

Ravi Shankar Industrial Engineering And Management

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Proceedings of the 23rd International Conference on Industrial Engineering and Engineering Management 2016 Ershi Qi 2017-03-07 International Conference on Industrial Engineering and Engineering Management is sponsored by Chinese Industrial Engineering Institution, CMES, which is the unique national-level academic society of Industrial Engineering. The conference is held annually as the major event in this area. Being the largest and the most authoritative international academic conference held in China, it supplies an academic platform for the experts and the entrepreneurs in International Industrial Engineering and Management area to exchange their research results. Many experts in various fields from China and foreign countries gather together in the conference to review, exchange, summarize and promote their achievements in Industrial Engineering and Engineering Management fields. Some experts pay special attention to the current situation of the related techniques application in China as well as their future prospect, such as Industry 4.0, Green Product Design, Quality Control and Management, Supply Chain and logistics Management to cater for the purpose of low-carbon, energy-saving and emission-reduction and so on. They also come up with their assumption and outlook about the related techniques' development. The proceedings will offer theatrical methods and technique application cases for experts from college and university, research institution and enterprises who are engaged in theoretical research of Industrial Engineering and Engineering Management and its technique's application in China. As all the papers are feathered by higher level of academic and application value, they also provide research data for foreign scholars who occupy themselves in investigating the enterprises and engineering management of Chinese style.

Electronic Devices and Circuit Design Suman Lata Tripathi 2022-02-03 This new volume offers a broad view of the challenges of electronic devices and circuits for IoT applications. The book presents the basic concepts and fundamentals behind new low power, high-speed efficient devices, circuits, and systems in addition to CMOS. It provides an understanding of new materials to improve device performance with smaller dimensions and lower costs. It also looks at the new methodologies to enhance system performance and provides key parameters for exploring the devices and circuit performance based on smart applications. The chapters delve into myriad aspects of circuit design, including MOSFET structures depending on their low power applications for IoT-enabled systems, advanced sensor design and fabrication using MEMS, indirect bootstrap techniques, efficient CMOS comparators, various encryption-decryption algorithms, IoT video forensics applications, microstrip patch antennas in embedded IoT applications, real-time object detection using sound, IOT and nanotechnologies based wireless sensors, and much more.

Sustainable Manufacturing for Industry 4.0 K. Jayakrishna 2020-10-19 Industry 4.0 promises tremendous opportunities for industries to go green by leveraging virtual physical systems and internet driven technologies for a competitive advantage and set the platform for the factory of the future and smart manufacturing. The book provides measures that can be adopted by practicing design engineers, to develop products that will be sustainable in all stages of its life cycle. It helps organizations in implementation of sustainable manufacturing practices and formulation of critical strategies in their transition towards Industry 4.0., and the book will provide insights on ways of deploying these practices in correlation with the environmental benefits mapped to support the practicing managers and stakeholders. Features Assists in the understanding of the shifting paradigm in manufacturing sector towards smart and sustainable practices Showcases contemporary technologies and their insurgence in existing industries Focuses on need, applications, and implementation framework for Industry 4.0 Encapsulates all that one has to learn about sustainability and its transformation in Industry 4.0 Real time case studies are presented

Responsible Manufacturing Ammar Y. Alqahtani 2019-02-25 Responsible Manufacturing has become an obligation to the environment and to society itself, enforced primarily by customer perspective and governmental regulations on environmental issues. This is mainly driven by the escalating deterioration of the environment, such as diminishing raw material resources, overflowing waste sites, and increasing levels of pollution. Responsible Manufacturing related issues have found a large following in industry and academia, which aim to find solutions to the problems that arise in this newly emerged research area. Problems are widespread, including the ones related to the lifecycle of products, disassembly, material recovery, remanufacturing, and pollution prevention. Organized into sixteen chapters, this book provides a foundation for academicians and practitioners, and addresses several important issues faced by strategic, tactical, and operation planners of Responsible Manufacturing. Using efficient models in a variety of decision-making situations, it provides easy-to-use mathematical and/or simulation modeling-based solution methodologies for the majority of the issues. Features Addresses a variety of state-of-the-art issues in Responsible Manufacturing Highlights how popular industrial engineering and operations research techniques can be effectively exploited to find the most effective solutions to problems Presents how a specific issue can be approached or modeled in a given decision-making situation Covers strategic, tactical, and operational systems issues Provides a foundation for academicians and practitioners interested in building bodies of knowledge in this new and fast-growing area

The Critical Success Factors of Green Supply Chain Management in Emerging Economies Syed Abdul Rehman Khan 2020-04-21 This book outlines the scope of sustainability and green practice in supply chain operations, which has continued to grow with a rapid speed. The book includes core aspects of sustainability and green supply chain management philosophy and practice, covering general concepts, principles, strategies and best practices, which not only protect socio-environmental sustainability, but spur economic growth. The book will aid practitioners in using sustainable supply chains to reduce cost and improve service, as well as keep up-to-date with different features of green supply chains and logistics in a global market. The book will also be a valuable resource for candidates undertaking certification examinations and students studying for degrees in related fields of sustainability and green supply chain management.

Who's who in America 2002

Systemic Flexibility and Business Agility Sushil 2014-12-16 This book provides a conceptual framework for systemic flexibility and business agility, drawing on a basis of research/case applications in various types of flexibility and agility in business. The selected papers address a variety of issues concerning the theme of systemic flexibility and business agility and are organized into following five parts: (i) Systemic and Strategic Flexibility; (ii) Information and Business Agility; (iii) Flexibility, Innovation and Business Excellence; (iv) Flexibility in Value and Supply Chains; and (v) Financial Flexibility and Mergers & Acquisitions. Flexibility and agility in business are emerging as key dimensions of business excellence that encompass the requirements of both choice and speed. The two concepts, flexibility and agility, have been used in multiple ways and often interchangeably, both in literature and in practice. The growing need for flexibility/agility in business can be seen from reactive as well as proactive perspectives. A business enterprise is expected to possess reactive flexibility/agility (as adaptability and responsiveness) in order to cope with the changing and uncertain business environment. It may also endeavor to intentionally generate flexibility/agility as a strategic change in a variety of ways, such as leadership change, reengineering, innovation in products and processes,

use of information and communication technology, and learning orientation.

Flexibility in Resource Management Sushil 2017-07-30 This book provides a conceptual 'Flexibility in Resource Management' framework supported by research/case applications in various related areas. It links and integrates the flexibility aspect with resource management to offer a fresh perspective, since flexibility in different levels of resource management is emerging as a key concern -- a business enterprise needs to have reactive flexibility (as adaptiveness and responsiveness) to cope with the changing and uncertain business environment. It may also endeavor to intentionally create flexibility by way of leadership change, re-engineering, innovation in products and processes, use of information and communication technology, and so on. The selected papers discussing a variety of issues concerning flexibility in resource management, are organized into following four parts: flexibility and innovation; flexibility in organizational management; operations and technology management; and financial and risk management. In addition to addressing the organizational needs of corporate bodies spread across the globe, the book serves as a useful reference resource for a variety of audiences including management students, researchers, business managers, consultants and professional institutes.

Industrial Engineering and Operations Management I João Reis 2019-04-13 Based on the 2018 International Joint Conference on Industrial Engineering and Operations Management (IJCIEOM) conference that took place in Lisbon, Portugal, this proceedings volume is the first of two focusing on mathematical applications in digital transformation. The different contributions in this volume explore topics such as modelling, simulation, logistics, innovation, sustainability, health care, supply chain, lean manufacturing, operations management, quality and digital. Written by renowned scientists from around the world, this multidisciplinary volume serves as a reference on industrial engineering and operations management and as a source on current findings for researchers and students aiming to work on industrial-related problems.

ISOM 2013 Proceedings (GIAP Journals, India) Global Institutes Amritsar and University of Mauritius

Proceedings on 25th International Joint Conference on Industrial Engineering and Operations Management - IJCIEOM Zoran Anisic 2020-03-20 This book presents the conference proceedings of the 25th edition of the International Joint Conference on Industrial Engineering and Operations Management. The conference is organized by 6 institutions (from different countries and continents) that gather a large number of members in the field of operational management, industrial engineering and engineering management. This edition of the conference had the title: THE NEXT GENERATION OF PRODUCTION AND SERVICE SYSTEMS in order to emphasize unpredictable and very changeable future. This conference is aimed to enhance connection between academia and industry and to gather researchers and practitioners specializing in operation management, industrial engineering, engineering management and other related disciplines from around the world.

Trends in Industrial Engineering Applications to Manufacturing Process Jorge Luis García-Alcaraz This book covers supply chain and logistics, production and manufacturing systems as well as human factors. Topics such as applications to procurements from suppliers, suppliers developments and relationships with suppliers are reported. The techniques and tools applied to production processes, such as, machinery maintenance and quick changeover, are described in detail. The book also presents human factors as the main component in the industrial engineering field, reporting some successful teamwork organizations for improvements and applied ergonomics, among others.

Emerging Trends in Mechanical Engineering L. Vijayaraghavan 2019-12-11 This book comprises select proceedings of the International Conference on Emerging Trends in Mechanical Engineering (ICETME 2018). The book covers various topics of mechanical engineering like computational fluid dynamics, heat transfer, machine dynamics, tribology, and composite materials. In addition, relevant studies in the allied fields of manufacturing, industrial and production engineering are also covered. The applications of latest tools and techniques in the context of mechanical engineering problems are discussed in this book. The contents of this book will be useful for students, researchers as well as industry professionals.

Environment Conscious Manufacturing Surendra M. Gupta 2007-12-19 Hotter temperatures, less arctic ice, loss of habitat-every other day, it seems, global warming and environmental issues make headlines. Consumer-driven environmental awareness combined with stricter recycling regulations have put the pressure on companies to produce and dispose of products in an environmentally responsible manner. Redefining indus

Production and Operations Management S.P. Singh This book covers the emerging and important topics related to production and operations management in a systematic way. It covers not only the essentials of planning, designing, managing and controlling of manufacturing operations, but also a number of relevant topics such as total preventive maintenance, environmental issues in production system, advanced production system, total productivity management and work system design, which are not covered in many books. The book is a useful resource for undergraduate and postgraduate students of MBA programmes, as well as B.Tech and M.Tech programmes of production and industrial engineering. Key Features • Theories and concepts based on day-to-day practical applications in the industry • Large number of solved examples to explain the theoretical concepts • Case study at the end of each chapter to illustrate the theory • Brings out the link between linear programming and its applications

Cloud Computing in Medical Imaging Ayman El-Baz 2023-03-14 Today's healthcare organizations must focus on a lot more than just the health of their clients. The infrastructure it takes to support clinical-care delivery continues to expand, with information technology being one of the most significant contributors to that growth. As companies have become more dependent on technology for their clinical, administrative, and financial functions, their IT departments and expenditures have had to scale quickly to keep up. However, as technology demands have increased, so have the options for reliable infrastructure for IT applications and data storage. The one that has taken center stage over the past few years is cloud computing. Healthcare researchers are moving their efforts to the cloud because they need adequate resources to process, store, exchange, and use large quantities of medical data. Cloud Computing in Medical Imaging covers the state-of-the-art techniques for cloud computing in medical imaging, healthcare technologies, and services. The book focuses on Machine-learning algorithms for health data security Fog computing in IoT-based health care Medical imaging and healthcare applications using fog IoT networks Diagnostic imaging and associated services Image steganography for medical informatics This book aims to help advance scientific research within the broad field of cloud computing in medical imaging, healthcare technologies, and services. It focuses on major trends and challenges in this area and presents work aimed to identify new techniques and their use in biomedical analysis.

Handbook of Research on Interdisciplinary Approaches to Decision Making for Sustainable Supply Chains Awasthi, Anjali 2019-09-27 Businesses must create initiatives and adopt eco-friendly practices in order to adhere to the sustainability goals of a globalized world. Recycling, product service systems, and green manufacturing are just a few methods businesses use within a sustainable supply chain. However, these tools and techniques must also ensure business growth in order to remain relevant in an environmentally-conscious world. The Handbook of Research on Interdisciplinary Approaches to Decision Making for Sustainable Supply Chains provides interdisciplinary approaches to sustainable supply chain management through the optimization of system performance and development of new policies, design networks, and effective reverse logistics practices. Featuring research on topics such as industrial symbiosis, green collaboration, and clean transportation, this book is ideally designed for policymakers, business executives, warehouse managers, operations managers, suppliers, industry professionals, sustainability developers, decision makers, students, academicians, practitioners, and researchers seeking current research on reducing the environmental impacts of businesses via sustainable supply chain planning.

Multiple Criteria Decision Making Applications in Environmentally Conscious Manufacturing and Product Recovery Surendra M. Gupta 2017-10-17 In order to ensure environmentally responsible production and disposal of products, local governments are imposing stricter environmental regulations, some of which even require manufacturers to take back their products at the end of the product's useful life. These government regulations, together with increasing environmental awareness, have forced manufacturers to invest in environment-conscious manufacturing. The Multiple Criteria Decision Making Techniques presented in this book can be employed to solve the problems of environment-conscious manufacturers in product design, logistics, disassembly and remanufacturing.

Agile Manufacturing Systems K Hans Raj 2011-12-17 Agility has become very important for the industries today as the lifetimes of the

products are continuously shrinking. This book provides an excellent opportunity for updating understanding of agile methods from the design, manufacturing and business process perspectives, whether one is an industrial practitioner, academic researcher engineer or business graduate student. This volume is a compilation of various important aspects of agility consisting of systemic considerations in manufacturing, agile software systems, agile business systems, agile operations research, flexible manufacturing systems, advanced manufacturing systems with improved materials and mechanical behavior of products, agile aspects of design, clean and green manufacturing systems, environment, agile defence systems.

Managing Supply Chain Risk and Disruptions: Post COVID-19 Aravind Raj Sakthivel 2021-06-24 This book summarizes the effect of COVID-19 on the global supply chain. Eminent researchers, practitioners, and professors discuss the challenges faced by supply chain providers and supply chain strategies related to various global, retail, fast moving consumer goods, humanitarian, pharmaceutical, and agricultural supply chains. This book also suggests the resilient approach adopted by supply chain organizations for quick recovery and re-establishing their networks. This book helps the readers explore the pandemic's impact on the supply chain and rebuilding the same using suitable approaches.

Lean and Green Manufacturing Kaliyan Mathiyazhagan 2021-10-16 This book provides a stage-by-stage integration of lean and green manufacturing paradigms to achieve environmental and economic benefits. The book includes chapters on conceptual development for incorporating the lean and green paradigm, and methods, tools and techniques for developing and integrating lean manufacturing. Several case studies which demonstrate the benefits of integrating lean and green manufacturing techniques are also covered here. The contents of this book are expected to support researchers and practitioners in the implementation of integrated lean and green manufacturing technologies.

Smart and Sustainable Operations and Supply Chain Management in Industry 4.0 Turan Paksoy 2023-03-08 Smart applications are transforming conventional supply chains into digital ones. To compete in today's competitive market, organizations must utilize the merits of the Fourth Industrial Revolution while being sustainable, lean, and eco-conscious. Smart and Sustainable Operations and Supply Chain Management in Industry 4.0 closes the gap and provides novel ideas, research, and applications. This book discusses smart and sustainable supply chain management concepts that are analyzed within the Industry 4.0 perspective. It also highlights green systems and smart applications within an Industry 4.0 setting. The book presents the latest technological developments, including disruptive technologies and their impact on smart and sustainable supply chains under the triple bottom line approach. For easy reader comprehension, each chapter will include a case study, a related problem, or a numerical example, as well as the solution. This book is written for academicians, practitioners, PhD students, and researchers involved in this area.

Managing Flexibility Sushil 2015-07-16 This edited book provides a conceptual framework of managing flexibility in the areas of people, process, technology and business supported by researches/case applications in various types of flexibilities in business. The book is organized into following five parts: (i) Managing Flexibility; (ii) People Flexibility; (iii) Process Flexibility; (iv) Flexibility in Technology and Innovation Management; and (v) Business Flexibility. Managing flexibility at the level of people, process, technology and business encompasses the requirements of both choice and speed. The need for managing flexibility is growing to cope with the developments and challenges in the global business environment. This can be seen from reactive as well as proactive perspectives. Flexibility is a major dimension of business excellence and deals with a paradoxical view point such as stability and dynamism, continuity and change, centralization and decentralization, and so on. It needs to be managed at the levels of people, process, technology and various business functions and it is important to create flexibility at the level of people to create and manage flexibility in processes and technologies in order to support flexible business requirements.

Advances in Manufacturing Technology and Management Ranganath M. Singari 2022-12-12 This book presents the select peer-reviewed proceeding of the International Conference on Advanced Production and Industrial Engineering (ICAPIE) – 2021 held at Delhi Technological University. It covers recent trends in various fields of mechanical engineering. The broad range of topics and issues covered include mechanical system engineering, materials engineering, micro-machining, renewable energy, industrial engineering and additive manufacturing. This book will be useful for students, researchers and professionals working in the area of mechanical and allied engineering discipline.

Proceedings of 2013 4th International Asia Conference on Industrial Engineering and Management Innovation (IEMI2013) Ershi Qi 2014-01-16 The purpose of the 4th International Asia Conference on Industrial Engineering and Management Innovation (IEMI 2013) is to bring together researchers, engineers and practitioners interested in the application of informatics to usher in new advances in the industrial engineering and management fields.

Remanufacturing Modeling and Analysis Mehmet Ali Ilgin 2016-04-19 New, Now, Next. Consumers' ever growing appetite to acquire new products and their short courtship with them has kept manufacturers busy not only expending resources at an alarming rate, but also depleting these resources and giving rise to waste and pollution at a correspondingly increasing and disturbing rate. Traditional manufacturing methods that use mainly virgin materials to produce new products and dispose of the used products at the end of their lives are quickly becoming unsustainable. In addition, regulations that require manufacturers to take back products and dispose of them responsibly have forced manufacturers to establish dedicated facilities for product recovery—systems that minimize waste and maximize remanufacturing and recycling. *Remanufacturing Modeling and Analysis* explores the design, planning and processing issues encountered in remanufacturing systems and provides examples of quantitative modeling methodologies to deal with them. The book covers the history, industry size and potential, comparison with other end-of-life options, benefits, conditions, challenges, and steps in a typical process. It provides a brief overview of each of the industrial engineering and operations research techniques used in the book and explains the models developed to increase the remanufacturability of product designs. The book also discusses how increasingly stringent environmental regulations and decreasing natural resources influence manufacturers toward more environmentally conscious manufacturing and product recovery initiatives. With easy-to-use mathematical or simulation modeling that demonstrates solutions for each remanufacturing issue, the book helps practitioners understand how a particular issue can be effectively modeled and how to choose the appropriate solution methodology. An in-depth look at quantitative analysis for remanufacturing systems, the book provides a foundation upon which to build a body of knowledge in this fast and growing area.

INDUSTRIAL ENGINEERING AND MANAGEMENT RAVI, V. 2015-08-31 The book is primarily intended as a text for all branches of B.Tech, M.Tech and MBA courses. Beginning with an introduction to industrial engineering, it discusses contributions and thoughts of classical (Taylor, Fayol, and Weber's), neo-classical (Hawthorne) and modern thinkers. The book explains different functions of management, and differentiate between management and administration. Various types of business organisations with their structures and personnel management also find place in the book. Topics related to facilities location, material handling, work study, job evaluation and merit rating, wages and incentives that are of prime importance in any business are discussed. The book is aimed at providing a better understanding of industrial operations with practical approach. Financial aspects related to business operations such as financial management, management accounting, breakeven analysis, depreciation and replacement policies for equipment assume prime importance. Numerical examples have been solved at appropriate places to create interest in readers. Marketing aspects of business as marketing management, new product development and sales forecasting methods are discussed, besides management and control of operations. For maintaining industrial peace, good relationship between employers and employees is essential. Chapters on industrial relations, industrial safety and industrial legislations are introduced with the objective of providing readers with information on these important aspects. Good decision-making is what differentiates a good manager from a bad one. Thus, a chapter on decision-making is added to examine its skill. Network constructions, CPM, PERT have been covered under project management. Quantitative techniques for decision-making as linear programming, transportation problems, assignment problems, game theory, queuing theory, etc., are also discussed in this textbook. **KEY FEATURES** • Lucid presentation of the concepts. • Illustrative figures and tables make the reading more fruitful and enriching. • Numerical problems with

solutions form an integral part of the book, making it application-oriented. • Chapter-end review questions test the students' knowledge of the fundamental concepts.

Handbook of Computational Intelligence in Manufacturing and Production Management Laha, Dipak 2007-11-30 During the last two decades, computer and information technologies have forced great changes in the ways businesses manage operations in meeting the desired quality of products and services, customer demands, competition, and other challenges. The Handbook of Computational Intelligence in Manufacturing and Production Management focuses on new developments in computational intelligence in areas such as forecasting, scheduling, production planning, inventory control, and aggregate planning, among others. This comprehensive collection of research provides cutting-edge knowledge on information technology developments for both researchers and professionals in fields such as operations and production management, Web engineering, artificial intelligence, and information resources management.

Emerging Methods in Predictive Analytics: Risk Management and Decision-Making Hsu, William H. 2014-01-31 Decision making tools are essential for the successful outcome of any organization. Recent advances in predictive analytics have aided in identifying particular points of leverage where critical decisions can be made. Emerging Methods in Predictive Analytics: Risk Management and Decision Making provides an interdisciplinary approach to predictive analytics; bringing together the fields of business, statistics, and information technology for effective decision making. Managers, business professionals, and decision makers in diverse fields will find the applications and cases presented in this text essential in providing new avenues for risk assessment, management, and predicting the future outcomes of their decisions.

Pursuing Sustainability Chialin Chen 2021-03-03 This handbook includes three parts, corresponding to the following three domains of OR/MS research related to sustainability: (i) Systems Design, Innovation, and Technology, (ii) Manufacturing, Logistics, and Transportation, and (iii) Sustainable Natural Resource Management. The first part of the handbook (Chapters 2-6) will focus on the creation and development of sustainable products, services, value chains, and organizations from a systems perspective. Key areas to be covered include Green Design & Innovation, Technology and Engineering Management, Sustainable Value Chain Systems, Sustainability Standards and Performance Evaluation, and Circular Economy and New Research Directions in Sustainability. The second part of the handbook (Chapters 7-11) will concentrate on the major operational and logistic issues faced by today's industries in pursuing sustainability. Key areas to be covered include Remanufacturing, Reverse Logistics, Closed-Loop Supply Chains, Sustainable Transportation, and New Research Directions in Green Supply Chain Management. The third part of the proposed handbook (Chapters 12-16) will center on major sustainability issues in managing engineering infrastructure and natural resources. Key areas to be covered include Renewable Energy, Sustainable Water Resource, Biofuel Infrastructure, Natural Gas, and New Research Direction in Sustainable Resource Management. The handbook aims to bridge the three main OR/MS research domains in sustainability: "Systems Design, Innovation, and Technology," "Manufacturing, Logistics, and Transportation," and "Sustainable Natural Resource Management." Traditionally, these domains are treated separately in the OR/MS literature. By combining the three domains, the handbook will provide a more holistic treatment of MS/OR methodologies to address critical sustainability issues faced by today's society. Unlike most existing handbooks which only focus on current OR/MS research in sustainability within a domain, this handbook will include a concluding chapter in each of the three parts to discuss and identify potential future research directions in each of the three main domains.

Computer Information Systems and Industrial Management Agostino Cortesi 2012-09-20 This book constitutes the refereed proceedings of the 11th International Conference on Computer Information Systems and Industrial Management, CISIM 2012, held in Venice, Italy, in September 2012. The 35 revised full papers presented together with 2 keynote talks were carefully reviewed and selected from 80 submissions. The papers are organized in topical sections on security, access control and intrusion detection; pattern recognition and image processing; biometric applications; algorithms and data management; networking; and system models and risk assessment.

Decision Management: Concepts, Methodologies, Tools, and Applications Management Association, Information Resources 2017-01-30 The implementation of effective decision making protocols is crucial in any organizational environment in modern society. Emerging advancements in technology and analytics have optimized uses and applications of decision making systems. Decision Management: Concepts, Methodologies, Tools, and Applications is a compendium of the latest academic material on the control, support, usage, and strategies for implementing efficient decision making systems across a variety of industries and fields. Featuring comprehensive coverage on numerous perspectives, such as data visualization, pattern analysis, and predictive analytics, this multi-volume book is an essential reference source for researchers, academics, professionals, managers, students, and practitioners interested in the maintenance and optimization of decision management processes.

Advances in Industrial and Production Engineering Kripa Shanker 2019-04-23 This book comprises select proceedings of the International Conference on Future Learning Aspects of Mechanical Engineering (FLAME 2018). The book discusses different topics of industrial and production engineering such as sustainable manufacturing systems, computer-aided engineering, rapid prototyping, manufacturing management and automation, metrology, manufacturing process optimization, casting, welding, machining, and machine tools. The contents of this book will be useful for researchers as well as professionals.

Operations Management and Data Analytics Modelling Lalit Kumar Awasthi 2021-12-30 Operations Management and Data Analytics Modelling: Economic Crises Perspective addresses real operation management problems in thrust areas like the healthcare and energy management sectors and Industry 4.0. It discusses recent advances and trends in developing data-driven operation management-based methodologies, big data analysis, application of computers in industrial engineering, optimization techniques, development of decision support systems for industrial operation, the role of a multiple-criteria decision-making (MCDM) approach in operation management, fuzzy set theory-based operation management modelling and Lean Six Sigma. Features Discusses the importance of data analytics in industrial operations to improve economy Provides step-by-step implementation of operation management models to identify best practices Covers in-depth analysis using data-based operation management tools and techniques Discusses mathematical modelling for novel operation management models to solve industrial problems This book is aimed at graduate students and professionals in the field of industrial and production engineering, mechanical engineering and materials science.

Web-Based Green Products Life Cycle Management Systems: Reverse Supply Chain Utilization Wang, Hsiao-Fan 2008-12-31 Provides a review of current and potential research in green management and control.

Multi-Criteria Decision Analysis in Management Behl, Abhishek 2020-02-01 Multi-criteria decision making (MCDM) has been extensively used in diverse disciplines, with a variety of MCDM techniques used to solve complex problems. A primary challenge faced by research scholars is to decode these techniques using detailed step-by-step analysis with case studies and data sets. The scope of such work would help decision makers to understand the process of using MCDM techniques appropriately to solve complex issues without making mistakes. Multi-Criteria Decision Analysis in Management provides innovative insights into the rationale behind using MCDM techniques to solve decision-making problems and provides comprehensive discussions on these techniques from their inception, development, and growth to their advancements and applications. The content within this publication examines hybrid multicriteria models, value theory, and data envelopment. Ideal for researchers, management professionals, students, operations scholars, and academicians, this scholarly work supports and enhances the decision-making process.

Research Companion to Building Information Modeling Lu, Weisheng 2022-03-22 Offering critical insights to the state-of-the-art in Building Information Modeling (BIM) research and development, this book outlines the prospects and challenges for the field in this era of digital revolution. Analysing the contributions of BIM across the construction industry, it provides a comprehensive survey of global BIM practices.

Advances in Industrial and Production Engineering Kripa Shanker 2019-05-28 This book comprises select proceedings of the International Conference on Future Learning Aspects of Mechanical Engineering (FLAME 2018). The book discusses different topics of industrial and production engineering such as sustainable manufacturing systems, computer-aided engineering, rapid prototyping, manufacturing

management and automation, metrology, manufacturing process optimization, casting, welding, machining, and machine tools. The contents of this book will be useful for researchers as well as professionals.

Advances in Manufacturing and Industrial Engineering Ranganath M. Singari 2021-01-13 This book presents selected peer reviewed papers from the International Conference on Advanced Production and Industrial Engineering (ICAPIE 2019). It covers a wide range of topics and latest research in mechanical systems engineering, materials engineering, micro-machining, renewable energy, industrial and production engineering, and additive manufacturing. Given the range of topics discussed, this book will be useful for students and researchers primarily working in mechanical and industrial engineering, and energy technologies.

Reverse Supply Chains Surendra M. Gupta 2016-04-19 Winner of IIE Book of the Month, December 2013 The introduction of reverse supply chains has created many challenges in network design, transportation, selection of used products, selection and evaluation of suppliers, performance measurement, marketing-related issues, end-of-life (EOL) alternative selection, remanufacturing, disassembly, and product acquisition management, to name a few. Under the guidance of an expert editor and with contributions from pioneers in the field, *Reverse Supply Chains: Issues and Analysis* addresses several important issues faced by strategic, tactical, and operation planners of reverse supply chains, using efficient models in a variety of decision-making situations providing easy-to-use mathematical and/or simulation modeling-based solution methodologies for a majority of the issues. The book introduces the basic concepts of reverse logistics and systematically analyzes the literature by classifying more than 400 published references into five major types of product returns. It then identifies the basic activities and scope of reverse logistics, examining its drivers and barriers as well as major issues and challenges. The chapters cover metrics for quantitatively comparing competing new-product designs for end-of-life disassembly on a reverse production line, how to use the theory of constraints thinking processes to determine the core problems in reverse logistics, and an integrated multi-criteria decision-making methodology using Taguchi loss functions AHP (Analytic Hierarchy Process) and fuzzy programming. They explore issues associated with remanufacturing and green and resilient supply chain management and propose system modeling based on graph theory and network flows application to analyze material resource flows in the life cycle of a product. Reverse supply chains is a new and fast growing area of research and only a handful of books are on the market, however those books discuss specific projects rather than provide a cohesive focus on the topics. This book will provide a foundation and understanding of the topic and also highlight how current issues can be approached in a decision-making situation—using the appropriate technique.