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Reliability Evaluation of Engineering Systems Advancements in Fuzzy Reliability Theory **Power System Reliability Evaluation** Reliability Assessment of Electric Power Systems Using Monte Carlo Methods **Machine Vision Inspection Systems, Machine Learning-Based Approaches** *Rising Threats in Expert Applications and Solutions* Product-Service Integration for Sustainable Solutions Wind Power Based Isolated Energy Systems **Managerial Strategies and Solutions for Business Success in Asia** *Innovative and Agile Contracting for Digital Transformation and Industry 4.0 Computer Simulation Validation* Low-Power Variation-Tolerant Design in Nanometer Silicon Nuclear Science Abstracts *Biomechanics* **Applied Mechanics Reviews** Security Solutions and Applied Cryptography in Smart Grid Communications *Recent Advances in Intelligent Information Systems and Applied Mathematics Fuzzy Stochastic Optimization Fuzzy Optimization* **Neutrosophic Sets and Systems: An International Book Series in Information Science and Engineering, vol. 21 / 2018** **Neutrosophic Sets and Systems: An International Book Series in Information Science and Engineering, vol. 19 / 2018** *Neutrosophic Goal Geometric Programming Problem based on Geometric Mean Method and its Application* **Neutrosophic Sets and Systems** Verification and Validation in Scientific Computing **Nonlinear Analysis and Boundary Value Problems** *Cumulated Index Medicus* Intuitionistic and Type-2 Fuzzy Logic Enhancements in Neural and Optimization Algorithms: Theory and Applications **Neutrosophic Sets and Systems, Vol. 46, 2021 System Reliability Management** *Glocalized Solutions for Sustainability in Manufacturing* **A Primer on the Taguchi Method** *Applications of Combinatorial Optimization* **Applications of Combinatorial Optimization** Bias Temperature Instability for Devices and Circuits Innovative Security Solutions for Information Technology and Communications **Design of Experiments Using The Taguchi Approach Circadian Rhythms for Future Resilient Electronic Systems Journal of Solution Chemistry** *Microelectronics Manufacturing Diagnostics Handbook* **Recent Advances in Intuitionistic Fuzzy Logic Systems**

Managerial Strategies and Solutions for Business Success in Asia Feb 20 2022 Globalization, sustainable development, and technological applications all affect the current state of the business sector in Asia. This complex industry plays a vital part in the overall economic, social, and political aspects of this region, as well as on a larger international scale. Managerial Strategies and Solutions for Business Success in Asia is an authoritative reference source for the latest collection of research perspectives on the development and optimization of various business sectors across the Asian region and examines their role in the globalized economy. Highlighting pertinent topics across an interdisciplinary scale, such as e-commerce, small and medium enterprises, and tourism management, this book is ideally designed for academics, professionals, graduate students, policy makers, and practitioners interested in emerging business and management practices in Asia.

Reliability Evaluation of Engineering Systems Oct 31 2022 In response to new developments in the field, practical teaching experience, and readers' suggestions, the authors of the warmly received Reliablity Evaluation of Engineering Systems have updated and extended the work-providing extended coverage of fault trees and a more complete examination of probability distribution, among other things-without disturbing the original's concept, structure, or style.

System Reliability Management Jun 02 2020 This book provides the latest research advances in the field of system reliability assurance and engineering. It contains reference material for applications of reliability in system engineering, offering a theoretical sound background with adequate numerical illustrations. Included are concepts pertaining to reliability analysis, assurance techniques and methodologies, tools, and practical applications of system reliability modeling and allocation. The collection discusses various soft computing techniques like artificial intelligence and particle swarm optimization approach for reliability assessment. Importance of differentiating between the optimal release time and testing stop time of the software has been explicitly discussed and presented in the book. Features: Creates understanding of the costs associated with complex systems Covers reliability measurement of engineering systems Incorporates an efficient effort-based expenditure policy incorporating cost and reliability criteria Provides information for optimal testing stop and release time of software system Presents software performance and security layout Addresses reliability prediction and its maintenance through advanced analytics techniques Overall, System Reliability Management: Solutions and Techniques is a collaborative and interdisciplinary approach for better communication of problems and solutions to increase the performance of the system for better utilization and resource management.

Innovative Security Solutions for Information Technology and Communications Nov 27 2019 This book constitutes the thoroughly refereed post-conference proceedings of the 13th International Conference on Security for Information Technology and Communications, SecITC 2020, held in Bucharest, Romania, in November 2020. The 17 revised full papers presented together with 2 invited talks were carefully reviewed and selected from 41 submissions. The conference covers topics from cryptographic algorithms, to digital forensics and cyber security and much more.

Neutrosophic Sets and Systems Dec 09 2020 “Neutrosophic Sets and Systems” has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.

Innovative and Agile Contracting for Digital Transformation and Industry 4.0 Jan 22 2022 Digital transformation is reshaping the business arena as new, successful digital business models are increasing agility and presenting better ways to handle business than the traditional alternatives. Industry 4.0 affects everything in our daily lives and is blurring the line between the physical, the biological, and the digital. This created an environment where technology and humans are so closely integrated that it is impacting every activity within the organizations. Specifically, contracting processes and procedures are challenged to align with the new business dynamics as traditional contracts are no longer fitting today's agile and continuously changing environments. Businesses are required to facilitate faster, more secure, soft, and real-time transactions while protecting stakeholders’ rights and obligations. This includes agile contracts which are dynamically handling scope changes, smart contracts that can automate rule-based functions, friction-less contracts that can facilitate different activities, and opportunity contracts that looks toward the future. Innovative and Agile Contracting for Digital Transformation and Industry 4.0 analyzes the consequences, benefits, and possible scenarios of contract transformation under the pressure of new technologies and business dynamics in modern times. The chapters cover the problems, issues, complications, strategies, governance, and risks related to the development and enforcement of digital transformation contracting practices. While highlighting topics in the area of digital transformation and contracting such

as artificial intelligence, digital business, emerging technologies, and blockchain, this book is ideally intended for business, engineering, and technology practitioners and policy makers, along with practitioners, stakeholders, researchers, academicians, and students interested in understanding the scope, complexity, and importance of innovative contracts and agile contracting.

Recent Advances in Intuitionistic Fuzzy Logic Systems Jun 22 2019 This book aims at providing an overview of state-of-the-art in both the theory and methods of intuitionistic fuzzy logic, partial differential equations and numerical methods in informatics. It covers topics such as fuzzy intuitionistic Hilbert spaces, intuitionistic fuzzy differential equations, fuzzy intuitionistic metric spaces, and numerical methods for differential equations. It reports on applications such as fuzzy real time scheduling, intelligent control, diagnostics and time series prediction. Chapters were carefully selected among contributions presented at the second edition of the International Conference on Intuitionistic Fuzzy Sets and Mathematical Science, ICIFSMAS, held on April 11-13, 2018, at Al Akhawayn University of Ifrane, in Morocco.

Bias Temperature Instability for Devices and Circuits Dec 29 2019 This book provides a single-source reference to one of the more challenging reliability issues plaguing modern semiconductor technologies, negative bias temperature instability. Readers will benefit from state-of-the art coverage of research in topics such as time dependent defect spectroscopy, anomalous defect behavior, stochastic modeling with additional metastable states, multiphonon theory, compact modeling with RC ladders and implications on device reliability and lifetime.

Computer Simulation Validation Dec 21 2021 This unique volume introduces and discusses the methods of validating computer simulations in scientific research. The core concepts, strategies, and techniques of validation are explained by an international team of pre-eminent authorities, drawing on expertise from various fields ranging from engineering and the physical sciences to the social sciences and history. The work also offers new and original philosophical perspectives on the validation of simulations. Topics and features: introduces the fundamental concepts and principles related to the validation of computer simulations, and examines philosophical frameworks for thinking about validation; provides an overview of the various strategies and techniques available for validating simulations, as well as the preparatory steps that have to be taken prior to validation; describes commonly used reference points and mathematical frameworks applicable to simulation validation; reviews the legal prescriptions, and the administrative and procedural activities related to simulation validation; presents examples of best practice that demonstrate how methods of validation are applied in various disciplines and with different types of simulation models; covers important practical challenges faced by simulation scientists when applying validation methods and techniques; offers a selection of general philosophical reflections that explore the significance of validation from a broader perspective. This truly interdisciplinary handbook will appeal to a broad audience, from professional scientists spanning all natural and social sciences, to young scholars new to research with computer simulations. Philosophers of science, and methodologists seeking to increase their understanding of simulation validation, will also find much to benefit from in the text.

Recent Advances in Intelligent Information Systems and Applied Mathematics Jun 14 2021 This book describes the latest advances in intelligent techniques such as fuzzy logic, neural networks, and optimization algorithms, and their relevance in building intelligent information systems in combination with applied mathematics. The authors also outline the applications of these systems in areas like intelligent control and robotics, pattern recognition, medical diagnosis, time series prediction, and optimization of complex problems. By sharing fresh ideas and identifying new targets/problems it offers young researchers and students new directions for their future research. The book is intended for readers from mathematics and computer science, in particular professors and students working on theory and applications of intelligent systems for real-world applications.

Rising Threats in Expert Applications and Solutions May 26 2022 This book presents high-quality, peer-reviewed papers from the FICR International Conference on Rising Threats in Expert Applications and Solutions 2020, held at IIS University Jaipur, Rajasthan, India, on January 17–19, 2020. Featuring innovative ideas from researchers, academics, industry professionals and students, the book covers a variety of topics, including expert applications and artificial intelligence/machine learning; advanced web technologies, like IoT, big data, and cloud computing in expert applications; information and cybersecurity threats and solutions; multimedia applications in forensics, security and intelligence; advances in app development; management practices for expert applications; and social and ethical aspects of expert applications in applied sciences.

Neutrosophic Sets and Systems: An International Book Series in Information Science and Engineering, vol. 21 / 2018 Mar 12 2021 “Neutrosophic Sets and Systems” has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.

Circadian Rhythms for Future Resilient Electronic Systems Sep 25 2019 This book describes methods to address wearout/aging degradations in electronic chips and systems, caused by several physical mechanisms at the device level. The authors introduce a novel technique called accelerated active self-healing, which fixes wearout issues by enabling accelerated recovery. Coverage includes recovery theory, experimental results, implementations and applications, across multiple nodes ranging from planar, FD-SOI to FinFET, based on both foundry provided models and predictive models. Presents novel techniques, tested with experiments on real hardware; Discusses circuit and system level wearout recovery implementations, many of these designs are portable and friendly to the standard design flow; Provides circuit-architecture-system infrastructures that enable the accelerated self-healing for future resilient systems; Discusses wearout issues at both transistor and interconnect level, providing solutions that apply to both; Includes coverage of resilient aspects of emerging applications such as IoT.

Advancements in Fuzzy Reliability Theory Sep 29 2022 In recent years, substantial efforts are being made in the development of reliability theory including fuzzy reliability theories and their applications to various real-life problems. Fuzzy set theory is widely used in decision making and multi criteria such as management and engineering, as well as other important domains in order to evaluate the uncertainty of real-life systems. Fuzzy reliability has proven to have effective tools and techniques based on real set theory for proposed models within various engineering fields, and current research focuses on these applications. Advancements in Fuzzy Reliability Theory introduces the concept of reliability fuzzy set theory including various methods, techniques, and algorithms. The chapters present the latest findings and research in fuzzy reliability theory applications in engineering areas. While examining the implementation of fuzzy reliability theory among various industries such as mining, construction, automobile, engineering, and more, this book is ideal for engineers, practitioners, researchers, academicians, and students interested in fuzzy reliability theory applications in engineering areas.

Applications of Combinatorial Optimization Feb 29 2020 Combinatorial optimization is a multidisciplinary scientific area,lying in the interface of three major scientific domains:mathematics, theoretical computer science and management. The three volumes of the Combinatorial Optimization series aimsto cover a wide range of topics in this area. These topics alsodeal with fundamental notions and approaches as with severalclassical applications of combinatorial optimization. “Applications of Combinatorial Optimization” ispresenting a certain number among the most common and well-knownapplications of Combinatorial Optimization.

Intuitionistic and Type-2 Fuzzy Logic Enhancements in Neural and Optimization Algorithms: Theory and Applications Aug 05 2020 This

book describes the latest advances in fuzzy logic, neural networks, and optimization algorithms, as well as their hybrid intelligent combinations, and their applications in the areas such as intelligent control, robotics, pattern recognition, medical diagnosis, time series prediction, and optimization. The topic is highly relevant as most current intelligent systems and devices use some form of intelligent feature to enhance their performance. The book also presents new and advanced models and algorithms of type-2 fuzzy logic and intuitionistic fuzzy systems, which are of great interest to researchers in these areas. Further, it proposes novel, nature-inspired optimization algorithms and innovative neural models. Featuring contributions on theoretical aspects as well as applications, the book appeals to a wide audience.
Cumulated Index Medicus Sep 05 2020
Nuclear Science Abstracts Oct 19 2021
Design of Experiments Using The Taguchi Approach Oct 26 2019 Fulfill the practical potential of DOE-with a powerful, 16-step approach for applying the Taguchi method Over the past decade, Design of Experiments (DOE) has undergone great advances through the work of the Japanese management guru Genechi Taguchi. Yet, until now, books on the Taguchi method have been steeped in theory and complicated statistical analysis. Now this trailblazing work translates the Taguchi method into an easy-to-implement 16-step system. Based on Ranjit Roy's successful Taguchi training course, this extensively illustrated book/CD-ROM package gives readers the knowledge and skills necessary to understand and apply the Taguchi method to engineering projects-from theory and applications to hands-on analysis of the data. It is suitable for managers and technicians without a college-level engineering or statistical background, and its self-study pace-with exercises included in each chapter-helps readers start using Taguchi DOE tools on the job quickly. Special features include: * An accompanying CD-ROM of Qualitek-4 software, which performs calculations and features all example experiments described in the book * Problem-solving exercises relevant to actual engineering situations, with solutions included at the end of the text * Coverage of two-, three-, and four-level factors, analysis of variance, robust designs, combination designs, and more Engineers and technical personnel working in process and product design-as well as other professionals interested in the Taguchi method-will find this book/CD-ROM a tremendously important and useful asset for making the most of DOE in their work.
Journal of Solution Chemistry Aug 24 2019
Wind Power Based Isolated Energy Systems Mar 24 2022 This book offers methods to improve energy access and support social and economic development through the appropriate and reliable design of isolated wind energy systems. The findings reported on wind based isolated power generation show that the proper match of turbine diameter and generator rating is vital, and is governed by the site wind resource and the load profile to be served. The methodology for sizing and selecting appropriate system parameters, taking into account the resource uncertainty, is demonstrated throughout the chapters of this monograph. Readers will discover information on the methodologies for modelling, design and optimization of the systems in terms of safety, functionality, longevity, and practicality. Details are provided on the design space of wind-battery systems, multiple wind generator systems, and wind-PV-battery hybrids to cover all the bases of isolated wind energy systems. This monograph aims to serve as a guide to system developers, manufacturers, and financing institutions on the design aspects of isolated wind energy systems.
Nonlinear Analysis and Boundary Value Problems Oct 07 2020 This book is devoted to Prof. Juan J. Nieto, on the occasion of his 60th birthday. Juan José Nieto Roig (born 1958, A Coruña) is a Spanish mathematician, who has been a Professor of Mathematical Analysis at the University of Santiago de Compostela since 1991. His most influential contributions to date are in the area of differential equations. Nieto received his degree in Mathematics from the University of Santiago de Compostela in 1980. He was then awarded a Fulbright scholarship and moved to the University of Texas at Arlington where he worked with Professor V. Lakshmikantham. He received his Ph.D. in Mathematics from the University of Santiago de Compostela in 1983. Nieto's work may be considered to fall within the ambit of differential equations, and his research interests include fractional calculus, fuzzy equations and epidemiological models. He is one of the world’s most cited mathematicians according to Web of Knowledge, and appears in the Thompson Reuters Highly Cited Researchers list. Nieto has also occupied different positions at the University of Santiago de Compostela, such as Dean of Mathematics and Director of the Mathematical Institute. He has also served as an editor for various mathematical journals, and was the editor-in-chief of the journal Nonlinear Analysis: Real World Applications from 2009 to 2012. In 2016, Nieto was admitted as a Fellow of the Royal Galician Academy of Sciences. This book consists of contributions presented at the International Conference on Nonlinear Analysis and Boundary Value Problems, held in Santiago de Compostela, Spain, 4th-7th September 2018. Covering a variety of topics linked to Nieto’s scientific work, ranging from differential, difference and fractional equations to epidemiological models and dynamical systems and their applications, it is primarily intended for researchers involved in nonlinear analysis and boundary value problems in a broad sense.
Applications of Combinatorial Optimization Jan 28 2020 Combinatorial optimization is a multidisciplinary scientific area, lying in the interface of three major scientific domains: mathematics, theoretical computer science and management. The three volumes of the Combinatorial Optimization series aim to cover a wide range of topics in this area. These topics also deal with fundamental notions and approaches as with several classical applications of combinatorial optimization. Concepts of Combinatorial Optimization, is divided into three parts: - On the complexity of combinatorial optimization problems, presenting basics about worst-case and randomized complexity; - Classical solution methods, presenting the two most-known methods for solving hard combinatorial optimization problems, that are Branch-and-Bound and Dynamic Programming; - Elements from mathematical programming, presenting fundamentals from mathematical programming based methods that are in the heart of Operations Research since the origins of this field.
Applied Mechanics Reviews Aug 17 2021
Fuzzy Optimization Apr 12 2021 Optimization is an extremely important area in science and technology which provides powerful and useful tools and techniques for the formulation and solution of a multitude of problems in which we wish, or need, to to find a best possible option or solution. The volume is divided into a coupe of parts which present various aspects of fuzzy optimization, some related more general issues, and applications.
Security Solutions and Applied Cryptography in Smart Grid Communications Jul 16 2021 Electrical energy usage is increasing every year due to population growth and new forms of consumption. As such, it is increasingly imperative to research methods of energy control and safe use. Security Solutions and Applied Cryptography in Smart Grid Communications is a pivotal reference source for the latest research on the development of smart grid technology and best practices of utilization. Featuring extensive coverage across a range of relevant perspectives and topics, such as threat detection, authentication, and intrusion detection, this book is ideally designed for academicians, researchers, engineers and students seeking current research on ways in which to implement smart grid platforms all over the globe.
Neutrosophic Goal Geometric Programming Problem based on Geometric Mean Method and its Application Jan 10 2021 This paper describes neutrosophic goal geometric programming method, a new concept to solve multi-objective non-linear optimization problem under uncertainty. The proposed method is described here as an extension of fuzzy and intuitionistic fuzzy goal geometric programming technique in which the degree of acceptance , degree of indeterminacy and degree of rejection is simultaneously considered.

Neutrosophic Sets and Systems, Vol. 46, 2021 Jul 04 2020 Papers on neutrosophic programming, neutrosophic hypersoft set, neutrosophic topological spaces, NeutroAlgebra, NeutroGeometry, AntiGeometry, NeutroNearRings, neutrosophic differential equations, etc.
Microelectronics Manufacturing Diagnostics Handbook Jul 24 2019 The world of microelectronics is filled with cusses measurement systems, manufacturing many success stories. From the use of semi control techniques, test, diagnostics, and fail ure analysis. It discusses methods for modeling conductors for powerful desktop computers to their use in maintaining optimum engine per and reducing defects, and for preventing de formance in modem automobiles, they have fects in the first place. The approach described, clearly improved our daily lives. The broad while geared to the microelectronics world, has useability of the technology is enabled, how applicability to any manufacturing process of similar complexity. The authors comprise some ever, only by the progress made in reducing their cost and improving their reliability. De of the best scientific minds in the world, and fect reduction receives a significant focus in our are practitioners of the art. The information modem manufacturing world, and high-quality captured here is world class. I know you will diagnostics is the key step in that process. find the material to be an excellent reference in of product failures enables step func Analysis your application. tion improvements in yield and reliability. which works to reduce cost and open up new Dr. Paul R. Low applications and technologies. IBM Vice President and This book describes the process ofdefect re of Technology Products General Manager duction in the microelectronics world.
A Primer on the Taguchi Method Mar 31 2020 A clear, simple and essentially non-mathematical presentation, this practical guide introduces you to the basic concepts, techniques and applications of the renowned Taguchi approach. A Primer on the Taguchi Method introduces the fundamental concepts of Taguchi experimental design and shows engineers how to design, analyze, and interpret experiments using the Taguchi approach for a wide range of common products and processes. Written for manufacturing and production engineers, as well as design engineers and managers, this book explains the most practical ways to apply the Taguchi approach. The Taguchi approach to quality: the power of the Taguchi approach shows how it can be applied to an array of products from automobiles to computers. Learn the extraordinary benefits of building quality into the design, the heart of the Taguchi technique. Numerous real-world examples will help you see how the Taguchi Method works in a variety of manufacturing applications.For those who need a more rigorous statistical treatment, the book's working appendices provide full mathematical details on orthogonal arrays, triangular tables and linear graphs, plus fully worked solutions to problems presented in the example case studies.
Low-Power Variation-Tolerant Design in Nanometer Silicon Nov 19 2021 Design considerations for low-power operations and robustness with respect to variations typically impose contradictory requirements. Low-power design techniques such as voltage scaling, dual-threshold assignment and gate sizing can have large negative impact on parametric yield under process variations. This book focuses on circuit/architectural design techniques for achieving low power operation under parameter variations. We consider both logic and memory design aspects and cover modeling and analysis, as well as design methodology to achieve simultaneously low power and variation tolerance, while minimizing design overhead. This book will discuss current industrial practices and emerging challenges at future technology nodes.
Verification and Validation in Scientific Computing Nov 07 2020 Advances in scientific computing have made modelling and simulation an important part of the decision-making process in engineering, science, and public policy. This book provides a comprehensive and systematic development of the basic concepts, principles, and procedures for verification and validation of models and simulations. The emphasis is placed on models that are described by partial differential and integral equations and the simulations that result from their numerical solution. The methods described can be applied to a wide range of technical fields, from the physical sciences, engineering and technology and industry, through to environmental regulations and safety, product and plant safety, financial investing, and governmental regulations. This book will be genuinely welcomed by researchers, practitioners, and decision makers in a broad range of fields, who seek to improve the credibility and reliability of simulation results. It will also be appropriate either for university courses or for independent study.
Power System Reliability Evaluation Aug 29 2022 First Published in 1970. Routledge is an imprint of Taylor & Francis, an informa company.
Neutrosophic Sets and Systems: An International Book Series in Information Science and Engineering, vol. 19 / 2018 Feb 08 2021 “Neutrosophic Sets and Systems” has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.
Fuzzy Stochastic Optimization May 14 2021 In 2014, winner of "Outstanding Book Award" by The Japan Society for Fuzzy Theory and Intelligent Informatics. Covering in detail both theoretical and practical perspectives, this book is a self-contained and systematic depiction of current fuzzy stochastic optimization that deploys the fuzzy random variable as a core mathematical tool to model the integrated fuzzy random uncertainty. It proceeds in an orderly fashion from the requisite theoretical aspects of the fuzzy random variable to fuzzy stochastic optimization models and their real-life case studies. The volume reflects the fact that randomness and fuzziness (or vagueness) are two major sources of uncertainty in the real world, with significant implications in a number of settings. In industrial engineering, management and economics, the chances are high that decision makers will be confronted with information that is simultaneously probabilistically uncertain and fuzzily imprecise, and optimization in the form of a decision must be made in an environment that is doubly uncertain, characterized by a co-occurrence of randomness and fuzziness. This book begins by outlining the history and development of the fuzzy random variable before detailing numerous optimization models and applications that include the design of system controls for a dam.
Biomechanics Sep 17 2021 In this book, the authors present in detail several recent methodologies and algorithms that they developed during the last fifteen years. The deterministic methods account for uncertainties through empirical safety factors, which implies that the actual uncertainties in materials, geometry and loading are not truly considered. This problem becomes much more complicated when considering biomechanical applications where a number of uncertainties are encountered in the design of prosthesis systems. This book implements improved numerical strategies and algorithms that can be applied to biomechanical studies.
Product-Service Integration for Sustainable Solutions Apr 24 2022 “An Industrial Product-Service System is characterized by the integrated and mutually determined planning, development, provision and use of product and service shares including its immanent software components in Business-to-Business applications and represents a knowledge-intensive socio-technical system.” – Meier, Roy, Seliger (2010) Since the first conference in 2009, the CIRP International Conference on Industrial Product-Service Systems has become a well-established international forum for the review and discussion of advances, research results and industrial improvements. Researchers from all over the world have met at previous IPS2 conferences in Cranfield (2009), Linköping (2010), Braunschweig (2011) and Tokyo (2012). In 2013, the 5th CIRP International Conference on Industrial Product-Service Systems is held in Bochum. Important topics of IPS2 research presented at the conference are: planning and development, sustainability, business models, operation, service engineering, knowledge management, ICT, modeling and simulation, marketing and economic aspects as well as the role of the human in IPS2.
Machine Vision Inspection Systems, Machine Learning-Based Approaches Jun 26 2022 Machine Vision Inspection Systems (MVIS) is a multidisciplinary research field that emphasizes image processing, machine vision and, pattern recognition for industrial applications.

Inspection techniques are generally used in destructive and non-destructive evaluation industry. Now a day's the current research on machine inspection gained more popularity among various researchers, because the manual assessment of the inspection may fail and turn into false assessment due to a large number of examining while inspection process. This volume 2 covers machine learning-based approaches in MVIS applications and it can be employed to a wide diversity of problems particularly in Non-Destructive testing (NDT), presence/absence detection, defect/fault detection (weld, textile, tiles, wood, etc.), automated vision test & measurement, pattern matching, optical character recognition & verification (OCR/OCV), natural language processing, medical diagnosis, etc. This edited book is designed to address various aspects of recent methodologies, concepts, and research plan out to the readers for giving more depth insights for perusing research on machine vision using machine learning-based approaches.

Reliability Assessment of Electric Power Systems Using Monte Carlo Methods Jul 28 2022 The application of quantitative reliability evaluation in electric power sys tems has now evolved to the point at which most utilities use these techniques in one or more areas of their planning, design, and operation. Most of the techniques in use are based on analytical models and resulting analytical evaluation procedures. Improvements in and availability of high-speed digi tal computers have created the opportunity to analyze many of these prob lems using stochastic simulation methods and over the last decade there has been increased interest in and use made of Monte Carlo simulation in quantitative power system reliability assessment. Monte Carlo simulation is not a new concept and recorded applications have existed for at least 50 yr. However, localized high-speed computers with large-capacity storage have made Monte Carlo simulation an available and sometimes preferable option for many power system reliability applications. Monte Carlo simulation is also an integral part of a modern undergrad uate or graduate course on reliability evaluation of general engineering systems or specialized areas such as electric power systems. It is hoped that this textbook will help formalize the many existing applications of Monte Carlo simulation and assist in their integration in teaching programs. This book presents the basic concepts associated with Monte Carlo simulation.

Glocalized Solutions for Sustainability in Manufacturing May 02 2020 The 18th CIRP International Conference on Life Cycle Engineering (LCE) 2011 continues a long tradition of scientific meetings focusing on the exchange of industrial and academic knowledge and experiences in life cycle assessment, product development, sustainable manufacturing and end-of-life-management. The theme “Glocalized Solutions for Sustainability in Manufacturing” addresses the need for engineers to develop solutions which have the potential to address global challenges by providing products, services and processes taking into account local capabilities and constraints to achieve an economically, socially and environmentally sustainable society in a global perspective. Glocalized Solutions for Sustainability in Manufacturing do not only involve products or services that are changed for a local market by simple substitution or the omitting of functions. Products and services need to be addressed that ensure a high standard of living everywhere. Resources required for manufacturing and use of such products are limited and not evenly distributed in the world. Locally available resources, local capabilities as well as local constraints have to be drivers for product- and process innovations with respect to the entire life cycle. The 18th CIRP International Conference on Life Cycle Engineering (LCE) 2011 serves as a platform for the discussion of the resulting challenges and the collaborative development of new scientific ideas.