simulation Conference

Advances in Project Scheduling

Project Scheduling Under Resource Constraints

'This collection in honor of David Boyce contains genuinely interesting and quality papers that reflect the diversity of interests of the honoree. David Boyce has made a number of significant contributions at the interface of transportation and regional science. He has been a pioneer of injecting rigor and consistency into spatial analysis. The papers here both reflect the ethos of this copious body of analysis and take it further in extensions and applications. It will prove to be an enduring source of ideas and insight.' - Kenneth Button, George Mason University, US

European Research Centres: A-N

Deutsche Nationalbibliographie und Bibliographie der im Ausland erschienenen deutschsprachigen Veröffentlichungen

Handbook of Mathematical Geosciences

Government Reports Annual Index

Markov Processes for Stochastic Modeling

This multi-author volume, containing contributions from international experts in the field, presents recent developments in project scheduling for both theory and practice. It is organized in three parts: I. Basic deterministic models; II. Special deterministic models; III. Stochastic models. A variety of approaches is presented dealing with multiple-category resource constraints, different mathematical models of activities, and various project performance measures in single and multiobjective formulation. Exact and heuristic algorithms are presented for both deterministic and stochastic project description. The volume will be of special interest to scientists, students, decision makers, executive managers, consultants and practitioners involved in systems management or operations research, in particular in

business, engineering, and finance, but also in other areas of pure and applied sciences.

Paperbound Books in Print

Now in its second edition, this book focuses on practical algorithms for mining data from even the largest datasets.

Global Change

Project management has become a widespread instrument enabling organizations to efficiently master the challenges of steadily shortening product life cycles, global markets and decreasing profit margins. With projects increasing in size and complexity, their planning and control represents one of the most crucial management tasks. This is especially true for scheduling, which is concerned with establishing execution dates for the sub-activities to be performed in order to complete the project. The ability to manage projects where resources must be allocated between concurrent projects or even sub-activities of a single project requires the use of commercial project management software packages. However, the results yielded by the solution procedures included are often rather unsatisfactory. Scheduling of Resource-Constrained Projects develops more efficient procedures, which can easily be integrated into software packages by incorporated programming languages, and thus should be of great interest for practitioners as well as scientists working in the field of project management.

The book is divided into two parts. In Part I, the project management process is described and the management tasks to be accomplished during project planning and control are discussed. This allows for identifying the major scheduling problems arising in the planning process, among which the resource-constrained project scheduling problem is the most important. Part II deals with efficient computer-based procedures for the resource-constrained project scheduling problem and its generalized version. Since both problems are NP-hard, the development of such procedures which yield satisfactory solutions in a reasonable amount of computation time is very challenging, and a number of new and very promising approaches are introduced. This includes heuristic procedures based on priority rules and tabu search as well as lower bound methods and branch and bound procedures which can be applied for computing optimal solutions.

European Research Centres

This fifth volume of a comprehensive bibliography lists all available publications on integer programming and combinatorial optimization from autumn 1984 to the end of 1987. The volume compiles and classifies 5867 new publications by 4680 authors under 50 different subject headings. The listing covers theory and methods of general integer programming and applications of integer programming. This classified bibliography will be an invaluable reference source for mathematicians working in optimization, researchers working on integer programming techniques, and

industrial operations research departments. The four earlier volumes were published as 'Lecture Notes in Economics and Mathematical Systems' Vols. 128, 160, 197 and 243.

Books in Print, 2004-2005

TIMS/ORSA Bulletin

This Open Access handbook published at the IAMG's 50th anniversary, presents a compilation of invited path-breaking research contributions by award-winning geoscientists who have been instrumental in shaping the IAMG. It contains 45 chapters that are categorized broadly into five parts (i) theory, (ii) general applications, (iii) exploration and resource estimation, (iv) reviews, and (v) reminiscences covering related topics like mathematical geosciences, mathematical morphology, geostatistics, fractals and multifractals, spatial statistics, multipoint geostatistics, compositional data analysis, informatics, geocomputation, numerical methods, and chaos theory in the geosciences.

INFOR.

Perspectives on Operations Research

Scheduling of Resource-Constrained Projects

Modeling and Analysis Using Q-GERT Networks

This book introduces the field of resource-constrained project scheduling. State-of-the-art reviews of optimal and heuristic procedures are provided for classical project scheduling models. Furthermore, new models which are relevant for practical problem settings, are introduced. The main emphasis is on newly developed competitive heuristic methods. Contents: Introduction. - Description of the Problems.- Classification of Schedules.- Characterisation and Generation of Instances.- The Single-Mode Project Scheduling Problem.- The Multi-Mode Project Scheduling Problem.- Project Scheduling with Given Deadline.- Project Scheduling with Setup Times.- Applications to Production Management.- Concluding Remarks.- List of Notations.- List of Abbreviations.

Urban and Regional Transportation Modeling

International Journal of Risk Assessment and Management

Markov processes are processes that have limited memory. In particular, their dependence on the past is only through the previous state. They are used to model the behavior of many systems including communications systems, transportation networks,

image segmentation and analysis, biological systems and DNA sequence analysis, random atomic motion and diffusion in physics, social mobility, population studies, epidemiology, animal and insect migration, queueing systems, resource management, dams, financial engineering, actuarial science, and decision systems. Covering a wide range of areas of application of Markov processes, this second edition is revised to highlight the most important aspects as well as the most recent trends and applications of Markov processes. The author spent over 16 years in the industry before returning to academia, and he has applied many of the principles covered in this book in multiple research projects. Therefore, this is an applications-oriented book that also includes enough theory to provide a solid ground in the subject for the reader. Presents both the theory and applications of the different aspects of Markov processes Includes numerous solved examples as well as detailed diagrams that make it easier to understand the principle being presented Discusses different applications of hidden Markov models, such as DNA sequence analysis and speech analysis.

Production and Operations Management

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.

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Foundations of Control Engineering

Integer Programming and Related Areas

Stochastic Programming, Algorithms and Models

Statistical Analysis and Stochastic Modelling of Hydrological Extremes

Winner of the 2013 DeGroot Prize. A state-of-the-art presentation of spatio-temporal processes,bridging classic ideas with modern hierarchical statisticalmodeling concepts and the latest computational methods Noel Cressie and Christopher K. Wikle, are also winnersof the 2011 PROSE Award in the Mathematics category, for thebook "Statistics for Spatio-Temporal Data" (2011),published by John Wiley and Sons. (The PROSE awards, forProfessional and Scholarly Excellence, are given by the Associationof American Publishers, the national trade association of the USbook publishing industry.) Statistics for Spatio-Temporal Data has now beenreprinted with small corrections to the text andthe bibliography. The overall content and pagination of thenew printing remains the same; the difference comes inthe form of corrections to typographical errors, editing ofincomplete and missing references, and some updated spatio-temporalinterpretations. From understanding environmental processes and climate trends todeveloping new technologies for mapping public-health data and thespread of invasive-species, there is a high demand for statisticalanalyses of data that take spatial, temporal, and spatio-temporalinformation into account. Statistics for Spatio-TemporalData presents a systematic approach to key quantitativetechniques that incorporate the latest advances in statisticalcomputing as well as hierarchical, particularly Bayesian,statistical

modeling, with an emphasis on dynamical spatio-temporalmodels. Cressie and Wikle supply a unique presentation thatincorporates ideas from the areas of time series and spatialstatistics as well as stochastic processes. Beginning with separatetreatments of temporal data and spatial data, the book combinesthese concepts to discuss spatio-temporal statistical methods forunderstanding complex processes. Topics of coverage include: Exploratory methods for spatio-temporal data, includingvisualization, spectral analysis, empirical orthogonal functionanalysis, and LISAs Spatio-temporal covariance functions, spatio-temporal kriging,and time series of spatial processes Development of hierarchical dynamical spatio-temporal models(DSTMs), with discussion of linear and nonlinear DSTMs andcomputational algorithms for their implementation Quantifying and exploring spatio-temporal variability inscientific applications, including case studies based on real-worldenvironmental data Throughout the book, interesting applications demonstrate therelevance of the presented concepts. Vivid, full-color graphicsemphasize the visual nature of the topic, and a related FTP sitecontains supplementary material. Statistics for Spatio-TemporalData is an excellent book for a graduate-level course onspatio-temporal statistics. It is also a valuable reference forresearchers and practitioners in the fields of applied mathematics,engineering, and the environmental and health sciences.

Biospheric Aspects of the Hydrological

Cycle (BAHC)

Hydrological extremes have become a major concern because of their devastating consequences and their increased risk as a result of climate change and the growing concentration of people and infrastructure in high-risk zones. The analysis of hydrological extremes is challenging due to their rarity and small sample size, and the interconnections between different types of extremes and becomes further complicated by the untrustworthy representation of meso-scale processes involved in extreme events by coarse spatial and temporal scale models as well as biased or missing observations due to technical difficulties during extreme conditions. The complexity of analyzing hydrological extremes calls for robust statistical methods for the treatment of such events. This Special Issue is motivated by the need to apply and develop innovative stochastic and statistical approaches to analyze hydrological extremes under current and future climate conditions. The papers of this Special Issue focus on six topics associated with hydrological extremes: Historical changes in hydrological extremes; Projected changes in hydrological extremes; Downscaling of hydrological extremes; Early warning and forecasting systems for drought and flood; Interconnections of hydrological extremes; Applicability of satellite data for hydrological studies.

International Books in Print

Guide To Temporal Networks, A (Second Edition)

Stanford Bulletin

Management Decision Making

This volume presents state-of-the-art models, algorithms, and applications of quantitative methods in management and economics. The papers are clustered into four parts, focusing on optimization issues, applications of Operations Research in production and service management, applications of Operations Research in logistics, and interdisciplinary approaches.

Behavior Analysis of Communication Systems

Probabilistic Foundations of Statistical Network Analysis

Network science offers a powerful language to represent and study complex systems composed of interacting elements — from the Internet to social and biological systems. A Guide to Temporal Networks presents recent theoretical and modelling progress in the emerging field of temporally varying networks and provides connections between the different areas

of knowledge required to address this multi-disciplinary subject. After an introduction to key concepts on networks and stochastic dynamics, the authors guide the reader through a coherent selection of mathematical and computational tools for network dynamics. Perfect for students and professionals, this book is a gateway to an active field of research developing between the disciplines of applied mathematics, physics and computer science, with applications in others including social sciences, neuroscience and biology.This second edition extensively expands upon the coverage of the first edition as the authors expertly present recent theoretical and modelling progress in the emerging field of temporal networks, providing the keys to (and connections between) the different areas of knowledge required to address this multi-disciplinary problem.

Stochastic Project Networks

Statistics for Spatio-Temporal Data

Probabilistic Foundations of Statistical Network Analysis presents a fresh and insightful perspective on the fundamental tenets and major challenges of modern network analysis. Its lucid exposition provides necessary background for understanding the essential ideas behind exchangeable and dynamic network models, network sampling, and network statistics such as sparsity and power law, all of which play a central role in contemporary data science and

machine learning applications. The book rewards readers with a clear and intuitive understanding of the subtle interplay between basic principles of statistical inference, empirical properties of network data, and technical concepts from probability theory. Its mathematically rigorous, yet non-technical, exposition makes the book accessible to professional data scientists, statisticians, and computer scientists as well as practitioners and researchers in substantive fields. Newcomers and non-quantitative researchers will find its conceptual approach invaluable for developing intuition about technical ideas from statistics and probability, while experts and graduate students will find the book a handy reference for a wide range of new topics, including edge exchangeability, relative exchangeability, graphon and graphex models, and graph-valued Levy process and rewiring models for dynamic networks. The author's incisive commentary supplements these core concepts, challenging the reader to push beyond the current limitations of this emerging discipline. With an approachable exposition and more than 50 open research problems and exercises with solutions, this book is ideal for advanced undergraduate and graduate students interested in modern network analysis, data science, machine learning, and statistics. Harry Crane is Associate Professor and Co-Director of the Graduate Program in Statistics and Biostatistics and an Associate Member of the Graduate Faculty in Philosophy at Rutgers University. Professor Crane's research interests cover a range of mathematical and applied topics in network science, probability theory, statistical inference, and mathematical logic. In addition to his technical work

on edge and relational exchangeability, relative exchangeability, and graph-valued Markov processes, Prof. Crane's methods have been applied to domain-specific cybersecurity and counterterrorism problems at the Foreign Policy Research Institute and RAND's Project AIR FORCE.

Mathematical Reviews

Pritsker and Sigal examine management decision making and the role network modeling can play in this process. Focusing on Q-GERT, a simulation language designed for the modeling of procedural management systems, they discuss model building related to production planning, logistics and inventory control, risk analysis and project planning as well as network graphics.

Whitaker's Books in Print

Project planning, scheduling, and control are regularly used in business and the service sector of an economy to accomplish outcomes with limited resources under critical time constraints. To aid in solving these problems, network-based planning methods have been developed that now exist in a wide variety of forms, cf. Elmaghraby (1977) and Moder et al. (1983). The so-called "classical" project networks, which are used in the network techniques CPM and PERT and which represent acyclic weighted directed graphs, are able to describe only projects whose evolution in time is uniquely specified in advance. Here every event of the project is realized

exactly once during a single project execution and it is not possible to return to activities previously carried out (that is, no feedback is permitted). Many practical projects, however, do not meet those conditions. Consider, for example, a production process where some parts produced by a machine may be poorly manufactured. If an inspection shows that a part does not conform to certain specifications, it must be repaired or replaced by a new item. This means that we have to return to a preceding stage of the production process. In other words, there is feedback. Note that the result of the inspection is that a certain percentage of the parts tested do not conform. That is, there is a positive probability (strictly less than 1) that any part is defective.

Time-oriented Analysis of Projects Using Stochastic Network Techniques

Project Scheduling

Mining of Massive Datasets

Whitaker's Book List

ROMANCE ACTION & ADVENTURE MYSTERY & THRILLER BIOGRAPHIES & HISTORY CHILDREN'S YOUNG ADULT FANTASY HISTORICAL FICTION HORROR LITERARY FICTION NON-FICTION SCIENCE FICTION