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Genetic and Evolutionary Computing
Information Control Problems in Manufacturing 2006
Looking Forward at Forty
Cost Modelling
Proceedings of The Eighth International Conference on Bio-Inspired Computing: Theories and Applications (BIC-TA), 2013
IFIP TC 5 / WG 5.5. Sixth IFIP International Conference on Information Technology for Balanced Automation Systems in Manufacturing and Services, 27-29 September 2004, Vienna, Austria
Selected papers of the 1st International Conference of Serviceology
Simulation Modeling and Analysis of Productivity Enhancement in Manufacturing Company Using Arena Software
Multi-Agent Systems for Healthcare Simulation and Modeling: Applications for System Improvement
Intelligent Manufacturing Systems 2003
Introduction to Discrete Event Simulation and Agent-based Modeling
A Practitioner's Approach
Health Care Delivery and Clinical Science: Concepts, Methodologies, Tools, and Applications
Discrete-Event Modeling and Simulation
Concepts, Models and Algorithms
Assessment and Modeling of Soil Functions or Soil-Based Ecosystem Services: Theory and Applications to Practical Problems
An Integrated Approach for Assessing Issues, Finding Solutions, and Reaching Corporate Objectives

BENTLEY NOELLE

A Pharmacokinetic-Pharmacodynamic Modeling Perspective CRC Press
This book gathers papers presented at the 10th International Conference on Genetic and Evolutionary Computing (ICGEC 2016). The conference was co-sponsored by Springer, Fujian University of Technology in China, the University of Computer Studies in Yangon, University of Miyazaki in Japan, National Kaohsiung University of Applied Sciences in Taiwan, Taiwan Association for Web Intelligence Consortium, and VSB-Technical University of Ostrava, Czech Republic. The ICGEC 2016, which was held from November 7 to 9, 2016 in Fuzhou City, China, was intended as an international forum for researchers and professionals in all areas of genetic and evolutionary computing.
Innovative Computing Trends and Applications Springer Science & Business Media
The first edition of this book was the first text to be written on the Arena software, which is a very popular simulation modeling software. What makes this text the authoritative source on Arena is that it was written by the creators of Arena themselves. The new third edition follows in the tradition of the successful first and second editions in its tutorial style (via a sequence of carefully crafted examples) and an accessible writing style. The updates include thorough coverage of the new version of the Arena software (Arena 7.01), enhanced support for Excel and Access, a new array editor, and updated examples to reflect the new version of software. The CD-ROM that accompanies the book contains the academic version of the recent Arena software. The software features new capabilities such as, model documentation, enhanced plots, file reading and writing, printing and animation symbols.
Computer Simulation Springer
This book contains selected papers from International Symposium for Production Research 2021, held on October 7–9, 2021, online, Turkey. The book reports recent advances in production engineering and operations. It explores topics including production research; production management; operations management; industry 4.0; industrial engineering;

mechanical engineering; engineering management; and operational research. Presenting real-life applications, case studies, and mathematical models, this book is of interest to researchers, academics, and practitioners in the field of production and operation engineering. It provides both the results of recent research and practical solutions to real-world problems.

Object Oriented Simulation Routledge

This book constitutes the refereed proceedings of the 6th International Conference on Data Science, ICDS 2019, held in Ningbo, China, during May 2019. The 64 revised full papers presented were carefully reviewed and selected from 210 submissions. The research papers cover the areas of Advancement of Data Science and Smart City Applications, Theory of Data Science, Data Science of People and Health, Web of Data, Data Science of Trust and Internet of Things.

Grand Timely Topics in Software Engineering Springer Science & Business Media

Improvements in hospital management and emergency medical and critical care services require continual attention and dedication to ensure efficient and proper care for citizens. To support this endeavor, professionals rely more and more on the application of information systems and technologies to promote the overall quality of modern healthcare. Implementing effective technologies and strategies ensures proper quality and instruction for both the patient and medical practitioners. Hospital Management and Emergency Medicine: Breakthroughs in Research and Practice examines the latest scholarly material on emerging strategies and methods for delivering optimal emergency medical care and examines the latest technologies and tools that support the development of efficient emergency departments and hospital staff. While highlighting the challenges medical practitioners and healthcare professionals face when treating patients and striving to optimize their processes, the book shows how revolutionary technologies and methods are vastly improving how healthcare is implemented globally. Highlighting a range of topics such as overcrowding, decision support systems, and patient safety, this publication is an ideal reference source for hospital directors, hospital staff, emergency medical services, paramedics, medical administrators, managers and employees of health units, physicians, medical students, academicians, and researchers seeking current research on providing optimal care in emergency medicine.

Simulation Modeling and Arena Purdue University Press

Data science has always been an effective way of extracting knowledge and insights from information in various forms. One industry that can utilize the benefits from the advances in data science is the healthcare field. The Handbook of Research on Data Science for Effective Healthcare Practice and Administration is a critical reference source that overviews the state of data analysis as it relates to current practices in the health sciences field. Covering innovative topics such as linear programming, simulation modeling, network theory, and predictive analytics, this publication is recommended for all healthcare professionals, graduate students, engineers, and researchers that are seeking to expand their knowledge of efficient techniques for information analysis in the healthcare professions.

14th International Conference, VECoS 2020, Xi'an, China, October 26–27, 2020, Proceedings Springer Nature

This book constitutes the refereed post-proceedings of the third Asian Simulation Conference, AsiaSim 2004, held in Jeju Island, Korea in October 2004. The 78 revised full papers presented together with 2 invited keynote papers were carefully reviewed and selected from 178 submissions; after the conference, the papers went through another round of revision. The papers are organized in topical sections on modeling and simulation methodology, manufacturing, aerospace simulation, military simulation, medical simulation, general applications, network simulation and modeling, e-business simulation, numerical simulation, traffic simulation, transportation, virtual reality, engineering applications, and DEVS modeling and simulation.

Garbage Can Model of Organizational Choice IGI Global

Design for the Unexpected: From Holonic Manufacturing Systems Towards a Humane Mechatronics Society presents new, even revolutionary, ideas to managing production and production systems which may fundamentally shift the paradigm of manufacturing systems design. It provides guidelines for the design of complex systems that can deal with unexpected disturbances and presents a decentralized control methodology that goes far beyond the traditional hierarchical control approach that currently prevails. The benefits are illustrated by a variety of examples and case studies from different fields, with the book's well-established authors presenting Holonic Manufacturing Systems (HMS) as the framework for the ‘factory-of-the-future’, and suggesting that the application of biologically inspired control paradigms can control complex manufacturing systems, and that there are far wider applications for these systems than pure manufacturing. In addition, the book explores how this multi-agent control framework can be extended to other fields such as traffic, transport, services, and health care. Provides a practical control system architecture that can be applied to a wide variety of systems in manufacturing, transportation, logistics, and robotics Contains a wide range of case studies from different engineering disciplines Provides a decentralized control methodology that goes beyond the traditional hierarchical control approach that currently prevails A must-read resource for researchers and professionals alike

From Holonic Manufacturing Systems towards a Humane Mechatronics Society Springer Science & Business Media

This Handbook is a collection of chapters on key issues in the design and analysis of computer simulation experiments on models of stochastic systems. The chapters are tightly focused and written by experts in each area. For the purpose of this volume “simulation refers to the analysis of stochastic processes through the generation of sample paths (realization) of the processes. Attention focuses on design and analysis issues and the goal of this volume is to survey the concepts, principles, tools and techniques that underlie the theory and practice of stochastic simulation design and analysis. Emphasis is placed on the ideas and methods that are likely to remain an intrinsic part of the foundation of the field for the foreseeable future. The chapters provide up-to-date references for both the simulation researcher and the advanced simulation user, but they do not constitute an introductory level ‘how to’ guide. Computer scientists, financial analysts, industrial engineers, management scientists, operations researchers and many other professionals use stochastic simulation to design, understand and improve communications, financial, manufacturing, logistics, and service systems. A theme that runs throughout these diverse applications is the need to evaluate system performance in the face of uncertainty, including uncertainty in user load, interest rates, demand for product, availability of goods, cost of transportation and equipment failures. * Tightly focused chapters written by experts * Surveys concepts, principles,

tools, and techniques that underlie the theory and practice of stochastic simulation design and analysis * Provides an up-to-date reference for both simulation researchers and advanced simulation users

Selected Papers from ISPR2021, October 07-09, 2021 Online, Turkey Elsevier

Simulation Modeling and Analysis with Arena is a highly readable textbook which treats the essentials of the Monte Carlo discrete-event simulation methodology, and does so in the context of a popular Arena simulation environment. It treats simulation modeling as an in-vitro laboratory that facilitates the understanding of complex systems and experimentation with what-if scenarios in order to estimate their performance metrics. The book contains chapters on the simulation modeling methodology and the underpinnings of discrete-event systems, as well as the relevant underlying probability, statistics, stochastic processes, input analysis, model validation and output analysis. All simulation-related concepts are illustrated in numerous Arena examples, encompassing production lines, manufacturing and inventory systems, transportation systems, and computer information systems in networked settings. · Introduces the concept of discrete event Monte Carlo simulation, the most commonly used methodology for modeling and analysis of complex systems · Covers essential workings of the popular animated simulation language, ARENA, including set-up, design parameters, input data, and output analysis, along with a wide variety of sample model applications from production lines to transportation systems · Reviews elements of statistics, probability, and stochastic processes relevant to simulation modeling * Ample end-of-chapter problems and full Solutions Manual * Includes CD with sample ARENA modeling programs

Simulation for Designing Clinical Trials Springer

Information Control Problems in Manufacturing 2006 contains the Proceedings of the 12th IFAC Symposium on Information Control Problems in Manufacturing (INCOM'2006). This symposium took place in Saint Etienne, France, on May 17-19 2006. INCOM is a tri-annual event of symposia series organized by IFAC and it is promoted by the IFAC Technical Committee on Manufacturing Plant Control. The purpose of the symposium INCOM'2006 was to offer a forum to present the state-of-the-art in international research and development work, with special emphasis on the applications of optimisation methods, automation and IT technologies in the control of manufacturing plants and the entire supply chain within the enterprise. The symposium stressed the scientific challenges and issues, covering the whole product and processes life cycle, from the design through the manufacturing and maintenance, to the distribution and service. INCOM'2006 Technical Program also included a special event on Innovative Engineering Techniques in Healthcare Delivery. The application of engineering and IT methods in medicine is a rapidly growing field with many opportunities for innovation. The Proceedings are composed of 3 volumes: Volume 1 - Information Systems, Control & Interoperability Volume 2 - Industrial Engineering Volume 3 - Operational Research * 3-volume set, containing 362 carefully reviewed and selected papers * presenting the state-of-the-art in international research and development in Information Control problems in Manufacturing

A Proceedings volume from the 12th IFAC International Symposium, St Etienne, France, 17-19 May 2006 John Wiley & Sons

A powerful, flexible, integrated framework for effective problem solving and decision making that serves the company's objectives and goals. * *A logical, flexible, well-structured approach to assessing issues, developing solutions, and making decisions that drive achievement of business objectives. *By two leading practitioners, consultants, and researchers in operations management and decision science. *Three chapter-length case studies show how this book's methods can be adapted and applied in a wide range of environments. This professional reference provides an integrated framework for problem solving and decision making in corporations. Drawing on vast experience in the field, the authors show how to apply state-of-the-art decision science, statistical modeling, benchmarking, and processing modeling techniques together to create a robust analytical framework for better decision making in any field that relies on advanced operations management. They integrate both newlydeveloped and time-tested techniques into a logical, structured approach for assessing corporate issues, developing solutions, and making decisions that drive the successful achievement of corporate objectives. Coverage includes: defining objectives, exploring the environment; scoping problems and evaluating their importance; bringing data mining and statistical analysis to bear; solving problems and measuring the results; evaluating the results and performing sensitivity analysis, and more. The book concludes with three case study chapters that walk through the effective use of its methods, step-by-step. Representing a wide variety of corporate environments, these case studies underscore and demonstrate the method's exceptional adaptability. This book will be valuable in a wide range of industries, notably finance, pharmaceutical, healthcare, economics, and manufacturing.

Emerging Solutions for Future Manufacturing Systems BoD – Books on Demand

This book constitutes the proceedings of the 14th International Conference on Verification and Evaluation of Computer and Communication Systems, VECoS 2020, which was supposed to be held in Xi’an, China, in October 2020, but was held virtually instead. The 19 full papers and 1 short paper presented in this volume were carefully reviewed and selected from 60 submissions. The aim of the VECoS conference is to bring together researchers and practitioners in the areas of verification, control, performance, and dependability evaluation in order to discuss state of the art and challenges in modern computer and communication systems in which functional and extra-functional properties are strongly interrelated. Thus, the main motivation for VECoS is to encourage the cross-fertilization between various formal verification and evaluation approaches, methods and techniques, and especially those developed for concurrent and distributed hardware/software systems. The papers are organized in the following topical sections: petri-net, simulation, and scheduling; formal modeling and verification, testing; and artificial intelligence and machine learning.

Third Asian Simulation Conference, AsiaSim 2004, Jeju Island, Korea, October 4-6, 2004, Revised Selected Papers Butterworth-Heinemann

Providing more than just a comprehensive history, critical vocabulary, insightful compilation of motivations, and clear explanation of the state-of-the-art of modern clinical trial simulation, this book supplies a rigorous framework for employing simulation as an experiment, according to a predefined simulation plan, that reflects good simulation p

Resource Optimization and Security for Cloud Services Springer

The management and design of call centres is increasing in complexity due to advancing technology and rising customer expectations. This guide provides

managers with an understanding of the role, value and practical deployment of simulation in the planning, management and analysis of call centres.

Verification and Evaluation of Computer and Communication Systems John Wiley & Sons

Every manufacturing company wants to improve and adapt their operating system in order to survive the industry competition. In manufacturing organizations, to improve their system it might mean to reduce the operating costs that come from the wastes in production line. By using the ARENA simulation in this study, the productivity improvement can be experimented without physically affect the real system and reduced the cost because designing, building, testing, redesigning, rebuilding and retesting can be an expensive project. This study focus on the flow in the production line processes in one piston manufacturing company. The existing plant layout was studied and formulated into ARENA simulation software as well as to enhance the productivity rate by improving certain parameters. The problems identified in this production line are the effect of the bottleneck process which resulting some idle time in some workstations and the increased piston demands from the customers. The data acquired and was translated into the ARENA simulation software and studied in order to simulate the existing plant layout design. Hence, the problems occurred in the production line can be seen clearly to determine room for productivity improvement. New designs are proposed by constructing several models to acquire the best solution to improve productivity capacity and meet the forecasting demand of customer. In these proposed models, the parameters of the actual system are modified accordingly in the terms of material handling such as human resources, machine cycle time, the number of machines, shape and area of plant layout. From the simulation results, the significant contribution factor that influenced the rate of productivity was by adding certain machines to do the same process to cover the buffer while the material handling did not have a huge effect on the production line.

A Professional's Guide to Decision Science and Problem Solving Springer

Simulation with Arena

Simulation with Arena CRC Press

Cost models underlie all the techniques used in construction cost and price forecasting, yet until relatively recently industry has been unfamiliar with their characteristics and properties. An understanding of the various types of cost model is vital to enable effective cost control and the development of future forecasting techniques. This volume brings together more than 20 seminal contributions to building cost modelling and introduces the major landmarks in progress and thinking in this field: * strategies and directions * explorations in cost modelling * cost-product/process modelling * dealing with uncertainty The strong techniques bias of this book will appeal to construction professionals involved in estimating, as well as researchers and students of building economics.

Applications for System Improvement Springer

International Conference on Bio-Inspired Computing: Theories and Applications (BIC-TA) is one of the flagship conferences on Bio-Computing, bringing together the world’s leading scientists from different areas of Natural Computing. Since 2006, the conferences have taken place at Wuhan (2006), Zhengzhou (2007), Adelaide (2008), Beijing (2009), Liverpool & Changsha (2010), Malaysia (2011) and India (2012). Following the successes of previous events, the 8th conference is organized and hosted by Anhui University of Science and Technology in China. This conference aims to provide a high-level international forum that researchers with different backgrounds and who are working in the related areas can use to present their latest results and exchange ideas. Additionally, the growing trend in Emergent Systems has resulted in the inclusion of two other closely related fields in the BIC-TA 2013 event, namely Complex Systems and Computational Neuroscience. These proceedings are intended for researchers in the fields of Membrane Computing, Evolutionary Computing and Genetic Algorithms, DNA and Molecular Computing, Biological Computing, Swarm Intelligence, Autonomy-Oriented Computing, Cellular and Molecular Automata, Complex Systems, etc. Professor Zhixiang Yin is the Dean of the School of Science, Anhui University of Science & Technology, China. Professor Linqiang Pan is the head of the research group of Natural Computing at Huazhong University of Science and Technology, Wuhan, China. Professor Xianwen Fang also works at the Anhui University of Science & Technology.

Intelligent Open Learning Systems IGI Global

The development of better processes to provide proper healthcare has enhanced contemporary society. By implementing effective collaborative strategies, this ensures proper quality and instruction for both the patient and medical practitioners. Health Care Delivery and Clinical Science: Concepts, Methodologies, Tools, and Applications is a comprehensive reference source for the latest scholarly material on emerging strategies and methods for delivering optimal healthcare and examines the latest techniques and methods of clinical science. Highlighting a range of pertinent topics such as medication management, health literacy, and patient engagement, this multi-volume book is ideally designed for professionals, practitioners, researchers, academics, and graduate students interested in healthcare delivery and clinical science.