

Signals And Systems Uday Kumar Text

Aimed primarily for undergraduate students pursuing courses in VLSI design, the book emphasizes the physical understanding of underlying principles of the subject. It not only focuses on circuit design process obeying VLSI rules but also on technological aspects of Fabrication. VHDL modeling is discussed as the design engineer is expected to have good knowledge of it. Various Modeling issues of VLSI devices are focused which includes necessary device physics to the required level. With such an in-depth coverage and practical approach practising engineers can also use this as ready reference. Signals and SystemsPHI Learning Pvt. Ltd.

As technology continues to advance in today's global market, practitioners are targeting systems with significant levels of applicability and variance. Instrumentation is a multidisciplinary subject that provides a wide range of usage in several professional fields, specifically engineering. Instrumentation plays a key role in numerous daily processes and has seen substantial advancement in recent years. It is of utmost importance for engineering professionals to understand the modern developments of instruments and how they affect everyday life. Advancements in Instrumentation and Control in Applied System Applications is a collection of innovative research on the methods and implementations of instrumentation in real-world practices including communication, transportation, and biomedical systems. While highlighting topics including smart sensor design, medical image processing, and atrial fibrillation, this book is ideally designed for researchers, software engineers, technologists, developers, scientists, designers, IT professionals, academicians, and post-graduate students seeking current research on recent developments within instrumentation systems and their applicability in daily life.

This up-to-date and contemporary book is designed as a first level undergraduate text on micro-processors for the students of engineering (computer science, electrical, electronics, telecommunication, instrumentation), computer applications and information technology. It gives a clear exposition of the architecture, programming and applications of 8085 microprocessor. Besides, it provides a brief introduction to 8086 and 8088 Intel microprocessors. The book focusses on : microprocessors starting from 4004 to 80586. Instruction set of 8085 microprocessor giving the clear picture of the operations at the machine level. the various steps of the assembly language program development cycle. the hardware architecture of microcomputer built with the 8085 microprocessor. the role of the hardware interfaces: memory, input/output and interrupt, in relation to overall microcomputer system operation. peripheral chips such as 8255, 8253, 8259, 8257 and 8279 to interface with 8085 microprocessor and to program it for different applications.

Remote Sensing Platforms

Modeling and Optimization

Recent Advances in Intelligent Information Systems and Applied Mathematics

6th International Symposium, SIRS 2020, Chennai, India, October 14|17, 2020, Revised Selected Papers

Modelling, Optimization and Management

This book discusses the various open issues of blockchain technology, such as the efficiency of blockchain in different domains of digital cryptocurrency, smart contracts, smart education system, smart cities, cloud identity and access, safeguard to cybersecurity and health care. For the first time in human history, people across the world can trust each other and transact over a large peer-to-peer networks without any central authority. This proves that, trust can be built not only by centralized institution but also by protocols and cryptographic mechanisms. The potential and collaboration between organizations and individuals within peer networks make it possible to potentially move to a global collaborative network without centralization. Blockchain is a complex social, economic and technological phenomenon. This questions what the established terminologies of the modern world like currency, trust, economics and exchange would mean. To make any sense, one needs to realize how much insightful and potential it is in the context and the way it is technically developed. Due to rapid changes in accessing the documents through online transactions and transferring the currency online, many previously used methods are proving insufficient and not secure to solve the problem which arises in the safe and hassle-free transaction. Nowadays, the world changes rapidly, and a transition flow is also seen in Business Process Management (BPM). The traditional Business Process Management holds good establishment last one to two decades, but, the internal workflow confined in a single organization. They do not manage the workflow process and information across organizations. If they do so, again fall in the same trap as the control transfers to the third party that is centralized server and it leads to tampering the data, and single point of failure. To address these issues, this book highlights a number of unique problems and effective solutions that reflects the state-of-the art in blockchain Technology. This book explores new experiments and yields promising solutions to the current challenges of blockchain technology. This book is intended for the researchers, academicians, faculties, scientists, blockchain specialists, business management and software industry professionals who will find it beneficial for their research work and set new ideas in the field of blockchain. This book caters research work in many fields of blockchain engineering, and it provides an in-depth knowledge of the fields covered.

Containing selected papers from the ICSTES-ARMS 2015 conference in Lulea, Sweden, collected by editors with years of experiences in Reliability and maintenance modeling, risk assessment, and asset management, this work maximizes reader insights into the current trends in Reliability, Availability, Maintainability and Safety (RAMS) and Risk Management. Featuring a comprehensive analysis of the significance of the role of RAMS and Risk Management in the decision making process during the various phases of design, operation, maintenance, asset management and productivity in Industrial domains, these proceedings discuss key issues and challenges in the operation, maintenance and risk management of complex engineering systems and will serve as a valuable resource for those in the field. A comprehensive text on foundations and techniques of graph neural networks with applications in NLP, data mining, vision and healthcare.

This book is a collection of research papers and articles presented at the 3rd International Conference on Communications and Cyber-Physical Engineering (ICCEE 2020), held on 1-2 February 2020 at CMR Engineering College, Hyderabad, Telangana, India. Discussing the latest developments in voice and data communication engineering, cyber-physical systems, network science, communication software, image and multimedia processing research and applications, as well as communication technologies and other related technologies, it includes contributions from both academia and industry. This book is a valuable resource for scientists, research scholars and PG students working to formulate their research ideas and find the future directions in these areas. Further, it may serve as a reference work to understand the latest engineering and technologies used by practicing engineers in the field of communication engineering.

Select Proceedings of ICSTESD 2018

8085 MICROPROCESSOR

Quality, IT and Business Operations

Smart Computational Intelligence in Biomedical and Health Informatics

Issues and Challenges in Disaster Management

DIGITAL SIGNAL PROCESSING

Industry 4.0 refers to fourth generation of industrial activity characterized by smart systems and internet-based solutions. This book describes the fourth revolution based on instrumented, interconnected and intelligent assets. The different book chapters provide a perspective on technologies and methodologies developed and deployed leading to this concept. With an aim to increase performance, productivity and flexibility, major application area of maintenance through smart system has been discussed in detail. Applicability of 4.0 in transportation, energy and infrastructure is explored, with effects on technology, organisation and operations from a systems perspective.

Maintenance combines various methods, tools, and techniques in a bid to reduce maintenance costs while increasing the reliability, availability, and security of equipment. Condition-based maintenance (CBM) is one such method, and prognostics forms a key element of a CBM program based on mathematical models for predicting remaining useful life (RUL). Prognostics and Remaining Useful Life (RUL) Estimation: Predicting with Confidence compares the techniques and models used to estimate the RUL of different assets, including a review of the relevant literature on prognostic techniques and their use in the industrial field. This book describes different approaches and prognosis methods for different assets backed up by appropriate case studies. FEATURES Presents a compendium of RUL estimation methods and technologies used in predictive maintenance Describes different approaches and prognosis methods for different assets Includes a comprehensive compilation of methods from model-based and data-driven to hybrid Discusses the benchmarking of RUL estimation methods according to accuracy and uncertainty, depending on the target application, the type of asset, and the forecast performance expected Contains a toolset of methods and a way of deployment aimed at a versatile audience This book is aimed at professionals, senior undergraduates, and graduate students in all interdisciplinary engineering streams that focus on prognosis and maintenance.

This book constitutes the refereed proceedings of the 6th International Symposium on Advances in Signal Processing and Intelligent Recognition Systems, SIRS 2020, held in Chennai, India, in October 2020. Due to the COVID-19 pandemic the conference was held online. The 22 revised full papers and 5 revised short papers presented were carefully reviewed and selected from 50 submissions. The papers cover wide research fields including information retrieval, human-computer interaction (HCI), information extraction, speech recognition.

As a powerful tool to study nonlinear systems and hybrid systems, piecewise affine (PWA) systems have been widely applied to mechanical systems. Control and Estimation of Piecewise Affine Systems presents several research findings relating to the control and estimation of PWA systems in one unified view. Chapters in this title discuss stability results of PWA systems, using piecewise quadratic Lyapunov functions and piecewise homogeneous polynomial Lyapunov functions. Explicit necessary and sufficient conditions for the controllability and reachability of a class of PWA systems are considered along with controller and estimator design methods for PWA systems using linear matrix inequality (LMI) and bilinear matrix inequality (BMI) techniques. A PWA approach to a class of Takagi-Sugeno fuzzy system is discussed in depth. The book uses a number of mechanical systems, such as disk servo systems to illustrate the advantages of the proposed methods. Provides new insights on properties of PWA systems, including stability, stabilizability, reachability and controllability Presents a unified framework for analysis and synthesis of both continuous-time and discrete-time PWA systems Presents novel approaches for stability analysis and control design based on the promising SOS techniques

Proceeding of the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017)

Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery

International Conference, AIM 2011, Nagpur, Maharashtra, India, April 21-22, 2011, Proceedings

Handbook of Industry 4.0 and SMART Systems

Signals, Systems, and Filters

Digital Signal Processing

The Fourth edition of this well-received text continues to provide coherent and comprehensive coverage of digital circuits. It is designed for the undergraduate students pursuing courses in areas of engineering disciplines such as Electrical and Electronics, Electronics and Communication, Electronics and Instrumentation, Telecommunications, Medical Electronics, Computer Science and Engineering, Electronics, and Computers and Information Technology. It is also useful as a text for MCA, M.Sc. (Electronics) and M.Sc. (Computer Science) students. Appropriate for self study, the book is useful even for AMIE and grad IETE students. Written in a student-friendly style, the book provides an excellent introduction to digital concepts and basic design techniques of digital circuits. It discusses Boolean algebra concepts and their application to digital circuitry, and elaborates on both combinational and sequential circuits. It provides numerous fully worked-out, laboratory tested examples to give students a solid grounding in the related design concepts. It includes a number of short questions with answers, review questions, fill in the blanks with answers, multiple choice questions with answers and exercise problems at the end of each chapter.

This text 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.

The book is written for an undergraduate course on the Signals and Systems. It provides comprehensive explanation of continuous time signals and systems , analogous systems, Fourier transform, Laplace transform, state variable analysis and z-transform analysis of systems. The book starts with the various types of signals and operations on signals. It explains the classification of continuous time signals and systems. Then it includes the discussion of analogous systems. The book provides detailed discussion of Fourier transform representation, properties of Fourier transform and its applications to network analysis. The book also covers the Laplace transform, its properties and network analysis using Laplace transform with and without initial conditions. The book provides the detailed explanation of modern approach of system analysis called the state variable analysis. It includes various methods of state space representation of systems, finding the state transition matrix and solution of state equation. The discussion of network topology is also included in the book. The chapter on z-transform includes the properties of ROC, properties of z-transform, inverse z-transform, z-transform analysis of LTI systems and pulse transfer function. The state space representation of discrete systems is also incorporated in the book. The book uses plain, simple and lucid language to explain each topic. The book provides the logical method of explaining the various complicated topics and stepwise methods to make the understanding easy. The variety of solved examples is the feature of this book. The book explains the philosophy of the subject which makes the understanding of the concepts very clear and makes the subject more interesting.

The natural disasters are the killer agents which can/can't be predicted even though we have modern technology. Every year, in one place or another, disasters striking which is devastating the area and surroundings, leading to ecological disruption besides huge loss of life and property. India is vulnerable to cyclones, landslides/avalanches, earthquakes, floods, droughts, forest fires, epidemics, etc. The 5700-km long coast of India, with its dense population is vulnerable to cyclones/low depressions, tsunamis, etc. The 2400-km long rugged Himalayan terrain is vulnerable to landslides, avalanches and earthquakes. India is not only vulnerable to natural disasters, it is also experiencing industrial accidents. The Bhopal Gas tragedy is one of the major man-made disasters in the world. The state of Andhra Pradesh has 970-km long coastline with two major rivers, etc. The conference is conducted in Visakhapatnam, is famous for industries and tourism. Recently, several industrial accidents took place, besides major natural disasters like Hud-Hud, etc. Disaster management shall be implemented from the grass root level in vulnerable areas to improve the capacity building, so as to minimize the losses. The capacity building coupled with technology results in reduction of loss of life and property.

Current Trends in Reliability, Availability, Maintainability and Safety

Signals and Systems

Proceedings of International Conference on Remote Sensing for Disaster Management

Signals & System Analysis

Predicting with Confidence

Prognostics and Remaining Useful Life (RUL) Estimation

The volume presents high quality papers presented at the Second International Conference on Microelectronics, Computing & Communication Systems (MCCS 2017). The book discusses recent trends in technology and advancement in MEMS and nanoelectronics, wireless communications, optical communication, instrumentation, signal processing, image processing, bioengineering, green energy, hybrid vehicles, environmental science, weather forecasting, cloud computing, renewable energy, RFID, CMOS sensors, actuators, transducers, telemetry systems, embedded systems, and sensor network applications. It includes original papers based on original theoretical, practical, experimental, simulations, development, application, measurement, and testing. The applications and solutions discussed in the book will serve as a good reference material for future works.

This book comprises select proceedings of the International Conference on Smart Technologies for Energy, Environment, and Sustainable Development (ICSTEEED 2018). The chapters are broadly divided into three focus areas, viz. energy, environment, and sustainable development, and discusses the relevance and applications of smart technologies in these fields. A wide variety of topics such as renewable energy, energy conservation and management, energy policy and planning, environmental management, marine environment, green building, smart cities, smart transportation are covered in this book. Researchers and professionals from varied engineering backgrounds contribute chapters with an aim to provide economically viable solutions to sustainable development challenges. The book will prove useful for academics, professionals, and policy makers interested in sustainable development.

This book is a collection of papers presented by renowned researchers, keynote speakers, and academicians in the International Conference on VLSI, Communication, Analog Designs, Signals & Systems and Networking (VCASAN-2013), organized by B.N.M. Institute of Technology, Bangalore, India during July 17–19, 2013. The book provides global trends in cutting-edge technologies in electronics and communication engineering. The content of the book is useful to engineers, researchers, and academicians as well as industry professionals.

The second edition of this well received text continues to provide coherent and comprehensive coverage of digital signal processing. It is designed for undergraduate students of Electronics and Communication engineering, Telecommunication engineering, Electronics and Instrumentation engineering, Electrical and Electronics engineering, Electronics and Computers engineering, Biomedical engineering and Medical Electronics engineering. This book will also be useful to AMIE and IETE students. Written with student-centred, pedagogically-driven approach, the text provides a self-contained introduction to the theory of digital signal processing. It covers topics ranging from basic discrete-time signals and systems, discrete convolution and correlation, Z-transform and its applications, realization of discrete-time systems, discrete-time Fourier transform, discrete Fourier series, discrete Fourier transform to fast Fourier transform. In addition to this, various design techniques for design of IIR and FIR filters are discussed. Multi-rate digital signal processing and introduction to digital signal processors and finite word length effects on digital filters are also covered. All the solved and unsolved problems in this book are designed to illustrate the topics in a clear way. MATLAB programs and the results for typical examples are also included at the end of chapters for the benefit of the students. New to This Edition A chapter on Finite Word Length Effects in Digital Filters Key Features • Numerous worked-out examples in each chapter • Short questions with answers help students to prepare for examinations and interviews • Fill in the blanks, review questions, objective type questions and unsolved problems at the end of each chapter to test the level of understanding of the subject

Robots, Drones, UAVs and UGVs for Operation and Maintenance

Machine Learning for Healthcare

VLSI Design

Smart Technologies for Energy, Environment and Sustainable Development

Principles of Biomedical Instrumentation

PROGRAMMING AND INTERFACING

New edition of a text intended primarily for the undergraduate courses on the subject which are frequently found in electrical engineering curricula--but the concepts and techniques it covers are also of fundamental importance in other engineering disciplines. The book is structured to develop in parallel the methods of analysis for continuous-time and discrete-time signals and systems, thus allowing exploration of their similarities and differences. Discussion of applications is emphasized, and numerous worked examples are included. Annotation copyrighted by Book News, Inc., Portland, OR

Smart Computational Intelligence in Biomedical and Health Informatics presents state-of-the-art innovations: research, design, and implementation of methodological and algorithmic solutions to data processing problems, including analysis of evolving trends in health informatics and computer-aided diagnosis. This book describes practical, applications-led research regarding the use of methods and devices in clinical diagnosis, disease prevention, and patient monitoring and management. It also covers simulation and modeling, measurement and control, analysis, information extraction and monitoring of physiological data in clinical medicine and the biological sciences. FEATURES Covers evolutionary approaches to solve optimization problems in biomedical engineering Discusses IoT, Cloud computing, and data analytics in healthcare informatics Provides computational intelligence-based solution for diagnosis of diseases Reviews modelling and simulations in designing of biomedical equipment Promotes machine learning-based approaches to improvements in biomedical engineering problems This book is for researchers, graduate students in healthcare, biomedical engineers, and those interested in health informatics, computational intelligence, and machine learning.

This book discusses action-oriented, concise and easy-to-communicate goals and challenges related to quality, reliability, infocomm technology and business operations. It brings together groundbreaking research in the area of software reliability, e-maintenance and big data analytics, highlighting the importance of maintaining the current growth in information technology (IT) adoption in businesses, while at the same time proposing process innovations to ensure sustainable development in the immediate future. In its thirty-seven chapters, it covers various areas of e-maintenance solutions, software architectures, patching problems in software reliability, preventive maintenance, industrial big data and reliability applications in electric power systems. The book reviews the ways in which countries currently attempt to resolve the conflicts and opportunities related to quality, reliability, IT and business operations, and proposes that internationally coordinated research plans are essential for effective and sustainable development, with research being most effective when it uses evidence-based decision-making frameworks resulting in clear management objectives, and is organized within adaptive management frameworks. Written by leading experts, the book is of interest to researchers, academicians, practitioners and policy makers alike who are working towards the common goal of making business operations more effective and sustainable.

Machine Learning for Healthcare: Handling and Managing Data provides in-depth information about handling and managing healthcare data through machine learning methods. This book expresses the long-standing challenges in healthcare informatics and provides rational explanations of how to deal with them. Machine Learning for Healthcare: Handling and Managing Data provides techniques on how to apply machine learning within your organization and evaluate the efficacy, suitability, and efficiency of machine learning applications. These are illustrated in a case study which examines how chronic disease is being redefined through patient-led data learning and the Internet of Things. This text offers a guided tour of machine learning algorithms, architecture design, and applications of learning in healthcare. Readers will discover the ethical implications of machine learning in healthcare and the future of machine learning in population and patient health optimization. This book can also help assist in the creation of a machine learning model, performance evaluation, and the operationalization of its outcomes within organizations. It may appeal to computer science/information technology professionals and researchers working in the area of machine learning, and is especially applicable to the healthcare sector. The features of this book include: A unique and complete focus on applications of machine learning in the healthcare sector. An examination of how data analysis can be done using healthcare data and bioinformatics.

An investigation of how healthcare companies can leverage the tapestry of big data to discover new business values. An exploration of the concepts of machine learning, along with recent research developments in healthcare sectors.

Control and Estimation of Piecewise Affine Systems

An Industry Perspective

The 8085 Microprocessor: Architecture, Programming and Interfacing: Architecture, Programming and Interfacing

Handbook of e-Business Security

Proceedings of the 2009 International Conference on Signals, Systems and Automation (ICSSA 2009)

FUNDAMENTALS OF DIGITAL CIRCUITS

Telemedicine, which involves electronic communications and software, provides the same clinical services to patients without the requirement of an in-person visit. Essentially, this is considered remote healthcare. Though telemedicine is not a new practice, it has become an increasingly popular form of healthcare delivery due to current events, including the COVID-19 pandemic. Not only are visits being moved onto virtual platforms, but additional materials and correspondence can remain in the digital sphere. Virtual lab results, digital imaging, medical diagnosis, and video consultations are just a few examples that encompass how telemedicine can be used for increased accessibility in healthcare delivery. With telemedicine being used in both the diagnosis and treatment of patients, technology in healthcare can be implemented at almost any phase of the patient experience. As healthcare delivery follows the digital shift, it is important to understand the technologies, benefits and challenges, and overall impacts of the remote healthcare experience. The Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery presents the latest research on best practices for adopting telehealth into medical practices and its efficacy and solutions for the improvement of telemedicine, as well as addresses emerging challenges and opportunities, including issues such as securing patient data and providing healthcare accessibility to rural populations. Covering important themes that include doctor-patient relationships, tele-wound monitoring, and telemedicine regulations, this book is essential for healthcare professionals, doctors, medical students, academic and medical libraries, medical technologists, practitioners, stakeholders, researchers, academicians, and students interested in the emerging technological developments and solutions within the field of telemedicine.

Sensors arrays are used in diverse applications across a broad range of disciplines. Regardless of the application, however, the tools of sensor array signal processing remain the same. Furthermore, whether your interest is in acoustic, seismic, mechanical, or electromagnetic wavefields, they all have a common mathematical framework. Mastering this framework and those tools lays a strong foundation for more specialized study and research. Sensor Array Signal Processing helps build that foundation. It unravels the underlying principles of the subject without reference to any particular application. Instead, the author focuses on the common threads that exist in wavefield analysis. After introducing the basic equations governing different wavefields, the treatment includes topics from simple beamforming, spatial filtering, and high resolution DOA estimation to imaging and reflector mapping. It studies different types of sensor configurations, but focuses on the uniform linear and circular arrays--the most useful configurations for understanding array systems in practice. Unique in its approach, depth, and quantitative focus, Sensor Array Signal Processing offers the ideal starting point and an outstanding reference for those working or interested in medical imaging, astronomy, radar, communications, sonar, seismology-any field that studies propagating wavefields. Its clear exposition, numerical examples, exercises, and wide applicability impart a broad picture of array signal processing unmatched by any other text on the market.

This book constitutes the refereed proceedings of the International Conference on Advances in Information Technology and Mobile Communication, AIM 2011, held at Nagpur, India, in April 2011. The 31 revised full papers presented together with 27 short papers and 34 poster papers were carefully reviewed and selected from 313 submissions. The papers cover all current issues in theory, practices, and applications of Information Technology, Computer and Mobile Communication Technology and related topics.

This comprehensive text on control systems is designed for undergraduate students pursuing courses in electronics and communication engineering, electrical and electronics engineering, telecommunication engineering, electronics and instrumentation engineering, mechanical engineering, and biomedical engineering. Appropriate for self-study, the book will also be useful for AMIE and IETE students. Written in a student-friendly readable manner, the book explains the basic fundamentals and concepts of control systems in a clearly understandable form. It is a balanced survey of theory aimed to provide the students with an in-depth insight into system behaviour and control of continuous-time control systems. All the solved and unsolved problems in this book are classroom tested, designed to illustrate the topics in a clear and thorough way. KEY FEATURES : Includes several fully worked-out examples to help students master the concepts involved. Provides short questions with answers to help students prepare for exams confidently. Offers fill in the blanks and objective type questions with answers at the end of each chapter to help students prepare for exams confidently. Offers fill in the blanks and objective type questions with answers at the end of each chapter to quiz students on key learning points. Gives chapter-end review questions and problems to assist students in reinforcing their knowledge.

Proceedings of the 3rd International Conference on Communications and Cyber Physical Engineering

Artificial Intelligence and Soft Computing

Sensor Array Signal Processing

Advancements in Instrumentation and Control in Applied System Applications

Blockchain Technology: Applications and Challenges

SIGNALS AND SYSTEMS

An up-to-the-minute textbook for junior/senior level signal processing courses and senior/graduate level digital filter design courses, this text is supported by a DSP software package known as D-Filter which would enable students to interactively learn the fundamentals of DSP and digital-filter design. The book includes a free license to D-Filter which will enable the owner of the book to download and install the most recent version of the software as well as future updates.

Industrial assets (such as railway lines, roads, pipelines) are usually huge, span long distances, and can be divided into clusters or segments that provide different levels of functionality subject to different loads, degradations and environmental conditions, and their efficient management is necessary. The aim of the book is to give comprehensive understanding about the use of autonomous vehicles (context of robotics) for the utilization of inspection and maintenance activities in industrial asset management in different accessibility and hazard levels. The usability of deploying inspection vehicles in an autonomous manner is explained with the emphasis on integrating the total process. Key Features Aims for solutions for maintenance and inspection problems provided by robotics, drones, unmanned air vehicles and unmanned ground vehicles Discusses integration of autonomous vehicles for inspection and maintenance of industrial assets Covers the industrial approach to inspection needs and presents what is needed from the infrastructure end Presents the requirements for robot designers to design an autonomous inspection and maintenance system Includes practical case studies from industries

The Third Edition of this well-received text continues to provide coherent and comprehensive coverage of signals and systems. It is designed for undergraduate students of electronics and communication engineering, telecommunication engineering, electronics and instrumentation engineering, and electrical and electronics engineering. The book will also be useful to AMIE and IETE students. Written with student-centred, pedagogically driven approach, the text provides a self-contained introduction to the theory of signals and systems. This book looks at the concepts of systems, and also examines signals and the way that signals interact with physical systems. It covers topics ranging from basic signals and systems to signal analysis, properties of continuous-time Fourier transforms including Fourier transforms of standard signals, signal transmission through linear systems, relation between convolution and correlation of signals, sampling theorems and techniques, and transform analysis of LTI systems. All the solved and unsolved problems in this book are designed to illustrate the topics in a clear way. New to This Edition MATLAB Programs at the end of each chapter Key Features • Numerous worked-out examples in each chapter • Short questions with answers help students to prepare for examinations • Objective type questions and unsolved problems at the end of each chapter to test the level of understanding of the subject.

With all the material available in the field of artificial intelligence (AI) and soft computing—texts, monographs, and journal articles—there remains a serious gap in the literature. Until now, there has been no comprehensive resource accessible to a broad audience yet containing a depth and breadth of information that enables the reader to fully understand and readily apply AI and soft computing concepts. Artificial Intelligence and Soft Computing fills this gap. It presents both the traditional and the modern aspects of AI and soft computing in a clear, insightful, and highly comprehensive style. It provides an in-depth analysis of mathematical models and algorithms and demonstrates their applications in real world problems. Beginning with the behavioral perspective of "human cognition," the text covers the tools and techniques required for its intelligent realization on machines. The author addresses the classical aspects—search, symbolic logic, planning, and machine learning—in detail and includes the latest research in these areas. He introduces the modern aspects of soft computing from first principles and discusses them in a manner that enables a beginner to grasp the subject. He also covers a number of other leading aspects of AI research, including nonmonotonic and spatio-temporal reasoning, knowledge acquisition, and much more. Artificial Intelligence and Soft Computing: Behavioral and Cognitive Modeling of the Human Brain is unique for its diverse content, clear presentation, and overall completeness. It provides a practical, detailed introduction that will prove valuable to computer science practitioners and students as well as to researchers migrating to the subject from other disciplines.

Advances in Signal Processing and Intelligent Recognition Systems

Proceedings of International Conference on VLSI, Communication, Advanced Devices, Signals & Systems and Networking (VCASAN-2013)

Deep Learning on Graphs

Soft-Computing-Based Nonlinear Control Systems Design

Introduction to Maintenance Engineering

ICCC 2020

There are a lot of e-business security concerns. Knowing about e-business security issues will likely help overcome them. Keep in mind, companies that have control over their e-business are likely to prosper most. In other words, setting up and maintaining a secure e-business is essential and important to business growth. This book covers state-of-the-art practices in e-business security, including privacy, trust, security of transactions, big data, cloud computing, social network, and distributed systems.

An up-to-date undergraduate text integrating microfabrication techniques, sensors and digital signal processing with clinical applications.

This book is a collection of papers from the 2009 International Conference on Signals, Systems and Automation (ICSSA 2009). The conference at a glance: - Pre-conference Workshops/Tutorials on 27th Dec, 2009 - Five Plenary talks - Paper/Poster Presentation: 28-29 Dec, 2009 - Demonstrations by SKYVIEWInc, SLS Inc., BSNL, Baroda Electric Meters, SIS - On line paper submission facility on website - 200+ papers are received from India and abroad - Delegates from different countries including Poland, Iran, USA -

Delegates from 16 states of India - Conference website is seen by more than 3000 persons across the world (27 countries and 120 cities)

This introductory textbook links theory with practice using real illustrative cases involving products, plants and infrastructures and exposes the student to the evolutionary trends in maintenance. Provides an interdisciplinary approach which links, engineering, science, technology, mathematical modelling, data collection and analysis, economics and management Blends theory with practice illustrated through examples relating to products, plants and infrastructures Focuses on concepts, tools and techniques Identifies the special

management requirements of various engineered objects (products, plants, and infrastructures)

Handling and Managing Data

Behavioral and Cognitive Modeling of the Human Brain

Signals & Systems

Information Technology and Mobile Communication

A critical part of ensuring that systems are advancing alongside technology without complications is problem solving. Practical applications of problem-solving theories can model conflict and cooperation and aid in creating solutions to real-world problems. Soft-Computing-Based Nonlinear Control Systems Design is a critical scholarly publication that examines the practical applications of control theory and its applications in problem solving to

fields including economics, environmental management, and financial modelling. Featuring a wide range of topics, such as fuzzy logic, nature-inspired algorithms, and cloud computing, this book is geared toward academicians, researchers, and students seeking relevant research on control theory and its practical applications.

The 8085 Microprocessor: Architecture, Programming and Interfacing is designed for an undergraduate course on the 8085 microprocessor, this text provides comprehensive coverage of the programming and interfacing of the 8-bit microprocessor. Written in a simple and easy-to-understand manner, this book introduces the reader to the basics and the architecture of the 8085 microprocessor. It presents balanced coverage of both hardware and software concepts

related to the microprocessor.