Free pdf Computer fundamentals by pk sinha solution Full PDF

this book collects together in one volume a number of suggested control engineering solutions which are intended to be representative of solutions applicable to a broad class of control problems it is neither a control theory book nor a handbook of laboratory experiments but it does include both the basic theory of control and associated practical laboratory set ups to illustrate the solutions proposed this book offers a timely review of modern technologies for health with a special emphasis on wireless and wearable technologies gis tools and machine learning methods for managing the impacts of pandemics it describes new strategies for forecasting evolution of pandemics optimizing contract tracing and for detection and diagnosis of diseases among others written by researchers and professionals with different backgrounds this book offers a extensive information and a source of inspiration for physiologists engineers it scientists and policy makers in the health and technology sector this book presents state of the art coverage of synthesis of advanced functional materials unconventional synthetic routes play an important role in the synthesis of advanced materials as many new materials are metastable and cannot be synthesized by conventional methods this book presents various synthesis methods such as conventional solid state method combustion method a range of soft chemical methods template synthesis molecular precursor method microwave synthesis sono chemical method and high pressure synthesis it provides a comprehensive overview of synthesis methods and covers a variety of materials including ceramics films glass carbon based and metallic materials many techniques for processing and surface functionalization are also discussed several engineering aspects of materials synthesis are also included the contents of this book are useful for researchers and professionals working in the areas of materials and chemistry this book consists of 20 review articles dedicated to prof philip roe on the occasion of his 60th birthday and in appreciation of his original contributions to computational fluid dynamics the articles written by leading researchers in the field cover many topics including theory and applications algorithm developments and modern computational techniques for industry contents oc a one sided viewoco the real story b van leer collocated upwind schemes for ideal mhd k g powell the penultimate scheme for systems of conservation laws finite difference eno with marquina s flux splitting r p fedkiw et al a finite element based level set method for multiphase flows b engquist a k tornberg the ghost fluid method for viscous flows r p fedkiw x d liu factorizable schemes for the equations of fluid flow d sidilkover evolution galerkin methods as finite difference schemes k w morton fluctuation distribution schemes on adjustable meshes for scalar hyperbolic equations m j baines superconvergent lift estimates through adjoint error analysis m b giles n a pierce somewhere between the laxocowendroff and roe schemes for calculating multidimensional compressible flows a lerat et al flux schemes for solving nonlinear systems of conservation laws j m ghidaglia a laxocowendroff type theorem for residual schemes r abgrall et al kinetic schemes for solving saintocovenant equations on unstructured grids m o bristeau b perthame nonlinear projection methods for multi entropies navierocostokes systems c berthon f coquel a hybrid fluctuation splitting scheme for two dimensional compressible steady flows p de palma et al some recent developments in kinetic schemes based on least squares and entropy variables s m deshpande difference approximation for scalar conservation law consistency with entropy condition from the viewpoint of oleinik s e condition h aiso lessons learned from the blast wave computation using overset moving grids grid motion improves the resolution k fujii readership researchers and graduate students in numerical and computational mathematics in engineering the book starts with an exposition of the relevant properties of ions and continues with a description of their solvation in the gas phase the book contains a large amount of factual information in the form of extensive tables of critically examined data and illustrations of the points made throughout it covers the relevant properties of prospective liquid solvents for the ions the process of the transfer of ions from the gas phase into a liquid where they are solvated various aspects of the solutions of the ions such as structural and transport ones and the effects of the ions on the solvent dynamics and structure what happens in cases where the solvent is a mixture selective solvation takes place applications of the concepts expounded previously in fields such as electrochemistry hydrometallurgy separation chemistry biophysics and synthetic methods energy usage and consumption continue to rise globally each year with the most efficient and cost effective energy sources causing huge impacts to the environment in an effort to mitigate harmful effects to the environment implementing clean energy resources and utilizing green energy management strategies have become worldwide

initiatives with many countries from all regions quickly becoming leaders in renewable energy usage still not every energy resource is without flaws researchers must develop effective and low cost strategies for clean energy in order to find the balance between production and consumption the research anthology on clean energy management and solutions provides in depth research that explores strategies and techniques used in the energy production field to optimize energy efficiency in order to maintain clean and safe use while delivering ample energy coverage the anthology also seeks solutions to energy that have not yet been optimized or are still produced in a way that is harmful to the environment covering topics such as hydrogen fuel cells renewable energy solar power solar systems cost savings and climate protection this text is essential for electrical engineers nuclear engineers environmentalists managers policymakers government officials professionals in the energy industry researchers academicians and students looking for the latest research on clean energy management graduate students college libraries and organizations or management teams will benefit tremendously when they acquire and use the solutions to the case studies in this book case studies are the well established and proven techniques that guide students or management teams to adopt prudent concepts theoretically in real world situations these studies can help to address an organization s dilemma depending upon the expectations of the stakeholders and the investors in this edition this book gives readers access to exemplary solutions to case studies drawn from a wide variety of cases in both academic and applied fields by studying these examples students can actively develop their skills in problem solving using analytical tools to make decisions in complex situations the reader can cope with ambiguities and learn how to apply optimal solutions in similar situations it is a must read for anyone intending to tackle managerial case studies this book gathers an in depth collection of 45 selected papers presented at the global conference on global warming 2014 in beijing china covering a broad variety of topics from the main principles of thermodynamics and their role in design analysis and the improvements in performance of energy systems to the potential impact of global warming on human health and wellbeing given energy production s role in contributing to global warming and climate change this work provides solutions to global warming from the point of view of energy incorporating multi disciplinary expertise and approaches it provides a platform for the analysis of new developments in the area of global warming and climate change as well as potential energy solutions including renewable energy energy efficiency energy storage hydrogen production co2 capture and environmental impact assessment the research and analysis presented herein will benefit international scientists researchers engineers policymakers and all others with an interest in global warming and its potential solutions this volume presents recent research challenging problems and solutions in intelligent systems covering the following disciplines artificial and computational intelligence fuzzy logic and other non classic logics intelligent database systems information retrieval information fusion intelligent search engines data mining cluster analysis unsupervised learning machine learning intelligent data analysis group decision support systems intelligent agents and multi agent systems knowledge based systems imprecision and uncertainty handling electronic commerce distributed systems etc the book defines a common ground for sometimes seemingly disparate problems and addresses them by using the paradigm of broadly perceived intelligent systems it presents a broad panorama of a multitude of theoretical and practical problems which have been successfully dealt with using the paradigm of intelligent computing this book covers all aspects of deficiency of essential elements and excess of toxic ones in crop plants the metal deficiency and toxicity are the two sides of same problem that are threatening to sustainable agricultural growth the book presents prospective strategies for the management of elemental nutrition of crop plants chapters are arranged in a manner so as to develop a lucid picture of the topic beginning from basics to advanced research the content is supplemented with flow charts and figures to make it convenient for readers to holistically grasp the concepts it will be a value addition for students research scholars and professionals in understanding the basics as well latest developments in the area of metal deficiency and excess in crop plants to address the issue of discharge of untreated industrial effluent in the water body causing pollution adoption of cleaner production technologies and waste minimization initiatives are being encouraged the book explains each related technology elaborately and critically analyses the same from practical application point of view in depth characterization environmental and health effects and treatment of various industrial effluents are discussed with case studies limitations challenges and remedial actions to be taken are included at the end of each chapter chapters are arranged as per specific type of effluents from various industries like textile tannery leather plant and oil refinery complementarity theory is a new domain in applied mathematics and is concerned with the study of complementarity problems these problems represent a wide class of mathematical

models related to optimization game theory economic engineering mechanics fluid mechanics stochastic optimal control etc the book is dedicated to the study of nonlinear complementarity problems by topological methods audience mathematicians engineers economists specialists working in operations research and anybody interested in applied mathematics or in mathematical modeling this volume is the first centralized source of technological and policy solutions for sustainable agriculture and food systems resilience in the face of climate change the editors have compiled a comprehensive collection of the latest tested replicable green technologies and approaches for food security including smart crops and new agricultural paradigms sustainable natural resources management and strategies for risk assessment and governance studies from resource constrained countries with vulnerable populations are emphasized with contributions on multisector partnership from development professionals debates concerning access to climate smart technologies intellectual property rights and international negotiations on technology transfer are also included the editors are respectively a public health physician a development professional and an environmental scientist they bring their varied perspectives together to curate a holistic volume that will be useful for policy makers scientists community based organizations international organizations and researchers across the world arsenic as is a widely distributed element in the environment having no known useful physiological function in plants or animals historically this metalloid has been known to be used widely as a poison effects of arsenic have come to light in the past few decades due to its increasing contamination in several parts of world with the worst situation being in bangladesh and west bengal in india this edited volume brings together diverse group of environmental science sustainability and health researchers to address the challenges posed by global mass poisoning caused by arsenic water contamination the book covers sources of arsenic contamination and its impact on human health and on prospective remediation both by bioremediation and phytoremediation applications of advance techniques such as genetic engineering and nanotechnology are also discussed to resolve the issue of arsenic contamination in ground water and river basins the book sheds light on this global environmental issue and proposes solutions to remove contamination through a multi disciplinary lens and case studies from bangladesh and india the book may serve as a reference to environment and sustainability researchers students and policy makers it delivers an outline to graduate undergraduate students and researchers as well as academicians who are working on arsenic toxicity with respect to remediation and health issues blockchain technology solutions for the security of iot based healthcare systems explores the various benefits and challenges associated with the integration of blockchain with iot healthcare systems focusing on designing cognitive embedded data technologies to aid better decision making processing and analysis of large amounts of data collected through iot this book series targets the adaptation of decision making approaches under cognitive computing paradigms to demonstrate how the proposed procedures as well as big data and internet of things iot problems can be handled in practice current internet of things iot based healthcare systems are incapable of sharing data between platforms in an efficient manner and holding them securely at the logical and physical level to this end blockchain technology guarantees a fully autonomous and secure ecosystem by exploiting the combined advantages of smart contracts and global consensus however incorporating blockchain technology in iot healthcare systems is not easy centralized networks in their current capacity will be incapable to meet the data storage demands of the incoming surge of iot based healthcare wearables highlights the coming surge of iot based healthcare wearables and predicts that centralized networks in their current capacity will be incapable to meet the data storage demands outlines the major benefits and challenges associated with the integration of blockchain with iot healthcare systems investigates use cases and the latest research on securing healthcare iot systems using blockchain technology discusses the evolution of blockchain technology from fundamental theories to applications in healthcare systems gathers and investigates the most recent research solutions that handle security and privacy threats while considering resource constrained iot healthcare devices gallium oxide technology devices and applications discusses the wide bandgap semiconductor and its promising applications in power electronics solar blind uv detectors and in extreme environment electronics it also covers the fundamental science of gallium oxide providing an in depth look at the most relevant properties of this materials system high quality bulk ga2o3 is now commercially available from several sources and n type epi structures are also coming onto the market as researchers are focused on creating new complex structures the book addresses the latest processing and synthesis methods chapters are designed to give readers a complete picture of the ga2o3 field and the area of devices based on ga2o3 from their theoretical simulation to fabrication and application provides an overview of the advantages of the gallium oxide materials system the advances in

in bulk and epitaxial crystal growth device design and processing reviews the most relevant applications including photodetectors fets finfets mosfets sensors catalytic applications and more addresses materials properties including structural mechanical electrical optical surface and contact this book provides a unique account of cross sectoral innovations through efficient partnerships based on the hands on experience of internationally renowned contributors specialised in the field of science of delivery the challenges and lessons learned from large development initiatives based in asia and from the work undertaken by international research institutions such as the fao are brought together in this book to benefit development agencies policy makers corporates post graduate students farmers organizations and those involved in supplying agricultural inputs and or buying agricultural produce particularly in developing countries within asia and africa through a number of case studies the book describes how the consortium approach of capacity building for equitable and efficient benefits collective action and convergence will benefit millions of small farm holders in different regions of asia this book is the best source for the most current relevant cutting edge research in the field of industrial informatics focusing on different methodologies of information technologies to enhance industrial fabrication intelligence and manufacturing processes provided by publisher the critically acclaimed laboratory standard for more than forty years methods in enzymology is one of the most highly respected publications in the field of biochemistry since 1955 each volume has been eagerly awaited frequently consulted and praised by researchers and reviewers alike more than 260 volumes have been published all of them still in print and much of the material is relevant even today truly an essential publication for researchers in all fields of life sciences key features liquid chromatography electrophoresis mass spectrometry this comprehensive book deals with motion estimation for autonomous systems from a biological algorithmic and digital perspective an algorithm which is based on the optical flow constraint equation is described in detail classical and recent aspects of power system optimization presents conventional and meta heuristic optimization methods and algorithms for power system studies the classic aspects of optimization in power systems such as optimal power flow economic dispatch unit commitment and power quality optimization are covered as are issues relating to distributed generation sizing allocation problems scheduling of renewable resources energy storage power reserve based problems efficient use of smart grid capabilities and protection studies in modern power systems the book brings together innovative research outcomes programs algorithms and approaches that consolidate the present state and future challenges for power analyzes and compares several aspects of optimization for power systems which has never been addressed in one reference details real life industry application examples for each chapter e g energy storage and power reserve problems provides practical training on theoretical developments and application of advanced methods for optimum electrical energy for realistic engineering problems we discuss graeffes s method and variations graeffe iteratively computes a sequence of polynomialsso that the roots of are those of raised to the power then the roots of can be expressed in terms of the coefficients of special treatment is given to complex and or multiple modulus roots a method of lehmer s finds the argument as well as the modulus of the roots while other authors show how to reduce the danger of overflow variants such as the chebyshev like process are discussed the graeffe iteration lends itself well to parallel processing and two algorithms in that context are described error estimates are given as well as several variants this book discusses the latest developmens in modelling simulation and control of flexible robot manipulators coverage includes an overall review of previously developed methodologies a range of modelling approaches including classical techniques parametric and neuromodelling approaches and numerical modelling simulation techniques the iec 61499 standard was developed to model distributed control systems this book introduces the main concepts and models defined in the iec 61499 standard particularly the use of function blocks covering service interface function blocks event function blocks industrial application examples and future development the book is written as a user guide for the application of the standard for modeling distributed systems and will useful for those working in industrial control software engineering and manufacturing systems lewis is the uk expert on two iec working groups annotation copyrighted by book news inc portland or power ultrasonics applications of high intensity ultrasound second edition provides a comprehensive reference on the fundamentals processing engineering medical food and pharmaceutical applications of ultrasonic processing chapters cover the fundamentals of nonlinear propagation of ultrasonic waves in fluids and solids discuss the materials and designs of power ultrasonic transducers and devices identify applications of high power ultrasound in materials engineering and mechanical engineering food processing technology environmental monitoring and remediation and industrial and chemical processing including pharmaceuticals medicine and biotechnology and cover

developments in ultrasound therapy and surgery applications the new edition also includes recent advances in modeling characterization and measurement techniques along with additive manufacturing and micromanufacturing this is an invaluable reference for graduate students and researchers working in the disciplines of materials science and engineering in addition those working on the physics of acoustics sound and ultrasound sonochemistry acoustic engineering and industrial process technology r d managers production and biomedical engineers will find it useful to their work covers the fundamentals of nonlinear propagation of ultrasonic waves in fluids and solids discusses the materials and designs of power ultrasonic transducers and devices considers state of the art power sonic applications across a wide range of industries lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the nasa scientific and technical information database stories of accomplishments of several inventors and entrepreneurs of all times and diverse backgrounds complete with facts and figures make this book interesting for general readers and of special value to young professionals as well as management students the idea of the 1st international conference on intelligent computing and applications icica 2014 is to bring the research engineers scientists industrialists scholars and students together from in and around the globe to present the on going research activities and hence to encourage research interactions between universities and industries the conference provides opportunities for the delegates to exchange new ideas applications and experiences to establish research relations and to find global partners for future collaboration the proceedings covers latest progresses in the cutting edge research on various research areas of image language processing computer vision and pattern recognition machine learning data mining and computational life sciences management of data including big data and analytics distributed and mobile systems including grid and cloud infrastructure information security and privacy vlsi electronic circuits power systems antenna computational fluid dynamics heat transfer intelligent manufacturing signal processing intelligent computing soft computing bio informatics bio computing security privacy and e commerce e governance service orient architecture data engineering open systems optimization communications smart wireless and sensor networks smart antennae networking and information security machine learning mobile computing and applications industrial automation and mes cloud computing green it it for rural engineering business computing business intelligence ict for education for solving hard problems and finally to create awareness about these domains to a wider audience of practitioners aims to provide in depth coverage of recent advances in all important areas of polyelectrolyte research and applications topics covered in this text include scaling theory dynamic light scattering neutron scattering biopolymers and ionomers competition science vision monthly magazine is published by pratiyogita darpan group in india and is one of the best science monthly magazines available for medical entrance examination students in india well qualified professionals of physics chemistry zoology and botany make contributions to this magazine and craft it with focus on providing complete and to the point study material for aspiring candidates the magazine covers general knowledge science and technology news interviews of toppers of examinations study material of physics chemistry zoology and botany with model papers reasoning test questions facts quiz contest general awareness and mental ability test in every monthly issue this lncs volume contains the papers presented at the first swarm evolutionary and memetic computing conference semcco 2010 held during december 16 18 2010 at srm university chennai in india semcco 2010 marked the beginning of a prestigious international conference series that aims at bringing together researchers from academia and industry to report and review the latest progress in the cutting edge research on swarm evolutionary and memetic computing to explore new application areas to design new bio inspired algorithms for solving specific hard optimization problems and finally to create awareness on these domains to a wider audience of practitioners semcco 2010 received 225 paper submissions from 20 countries across the globe after a rigorous peer review process involving 610 reviews in total 90 fu length articles were accepted for oral presentation at the conference this corresponds to an acceptance rate of 40 and is intended for maintaining the high standards of the conference proceedings the papers included in this lncs volume cover a wide range of topics in swarm evolutionary and memetic computing algorithms and their real world applications in problems selected from diverse domains of science and engineering

Control Engineering Solutions

1997

this book collects together in one volume a number of suggested control engineering solutions which are intended to be representative of solutions applicable to a broad class of control problems it is neither a control theory book nor a handbook of laboratory experiments but it does include both the basic theory of control and associated practical laboratory set ups to illustrate the solutions proposed

The Science behind the COVID Pandemic and Healthcare Technology Solutions

2022-10-29

this book offers a timely review of modern technologies for health with a special emphasis on wireless and wearable technologies gis tools and machine learning methods for managing the impacts of pandemics it describes new strategies for forecasting evolution of pandemics optimizing contract tracing and for detection and diagnosis of diseases among others written by researchers and professionals with different backgrounds this book offers a extensive information and a source of inspiration for physiologists engineers it scientists and policy makers in the health and technology sector

Handbook on Synthesis Strategies for Advanced Materials

2021-10-22

this book presents state of the art coverage of synthesis of advanced functional materials unconventional synthetic routes play an important role in the synthesis of advanced materials as many new materials are metastable and cannot be synthesized by conventional methods this book presents various synthesis methods such as conventional solid state method combustion method a range of soft chemical methods template synthesis molecular precursor method microwave synthesis sono chemical method and high pressure synthesis it provides a comprehensive overview of synthesis methods and covers a variety of materials including ceramics films glass carbon based and metallic materials many techniques for processing and surface functionalization are also discussed several engineering aspects of materials synthesis are also included the contents of this book are useful for researchers and professionals working in the areas of materials and chemistry

Innovative Methods for Numerical Solutions of Partial Differential Equations

2002

this book consists of 20 review articles dedicated to prof philip roe on the occasion of his 60th birthday and in appreciation of his original contributions to computational fluid dynamics the articles written by leading researchers in the field cover many topics including theory and applications algorithm developments and modern computational techniques for industry contents oc a one sided viewoco the real story b van leer collocated upwind schemes for ideal mhd k g powell the penultimate scheme for systems of conservation laws finite difference eno with marquina s flux splitting r p fedkiw et al a finite element based level set method for multiphase flows b engquist a k tornberg the ghost fluid method for viscous flows r p fedkiw x d liu factorizable schemes for the equations of fluid flow d sidilkover evolution galerkin methods as finite difference schemes k w morton fluctuation distribution schemes on adjustable meshes for scalar hyperbolic equations m j baines superconvergent lift estimates through adjoint error analysis m b giles n a pierce somewhere between the laxocowendroff and roe schemes for calculating multidimensional compressible flows a lerat et al flux schemes for solving nonlinear systems of conservation laws j m ghidaglia a laxocowendroff type theorem for residual schemes r abgrall et al kinetic schemes for solving saintocovenant equations on unstructured grids m o bristeau b perthame nonlinear projection methods for

multi entropies navierocostokes systems c berthon f coquel a hybrid fluctuation splitting scheme for two dimensional compressible steady flows p de palma et al some recent developments in kinetic schemes based on least squares and entropy variables s m deshpande difference approximation for scalar conservation law consistency with entropy condition from the viewpoint of oleinik s e condition h aiso lessons learned from the blast wave computation using overset moving grids grid motion improves the resolution k fujii readership researchers and graduate students in numerical and computational mathematics in engineering

Ions in Solution and their Solvation

2015-06-18

the book starts with an exposition of the relevant properties of ions and continues with a description of their solvation in the gas phase the book contains a large amount of factual information in the form of extensive tables of critically examined data and illustrations of the points made throughout it covers the relevant properties of prospective liquid solvents for the ions the process of the transfer of ions from the gas phase into a liquid where they are solvated various aspects of the solutions of the ions such as structural and transport ones and the effects of the ions on the solvent dynamics and structure what happens in cases where the solvent is a mixture selective solvation takes place applications of the concepts expounded previously in fields such as electrochemistry hydrometallurgy separation chemistry biophysics and synthetic methods

Research Anthology on Clean Energy Management and Solutions

2021-06-25

energy usage and consumption continue to rise globally each year with the most efficient and cost effective energy sources causing huge impacts to the environment in an effort to mitigate harmful effects to the environment implementing clean energy resources and utilizing green energy management strategies have become worldwide initiatives with many countries from all regions quickly becoming leaders in renewable energy usage still not every energy resource is without flaws researchers must develop effective and low cost strategies for clean energy in order to find the balance between production and consumption the research anthology on clean energy management and solutions provides in depth research that explores strategies and techniques used in the energy production field to optimize energy efficiency in order to maintain clean and safe use while delivering ample energy coverage the anthology also seeks solutions to energy that have not yet been optimized or are still produced in a way that is harmful to the environment covering topics such as hydrogen fuel cells renewable energy solar power solar systems cost savings and climate protection this text is essential for electrical engineers nuclear engineers environmentalists managers policymakers government officials professionals in the energy industry researchers academicians and students looking for the latest research on clean energy management

Solutions to Case Studies for Graduate Students

2019-03-21

graduate students college libraries and organizations or management teams will benefit tremendously when they acquire and use the solutions to the case studies in this book case studies are the well established and proven techniques that guide students or management teams to adopt prudent concepts theoretically in real world situations these studies can help to address an organization s dilemma depending upon the expectations of the stakeholders and the investors in this edition this book gives readers access to exemplary solutions to case studies drawn from a wide variety of cases in both academic and applied fields by studying these examples students can actively develop their skills in problem solving using analytical tools to make decisions in complex situations the reader can cope with ambiguities and learn how to apply optimal solutions in similar situations it is a must read for anyone intending to tackle managerial case studies

Radioactive Waste Management

1995-04

this book gathers an in depth collection of 45 selected papers presented at the global conference on global warming 2014 in beijing china covering a broad variety of topics from the main principles of thermodynamics and their role in design analysis and the improvements in performance of energy systems to the potential impact of global warming on human health and wellbeing given energy production s role in contributing to global warming and climate change this work provides solutions to global warming from the point of view of energy incorporating multi disciplinary expertise and approaches it provides a platform for the analysis of new developments in the area of global warming and climate change as well as potential energy solutions including renewable energy energy efficiency energy storage hydrogen production co2 capture and environmental impact assessment the research and analysis presented herein will benefit international scientists researchers engineers policymakers and all others with an interest in global warming and its potential solutions

Energy Solutions to Combat Global Warming

2016-10-17

this volume presents recent research challenging problems and solutions in intelligent systems covering the following disciplines artificial and computational intelligence fuzzy logic and other non classic logics intelligent database systems information retrieval information fusion intelligent search engines data mining cluster analysis unsupervised learning machine learning intelligent data analysis group decision support systems intelligent agents and multi agent systems knowledge based systems imprecision and uncertainty handling electronic commerce distributed systems etc the book defines a common ground for sometimes seemingly disparate problems and addresses them by using the paradigm of broadly perceived intelligent systems it presents a broad panorama of a multitude of theoretical and practical problems which have been successfully dealt with using the paradigm of intelligent computing

Challenging Problems and Solutions in Intelligent Systems

2016-03-25

this book covers all aspects of deficiency of essential elements and excess of toxic ones in crop plants the metal deficiency and toxicity are the two sides of same problem that are threatening to sustainable agricultural growth the book presents prospective strategies for the management of elemental nutrition of crop plants chapters are arranged in a manner so as to develop a lucid picture of the topic beginning from basics to advanced research the content is supplemented with flow charts and figures to make it convenient for readers to holistically grasp the concepts it will be a value addition for students research scholars and professionals in understanding the basics as well latest developments in the area of metal deficiency and excess in crop plants

Sustainable Solutions for Elemental Deficiency and Excess in Crop Plants

2020-11-28

to address the issue of discharge of untreated industrial effluent in the water body causing pollution adoption of cleaner production technologies and waste minimization initiatives are being encouraged the book explains each related technology elaborately and critically analyses the same from practical application point of view in depth characterization environmental and health effects and treatment of various industrial effluents are discussed with case studies limitations challenges and remedial actions to be taken are included at the end of each chapter chapters are arranged as per specific type of effluents from various industries like textile tannery leather plant and oil refinery

NML Technical Journal

1994

complementarity theory is a new domain in applied mathematics and is concerned with the study of complementarity problems these problems represent a wide class of mathematical models related to optimization game theory economic engineering mechanics fluid mechanics stochastic optimal control etc the book is dedicated to the study of nonlinear complementarity problems by topological methods audience mathematicians engineers economists specialists working in operations research and anybody interested in applied mathematics or in mathematical modeling

Treatment of Industrial Effluents

2019-09-06

this volume is the first centralized source of technological and policy solutions for sustainable agriculture and food systems resilience in the face of climate change the editors have compiled a comprehensive collection of the latest tested replicable green technologies and approaches for food security including smart crops and new agricultural paradigms sustainable natural resources management and strategies for risk assessment and governance studies from resource constrained countries with vulnerable populations are emphasized with contributions on multisector partnership from development professionals debates concerning access to climate smart technologies intellectual property rights and international negotiations on technology transfer are also included the editors are respectively a public health physician a development professional and an environmental scientist they bring their varied perspectives together to curate a holistic volume that will be useful for policy makers scientists community based organizations international organizations and researchers across the world

Topological Methods in Complementarity Theory

2013-04-17

arsenic as is a widely distributed element in the environment having no known useful physiological function in plants or animals historically this metalloid has been known to be used widely as a poison effects of arsenic have come to light in the past few decades due to its increasing contamination in several parts of world with the worst situation being in bangladesh and west bengal in india this edited volume brings together diverse group of environmental science sustainability and health researchers to address the challenges posed by global mass poisoning caused by arsenic water contamination the book covers sources of arsenic contamination and its impact on human health and on prospective remediation both by bioremediation and phytoremediation applications of advance techniques such as genetic engineering and nanotechnology are also discussed to resolve the issue of arsenic contamination in ground water and river basins the book sheds light on this global environmental issue and proposes solutions to remove contamination through a multi disciplinary lens and case studies from bangladesh and india the book may serve as a reference to environment and sustainability researchers students and policy makers it delivers an outline to graduate undergraduate students and researchers as well as academicians who are working on arsenic toxicity with respect to remediation and health issues

Sustainable Solutions for Food Security

2019-01-18

blockchain technology solutions for the security of iot based healthcare systems explores the various benefits and challenges associated with the integration of blockchain with iot healthcare systems focusing on designing cognitive embedded data technologies to aid better decision making processing and analysis of large amounts of data collected through iot this book series targets the adaptation of decision making approaches under cognitive computing paradigms to demonstrate how the proposed procedures as well as big data and internet of things iot problems can be handled in practice current internet of things iot based healthcare

systems are incapable of sharing data between platforms in an efficient manner and holding them securely at the logical and physical level to this end blockchain technology guarantees a fully autonomous and secure ecosystem by exploiting the combined advantages of smart contracts and global consensus however incorporating blockchain technology in iot healthcare systems is not easy centralized networks in their current capacity will be incapable to meet the data storage demands of the incoming surge of iot based healthcare wearables highlights the coming surge of iot based healthcare wearables and predicts that centralized networks in their current capacity will be incapable to meet the data storage demands outlines the major benefits and challenges associated with the integration of blockchain with iot healthcare systems investigates use cases and the latest research on securing healthcare iot systems using blockchain technology discusses the evolution of blockchain technology from fundamental theories to applications in healthcare systems gathers and investigates the most recent research solutions that handle security and privacy threats while considering resource constrained iot healthcare devices

Arsenic Toxicity: Challenges and Solutions

2021-02-15

gallium oxide technology devices and applications discusses the wide bandgap semiconductor and its promising applications in power electronics solar blind uv detectors and in extreme environment electronics it also covers the fundamental science of gallium oxide providing an in depth look at the most relevant properties of this materials system high quality bulk ga2o3 is now commercially available from several sources and n type epi structures are also coming onto the market as researchers are focused on creating new complex structures the book addresses the latest processing and synthesis methods chapters are designed to give readers a complete picture of the ga2o3 field and the area of devices based on ga2o3 from their theoretical simulation to fabrication and application provides an overview of the advantages of the gallium oxide materials system the advances in in bulk and epitaxial crystal growth device design and processing reviews the most relevant applications including photodetectors fets finfets mosfets sensors catalytic applications and more addresses materials properties including structural mechanical electrical optical surface and contact

Blockchain Technology Solutions for the Security of IoT-Based Healthcare Systems

2023-01-10

this book provides a unique account of cross sectoral innovations through efficient partnerships based on the hands on experience of internationally renowned contributors specialised in the field of science of delivery the challenges and lessons learned from large development initiatives based in asia and from the work undertaken by international research institutions such as the fao are brought together in this book to benefit development agencies policy makers corporates post graduate students farmers organizations and those involved in supplying agricultural inputs and or buying agricultural produce particularly in developing countries within asia and africa through a number of case studies the book describes how the consortium approach of capacity building for equitable and efficient benefits collective action and convergence will benefit millions of small farm holders in different regions of asia

Applied Mechanics Reviews

1973

this book is the best source for the most current relevant cutting edge research in the field of industrial informatics focusing on different methodologies of information technologies to enhance industrial fabrication intelligence and manufacturing processes provided by publisher

Gallium Oxide

2018-10-15

the critically acclaimed laboratory standard for more than forty years methods in enzymology

is one of the most highly respected publications in the field of biochemistry since 1955 each volume has been eagerly awaited frequently consulted and praised by researchers and reviewers alike more than 260 volumes have been published all of them still in print and much of the material is relevant even today truly an essential publication for researchers in all fields of life sciences key features liquid chromatography electrophoresis mass spectrometry

Scaling-up Solutions for Farmers

2021-11-17

this comprehensive book deals with motion estimation for autonomous systems from a biological algorithmic and digital perspective an algorithm which is based on the optical flow constraint equation is described in detail

Handbook of Research on Industrial Informatics and Manufacturing Intelligence: Innovations and Solutions

2012-03-31

classical and recent aspects of power system optimization presents conventional and meta heuristic optimization methods and algorithms for power system studies the classic aspects of optimization in power systems such as optimal power flow economic dispatch unit commitment and power quality optimization are covered as are issues relating to distributed generation sizing allocation problems scheduling of renewable resources energy storage power reserve based problems efficient use of smart grid capabilities and protection studies in modern power systems the book brings together innovative research outcomes programs algorithms and approaches that consolidate the present state and future challenges for power analyzes and compares several aspects of optimization for power systems which has never been addressed in one reference details real life industry application examples for each chapter e g energy storage and power reserve problems provides practical training on theoretical developments and application of advanced methods for optimum electrical energy for realistic engineering problems

Linear Complementarity, Linear and Nonlinear Programming

1988

we discuss graeffes s method and variations graeffe iteratively computes a sequence of polynomialsso that the roots of are those of raised to the power then the roots of can be expressed in terms of the coefficients of special treatment is given to complex and or multiple modulus roots a method of lehmer s finds the argument as well as the modulus of the roots while other authors show how to reduce the danger of overflow variants such as the chebyshev like process are discussed the graeffe iteration lends itself well to parallel processing and two algorithms in that context are described error estimates are given as well as several variants

Minimax Solutions in Sampling from Finite Populations

2012-12-06

this book discusses the latest developmens in modelling simulation and control of flexible robot manipulators coverage includes an overall review of previously developed methodologies a range of modelling approaches including classical techniques parametric and neuromodelling approaches and numerical modelling simulation techniques

High Resolution Separation and Analysis of Biological Macromolecules

1996

the iec 61499 standard was developed to model distributed control systems this book introduces the main concepts and models defined in the iec 61499 standard particularly the use of function blocks covering service interface function blocks event function blocks industrial application examples and future development the book is written as a user guide for the application of the standard for modeling distributed systems and will useful for those working in industrial control software engineering and manufacturing systems lewis is the uk expert on two iec working groups annotation copyrighted by book news inc portland or

Mathematical Reviews

2005

power ultrasonics applications of high intensity ultrasound second edition provides a comprehensive reference on the fundamentals processing engineering medical food and pharmaceutical applications of ultrasonic processing chapters cover the fundamentals of nonlinear propagation of ultrasonic waves in fluids and solids discuss the materials and designs of power ultrasonic transducers and devices identify applications of high power ultrasound in materials engineering and mechanical engineering food processing technology environmental monitoring and remediation and industrial and chemical processing including pharmaceuticals medicine and biotechnology and cover developments in ultrasound therapy and surgery applications the new edition also includes recent advances in modeling characterization and measurement techniques along with additive manufacturing and micromanufacturing this is an invaluable reference for graduate students and researchers working in the disciplines of materials science and engineering in addition those working on the physics of acoustics sound and ultrasound sonochemistry acoustic engineering and industrial process technology r d managers production and biomedical engineers will find it useful to their work covers the fundamentals of nonlinear propagation of ultrasonic waves in fluids and solids discusses the materials and designs of power ultrasonic transducers and devices considers state of the art power sonic applications across a wide range of industries

Motion Vision

2005

lists citations with abstracts for aerospace related reports obtained from world wide sources and announces documents that have recently been entered into the nasa scientific and technical information database

Classical and Recent Aspects of Power System Optimization

2018-06-29

stories of accomplishments of several inventors and entrepreneurs of all times and diverse backgrounds complete with facts and figures make this book interesting for general readers and of special value to young professionals as well as management students

Numerical Methods for Roots of Polynomials - Part II

2013-07-19

the idea of the 1st international conference on intelligent computing and applications icica 2014 is to bring the research engineers scientists industrialists scholars and students together from in and around the globe to present the on going research activities and hence to encourage research interactions between universities and industries the conference provides opportunities for the delegates to exchange new ideas applications and experiences to establish research relations and to find global partners for future collaboration the proceedings covers latest progresses in the cutting edge research on various research areas of image language processing computer vision and pattern recognition machine learning data mining and computational life sciences management of data including big data and analytics distributed and mobile systems including grid and cloud infrastructure information security and privacy vlsi electronic circuits power systems antenna computational fluid dynamics heat

transfer intelligent manufacturing signal processing intelligent computing soft computing bio informatics bio computing security privacy and e commerce e governance service orient architecture data engineering open systems optimization communications smart wireless and sensor networks smart antennae networking and information security machine learning mobile computing and applications industrial automation and mes cloud computing green it it for rural engineering business computing business intelligence ict for education for solving hard problems and finally to create awareness about these domains to a wider audience of practitioners

Flexible Robot Manipulators

2008-05-20

aims to provide in depth coverage of recent advances in all important areas of polyelectrolyte research and applications topics covered in this text include scaling theory dynamic light scattering neutron scattering biopolymers and ionomers

Modelling Control Systems Using IEC 61499

2001-04-23

competition science vision monthly magazine is published by pratiyogita darpan group in india and is one of the best science monthly magazines available for medical entrance examination students in india well qualified professionals of physics chemistry zoology and botany make contributions to this magazine and craft it with focus on providing complete and to the point study material for aspiring candidates the magazine covers general knowledge science and technology news interviews of toppers of examinations study material of physics chemistry zoology and botany with model papers reasoning test questions facts quiz contest general awareness and mental ability test in every monthly issue

Power Ultrasonics

2023-04-06

this lncs volume contains the papers presented at the first swarm evolutionary and memetic computing conference semcco 2010 held during december 16 18 2010 at srm university chennai in india semcco 2010 marked the beginning of a prestigious international conference series that aims at bringing together researchers from academia and industry to report and review the latest progress in the cutting edge research on swarm evolutionary and memetic computing to explore new application areas to design new bio inspired algorithms for solving specific hard optimization problems and finally to create awareness on these domains to a wider audience of practitioners semcco 2010 received 225 paper submissions from 20 countries across the globe after a rigorous peer review process involving 610 reviews in total 90 fu length articles were accepted for oral presentation at the conference this corresponds to an acceptance rate of 40 and is intended for maintaining the high standards of the conference proceedings the papers included in this lncs volume cover a wide range of topics in swarm evolutionary and memetic computing algorithms and their real world applications in problems selected from diverse domains of science and engineering

Scientific and Technical Aerospace Reports

1979

Indian Journal of Chemistry

2009

India Land of a Billion Entrepreneurs

2011

Intelligent Computing and Applications

2015-02-23

Electrolyte Data Collection: Viscosity of nonaqueous solutions. I. Alcohol solutions

1997

Diarrhoeal Diseases Research

1993-12

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Swarm, Evolutionary, and Memetic Computing

2010-12-06

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