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this book is designed to cover all of the mathematical topics required in the typical engineering curriculum hundreds of examples with worked out solutions provide a self study format for both engineering students and as a refresher course for practicing engineers covers algebra vectors geometry calculus series differential equations complex analysis transforms numerical methods statistics and special topics spread in 133 articles divided in 20 sections the present treatises broadly discusses part 1 image processing part 2 radar and satellite image processing part 3 image filtering part 4 content based image retrieval part 5 color image processing and video processing part 6 medical image processing part 7 biometric part 8 network part 9 mobile computing part 10 pattern recognition part 11 pattern classification part 12 genetic algorithm part 13 data warehousing and mining part 14 embedded system part 15 wavelet part 16 signal processing part 17 neural network part 18 nanotechnology and quantum computing part 19 image analysis part 20 human computer interaction mathematics I is included as a paper for the first year diploma program syllabus of this book is strictly aligned as per model curriculum of aicte and academic content is combined with the concept of outcome based education book cover five units trigonometry functions and limit differential calculus complex numbers and partial fraction permutation and combination and binomial theorem in every unit each topic is written in easy and lucid manner a set of exercise at the end of each unit is clubbed to test the student s comprehension some salient features of the book content of the book aligned with the mapping of course outcomes programs outcomes and unit outcomes book provides lots of real world applications interesting facts qr code for e resources mini projects curiosity topics sample specification table etc students and teacher centric subject materials included in book with balanced and chronological manner figures tables and mathematical equations are inserted to improve clarity of the topics short questions objective questions and long answer exercises are given for practice of students after every chapter comprehensive synopsis of formulae for a quick revision of the basic principles the existing third volume of our series of textbooks on engineering mathematics for students of b e b tech b sc applied science has been now split into two volumes to caters to the needs of the syllabus semester wise this volume caters to the syllabus of fourth semester many worked examples are added in each chapter and a large number of problems are included in the exercises linear and non linear system theory focuses on the basics of linear and non linear systems optimal control and optimal estimation with an objective to understand the basics of state space approach linear and non linear systems and its analysis thereof divided into eight chapters materials cover an introduction to the advanced topics in the field of linear and non linear systems optimal control and estimation supported by mathematical tools detailed case studies and numerical and exercise problems this book is aimed at senior undergraduate and graduate students in electrical instrumentation electronics chemical control engineering and other allied branches of engineering features covers both linear and non linear system theory explores state feedback control and state estimator concepts discusses non linear systems and phase plane analysis includes non linear system stability and bifurcation behaviour elaborates optimal control and estimation reliability concerns and the limitations of process technology can sometimes restrict the innovation process involved in designing nano scale analog circuits the success of nano scale analog circuit design requires repeat experimentation correct analysis of the device physics process technology and adequate use of the knowledge database starting with the basics nano scale cmos analog circuits models and cad techniques for high level design introduces the essential fundamental concepts for designing analog circuits with optimal performances this book explains the links between the physics and technology of scaled mos transistors and the design and simulation of nano scale analog circuits it also explores the development of structured computer aided design cad techniques for architecture level and circuit level design of analog circuits the book outlines the general trends of technology scaling with respect to device geometry process parameters and supply voltage it describes models and optimization techniques as well as the compact modeling of scaled mos transistors for vlsi circuit simulation includes two learning based methods the artificial neural network ann and the least squares support vector machine ls svm method provides case studies demonstrating the practical use of these two methods explores circuit sizing and specification translation tasks introduces the particle swarm optimization technique and provides examples of sizing analog circuits discusses the advanced effects of scaled mos transistors like narrow width effects and vertical and lateral channel engineering nano scale cmos analog circuits models and cad techniques for high level design describes the models and cad techniques explores the physics of mos transistors and considers the design challenges involving statistical variations of process technology parameters and reliability constraints related to circuit design the 10 volume set Incs 14254 14263 constitutes the proceedings of the 32nd international conference on artificial neural networks and machine learning icann 2023 which took place in heraklion crete greece during september 26 29 2023 the 426 full papers 9 short papers and 9 abstract papers included in these proceedings were carefully reviewed and selected from 947 submissions icann is a dual track conference featuring tracks in brain inspired computing on the one hand and machine learning on the other with strong cross disciplinary interactions and applications in this book optimization of chemical processes is performed using both classical and advanced algorithms this book is a collection of papers selected for the 16 obstacles to success

research papers presented at 5th international conference on computer networks and inventive communication technologies iccnct 2022 the book covers new results in theory methodology and applications of computer networks and data communications it includes original papers on computer networks network protocols and wireless networks data communication technologies and network security the proceedings of this conference is a valuable resource dealing with both the important core and the specialized issues in the areas of next generation wireless network design control and management as well as in the areas of protection assurance and trust in information security practice it is a reference for researchers instructors students scientists engineers managers and industry practitioners for advance work in the area engineering mathematics vol 2 calculus and linear algebra cover all the modules prescribed by aicte model curriculum to all the 1st year cse students studying in engineering institutions and universities of the country it serves as both text book or useful reference work it contains 5 units which included calculus algebra and vector spaces along with their applications this renowned and well respected title provides in one handy volume with the essential mathematical tools that help in understanding the subject and problem solving techniques with many real life engineering applications as per trademark of aicte this book is in student friendly style author has endeavored enormous efforts in providing numerous solved examples and exercise under each topic to facilitate better understanding of the concepts to the students majority of questions in this book have been designed to access the reader s understanding of the subject professionals or those who are preparing for competitive examinations will also find this book very useful this book will give the students a complete grasp of the mathematical skills that are needed by engineers all over the country some salient features of the book in depth coverage of all related essential and mentioned topics as per aicte in simple presentation with clarity and accuracy emphasis on the applications of concepts and theorems core concepts are presented through a large number of solved graded model examples in an innovative and lucid manner a good number of relatively competitive problems are given at the end of each unit in the form of short questions hot assignments mcqs and know more for student s practices purpose practical projects activity also given in each unit for enhancing the student s capability to increase the feeling of team work to clarify the subject the text has been supplemented through notes observations and remarks an attempt has been made to explain the topic through maximum use of geometries wherever possible some standard problems with sufficient hints have been included in each exercise to gauge the student s visual understanding and for grasp the theory video links interesting facts uses of ict also included after each topic in every unit for easy understanding of the readers also included the pictorial representations of many topics for fast and permanent grasping of the content calculus multivariable calculus and linear algebra covers all the modules prescribed by aicte model curriculum to all the 1st year students except cse studying in engineering institutions and universities of the country it serves as both text book and or useful reference work it contains 5 units which include calculus matrices sequences series and multivariable calculus along with their applications this renowned and well respected title provides in one handy volume with the essential mathematical tools that helps in understanding the subject and problem solving techniques with many real life engineering applications as per trademark of aicte this book is in student friendly style author has endeavored enormous efforts in providing numerous solved examples and exercise under each topic to facilitate better understanding of the concepts to the students majority of questions in this book have been designed to success the reader understands of the subject professionals or those who are preparing for competitive examinations will also find this book very useful this book will give the students a complete grasp of the mathematical skills that are needed by engineers all over the country some salient features of the book in depth coverage of all related essential and mentioned topics as per aicte in simple presentation with clarity and accuracy emphasis on the applications of concepts and theorems core concepts are presented through a large number of solved graded model examples in an innovative and lucid manner a good number of relatively competitive problems are given at the end of each unit in the form of short questions hot assignments mcqs and know more for student s practices purpose practical projects activity also given in each unit for enhancing 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transportation systems facilitate the swift spread of diseases as large populations migrate from one part of the world to another studies on the spread of the communicable diseases are very important this book mathematical population dynamics and epidemiology in temporal and spatio temporal domains provides a useful experimental tool for making practical predictions building and testing theories answering specific questions determining sensitivities of the parameters forming control strategies and much more this volume focuses

on the study of population dynamics with special emphasis on the migration of populations and the spreading of epidemics among human and animal populations it also provides the background needed to interpret construct and analyze a wide variety of mathematical models most of the techniques presented in the book can be readily applied to model other phenomena in biology as well as in other disciplines the book provides primary information about civil engineering to both a civil and non civil engineering audience in areas such as construction management estate management and building basic civil engineering topics like surveying building materials construction technology and management concrete technology steel structures soil mechanics and foundations water resources transportation and environment engineering are explained in detail codal provisions of us uk and india are included to cater to a global audience insights into techniques like modern surveying equipment and technologies sustainable construction materials and modern construction materials are also included key features provides a concise presentation of theory and practice for all technical in civil engineering contains detailed theory with lucid illustrations focuses on the management aspects of a civil engineer s job addresses contemporary issues such as permitting globalization sustainability and emerging technologies includes codal provisions of us uk and india the book is aimed at professionals and senior undergraduate students in civil engineering non specialist civil engineering audience this book includes high quality papers presented at proceedings of first international conference on computational electronics for wireless communications iccwc 2021 held at national institute of technology kurukshetra haryana india during june 11 12 2021 the book presents original research work of academics and industry professionals to exchange their knowledge of the state of the art research and development in computational electronics with an emphasis on wireless communications the topics covered in the book are radio frequency and microwave signal processing microelectronics and wireless networks this textbook covers the basic concepts and applications of finite element analysis it is specifically aimed at introducing this advanced topic to undergraduate level engineering students and practicing engineers in a lucid manner it also introduces a structural and heat transfer analysis software feastsmt which has wide applications in civil mechanical nuclear and automobile engineering domains this software has been developed by generations of scientists and engineers of vikram sarabhai space centre and indian space research organisation supported with many illustrative examples the textbook covers the classical methods of estimating solutions of mathematical models the book is written in an easy to understand manner this textbook also contains numeral exercise problems to aid self learning of the students the solutions to these problems are demonstrated using finite element software furthermore the textbook contains several tutorials and associated online resources on usage of the feastsmt software given the contents this textbook is highly useful for the undergraduate students of various disciplines of engineering it is also a good reference book for the practicing engineers this the 26th issue of the transactions on computational science journal is comprised of ten extended versions of selected papers from the international conference on cyberworlds 2014 held in santander spain in june 2014 the topics covered include areas of virtual reality games social networks haptic modeling cybersecurity and applications in education and arts fourier transform is an efficient method and a powerful tool for solving certain types of differential and integral equations it is frequently applied for attaining the solutions to the problems of science and engineering such as image analysis image filtering image reconstruction image compression signal analyzing and circuit analysis this transform is also effectively applied to initial and boundary value problems this book is to explore the basic concepts of fourier transforms in a simple systematic and easy to understand manner the present book is divided into six chapters that cover all the important topics like fourier transform fourier sine transform fourier cosine transform finite fourier sine transform finite fourier cosine transform and application of fourier transforms this book is intended for academic and industrial developers exploring and developing applications in the area of big data and machine learning including those that are solving technology requirements evaluation of methodology advances and algorithm demonstrations the intent of this book is to provide awareness of algorithms used for machine learning and big data in the academic and professional community the 17 chapters are divided into 5 sections theoretical fundamentals big data and pattern recognition machine learning algorithms applications machine learning s next frontier and hands on and case study while it dwells on the foundations of machine learning and big data as a part of analytics it also focuses on contemporary topics for research and development in this regard the book covers machine learning algorithms and their modern applications in developing automated systems subjects covered in detail include mathematical foundations of machine learning with various examples an empirical study of supervised learning algorithms like naïve bayes knn and semi supervised learning algorithms viz s3vm graph based multiview precise study on unsupervised learning algorithms like gmm k mean clustering dritchlet process mixture model x means and reinforcement learning algorithm with q learning r learning td learning sarsa learning and so forth hands on machine leaning open source tools viz apache mahout h2o case studies for readers to analyze the prescribed cases and present their solutions or interpretations with intrusion detection in manets using machine learning showcase on novel user cases implications of electronic governance as well as pragmatic study of bd ml technologies for agriculture healthcare social media industry banking insurance and so on aiming at

author lucid and beyond traditional writing style makes the text different from other books in this text every effort has been taken to make the subject easy and interesting the concepts have been explained in such a manner that students do not require any prerequisite knowledge the text amalgamated with real world examples help students adhere to the book and learn the concepts on their own throughout the book engaging and thought provoking approach has been followed it discusses free and forced vibrations of undamped and damped single degree freedom systems self excited vibrations vibrations of two and multi degree freedom systems vibrations of continuous systems and lagrangian formulation a chapter on set up a mechanical vibration laboratory helps students and teachers to learn how to develop a basic laboratory without involving a heavy cost besides undergraduate and postgraduate students this text also serves as a launch pad for those who want to pursue research key features simple practical demonstrations helps the student in developing important skills such as reasoning interpretation and physical visualisation helps to develop software prepares for competitive examinations there are nearly 50 problems illustrated and around 200 problems given in exercises for practice the two volume set ccis 1030 and 1031 constitutes the refereed proceedings of the second international conference on computational intelligence communications and business analytics cicba 2018 held in kalyani india in july 2018 the 76 revised full papers presented in the two volumes were carefully reviewed and selected from 240 submissions the papers are organized in topical sections on computational intelligence signal processing and communications microelectronics sensors and intelligent networks data science advanced data analytics intelligent data mining data warehousing and computational forensics privacy and security optimization is a key concept in mathematics computer science and operations research and is essential to the modeling of any system playing an integral role in computer aided design fundamentals of optimization techniques with algorithms presents a complete package of various traditional and advanced optimization techniques along with a variety of example problems algorithms and matlab code optimization techniques for linear and nonlinear single variable and multivariable models as well as multi objective and advanced optimization techniques it presents both theoretical and numerical perspectives in a clear and approachable way in order to help the reader apply optimization techniques in practice the book details program codes and computer aided designs in relation to real world problems ten chapters cover an introduction to optimization linear programming single variable nonlinear optimization multivariable unconstrained nonlinear optimization multivariable constrained nonlinear optimization geometric programming dynamic programming integer programming multi objective optimization and nature inspired optimization this book provides accessible coverage of optimization techniques and helps the reader to apply them in practice presents optimization techniques clearly including worked out examples from traditional to advanced maps out the relations between optimization and other mathematical topics and disciplines provides systematic coverage of algorithms to facilitate computer coding gives matlab codes in relation to optimization techniques and their use in computer aided design presents nature inspired optimization techniques including genetic algorithms and artificial neural networks the book contains the extended version of the works that have been presented and discussed in the second international doctoral symposium on applied computation and security systems acss 2015 held during may 23 25 2015 in kolkata india the symposium has been jointly organized by the agh university of science technology cracow poland ca foscari university venice italy and university of calcutta india the book is divided into volumes and presents dissertation works in the areas of image processing biometrics based authentication soft computing data mining next generation networking and network security remote healthcare communications embedded systems software engineering and service engineering this three volume book contains the proceedings of 5th international conference on advanced computing networking and informatics icacni 2017 the book focuses on the recent advancement of the broad areas of advanced computing networking and informatics it also includes novel approaches devised by researchers from across the globe this book brings together academic scientists professors research scholars and students to share and disseminate information on knowledge and scientific research works related to computing networking and informatics to discuss the practical challenges encountered and the solutions adopted the book also promotes translation of basic research into applied investigation and convert applied investigation into practice micro and nanofluid convection with magnetic field effects for heat and mass transfer applications using matlab examines the performance of micro and nanofluids with various physical effects such as magnetic field slip effects radiation and heat sources heat and mass transfer enhancement techniques are widely used in many applications in the heating and cooling or freezing process to make possible a reduction in weight and size or enhance performance during heat and mass exchanges the book covers the two categories of flow techniques active and passive it discusses various considerations in the engineering sciences in the melting process polymer industry and in metallurgy to be more precise it may be pointed out that many metal surgical developments involve the cooling of continuous strips or filaments by drawing them through a quiescent fluid and in that process of drawing these strips are sometimes stretched in all these cases the properties of the final product depend to a great extent on the rate of cooling by drawing such strips in an electrically conducting fluid subject to a magnetic field and thermal radiation provides information about the governing equations for all three types of flow geometries explains micro polar fluid flow modeling offers detailed coverage of boundary value problems using

matlab m u s mathematical uniform space is a new number of π pi representing the reality of the universe in which we live with this number we created a new geometry hyperelliptical geometry which will provide the unification of physics thus uniting the theory of relativity and quantum theory a new geometry for a new mathematics and a new physics isbn 978 65 00 98107 0

information technology it can be collectively described as that used by man to gather store and retrieve manipulate and communicate data and information today in the information age this takes place over and across vast geographical demographical socio political and economic scopes and the ceasing of it will choke society as know it today to a pre historic standstill it is understandably implemented through various aspects of computing and electronic technology with the growing complexity of the information processing needs throughout fields as diverse as business science technology exploration and entertainment several issues involving data security time complexity bandwidth and thought put parallel and alternative computing technology and the technology used in an ever increasing band of newer types of devices are posing the most crucial questions to the future of society in general and it in particular the book is a collection of articles written by professors industry persons and researchers of international repute and comprises the latest breakthrough sin the fields of information theory and coding information security next generation internet technology data mining and knowledge management mobile computing and communication bioinformatics soft computing multimedia systems and communication quantum computing image processing and other areas which together comprise it this book is a must read for those seeking to expand their knowledge about various aspects of information technology

Higher Engineering Mathematics

2001

this book is designed to cover all of the mathematical topics required in the typical engineering curriculum hundreds of examples with worked out solutions provide a self study format for both engineering students and as a refresher course for practicing engineers covers algebra vectors geometry calculus series differential equations complex analysis transforms numerical methods statistics and special topics

Advanced Engineering Mathematics

2018-08-31

spread in 133 articles divided in 20 sections the present treatises broadly discusses part 1 image processing part 2 radar and satellite image processing part 3 image filtering part 4 content based image retrieval part 5 color image processing and video processing part 6 medical image processing part 7 biometric part 8 network part 9 mobile computing part 10 pattern recognition part 11 pattern classification part 12 genetic algorithm part 13 data warehousing and mining part 14 embedded system part 15 wavelet part 16 signal processing part 17 neural network part 18 nanotechnology and quantum computing part 19 image analysis part 20 human computer interaction

Higher Engineering Mathematics

1978

mathematics I is included as a paper for the first year diploma program syllabus of this book is strictly aligned as per model curriculum of aicte and academic content is combined with the concept of outcome based education book cover five units trigonometry functions and limit differential calculus complex numbers and partial fraction permutation and combination and binomial theorem in every unit each topic is written in easy and lucid manner a set of exercise at the end of each unit is clubbed to test the student s comprehension some salient features of the book content of the book aligned with the mapping of course outcomes programs outcomes and unit outcomes book provides lots of real world applications interesting facts qr code for e resources mini projects curiosity topics sample specification table etc students and teacher centric subject materials included in book with balanced and chronological manner figures tables and mathematical equations are inserted to improve clarity of the topics short questions objective questions and long answer exercises are given for practice of students after every chapter comprehensive synopsis of formulae for a quick revision of the basic principles

Computer Vision and Information Technology

2010

the existing third volume of our series of textbooks on engineering mathematics for students of b e b tech b sc applied science has been now split into two volumes to caters to the needs of the syllabus semester wise this volume caters to the syllabus of fourth semester many worked examples are added in each chapter and a large number of problems are included in the exercises

Elementary Engineering Mathematics

2002

linear and non linear system theory focuses on the basics of linear and non linear systems optimal control and optimal estimation with an objective to understand the basics of state space approach linear and non linear systems and its analysis thereof divided into eight chapters materials cover an introduction to the advanced topics in the field of linear and non linear systems optimal control and estimation supported by mathematical tools detailed case studies and numerical and exercise problems this book is aimed at senior

undergraduate and graduate students in electrical instrumentation electronics chemical control engineering and other allied branches of engineering features covers both linear and non linear system theory explores state feedback control and state estimator concepts discusses non linear systems and phase plane analysis includes non linear system stability and bifurcation behaviour elaborates optimal control and estimation

Mathematics-I | AICTE Prescribed Textbook (English)

2021-11-01

reliability concerns and the limitations of process technology can sometimes restrict the innovation process involved in designing nano scale analog circuits the success of nano scale analog circuit design requires repeat experimentation correct analysis of the device physics process technology and adequate use of the knowledge database starting with the basics nano scale cmos analog circuits models and cad techniques for high level design introduces the essential fundamental concepts for designing analog circuits with optimal performances this book explains the links between the physics and technology of scaled mos transistors and the design and simulation of nano scale analog circuits it also explores the development of structured computer aided design cad techniques for architecture level and circuit level design of analog circuits the book outlines the general trends of technology scaling with respect to device geometry process parameters and supply voltage it describes models and optimization techniques as well as the compact modeling of scaled mos transistors for vlsi circuit simulation includes two learning based methods the artificial neural network ann and the least squares support vector machine ls svm method provides case studies demonstrating the practical use of these two methods explores circuit sizing and specification translation tasks introduces the particle swarm optimization technique and provides examples of sizing analog circuits discusses the advanced effects of scaled mos transistors like narrow width effects and vertical and lateral channel engineering nano scale cmos analog circuits models and cad techniques for high level design describes the models and cad techniques explores the physics of mos transistors and considers the design challenges involving statistical variations of process technology parameters and reliability constraints related to circuit design

Engineering Mathematics Vol -III (Tamil Nadu)

2008-01-01

the 10 volume set Incs 14254 14263 constitutes the proceedings of the 32nd international conference on artificial neural networks and machine learning icann 2023 which took place in heraklion crete greece during september 26 29 2023 the 426 full papers 9 short papers and 9 abstract papers included in these proceedings were carefully reviewed and selected from 947 submissions icann is a dual track conference featuring tracks in brain inspired computing on the one hand and machine learning on the other with strong cross disciplinary interactions and applications

Linear and Non-Linear System Theory

2020-10-22

in this book optimization of chemical processes is performed using both classical and advanced algorithms

Nano-scale CMOS Analog Circuits

2018-09-03

this book is a collection of peer reviewed best selected research papers presented at 5th international conference on computer networks and inventive communication technologies iccnct 2022 the book covers new results in theory methodology and applications of computer networks and data communications it includes original papers on computer networks network protocols and wireless networks data communication technologies and network security the proceedings of this conference is a valuable resource dealing with both the important core and the specialized issues in the areas of next generation wireless network design control and management as well as in the areas of protection assurance and trust in information security practice it is a reference for researchers instructors students

scientists engineers managers and industry practitioners for advance work in the area

Artificial Neural Networks and Machine Learning – ICANN 2023

2023-10-23

engineering mathematics vol 2

Optimization in Chemical Engineering

2016-03-11

calculus and linear algebra cover all the modules prescribed by aicte model curriculum to all the 1st year cse students studying in engineering institutions and universities of the country it serves as both text book or useful reference work it contains 5 units which included calculus algebra and vector spaces along with their applications this renowned and well respected title provides in one handy volume with the essential mathematical tools that help in understanding the subject and problem solving techniques with many real life engineering applications as per trademark of aicte this book is in student s friendly style author has endeavored enormous efforts in providing numerous solved examples and exercise under each topic to facilitate better understanding of the concepts to the students majority of questions in this book have been designed to access the reader s understanding of the subject professionals or those who are preparing for competitive examinations will also find this book very useful this book will give the students a complete grasp of the mathematical skills that are needed by engineers all over the country some salient features of the book in depth coverage of all related essential and mentioned topics as per aicte in simple presentation with clarity and accuracy emphasis on the applications of concepts and theorems core concepts are presented through a large number of solved graded model examples in an innovative and lucid manner a good number of relatively competitive problems are given at the end of each unit in the form of short questions hot assignments mcqs and know more for student s practices purpose practical projects activity also given in each unit for enhancing the student s capability to increase the feeling of team work to clarify the subject the text has been supplemented through notes observations and remarks an attempt has been made to explain the topic through maximum use of geometries wherever possible some standard problems with sufficient hints have been included in each exercise to gauge the student s visual understanding and for grasp the theory video links interesting facts uses of ict also included after each topic in every unit for easy understanding of the readers also included the pictorial representations of many topics for fast and permanent grasping of the content

Computer Networks and Inventive Communication Technologies

2022-10-13

calculus multivariable calculus and linear algebra covers all the modules prescribed by aicte model curriculum to all the 1st year students except cse studying in engineering institutions and universities of the country it serves as both text book and or useful reference work it contains 5 units which include calculus matrices sequences series and multivariable calculus along with their applications this renowned and well respected title provides in one handy volume with the essential mathematical tools that helps in understanding the subject and problem solving techniques with many real life engineering applications as per trademark of aicte this book is in student friendly style author has endeavored enormous efforts in providing numerous solved examples and exercise under each topic to facilitate better understanding of the concepts to the students majority of questions in this book have been designed to success the reader understands of the subject professionals or those who are preparing for competitive examinations will also find this book very useful this book will give the students a complete grasp of the mathematical skills that are needed by engineers all over the country some salient features of the book in depth coverage of all related essential and mentioned topics as per aicte in simple presentation with clarity and accuracy emphasis on the applications of concepts and theorems core concepts are presented through a large number of solved graded model examples in an innovative and lucid manner a good number of relatively competitive problems are given at the end of each unit in the form of short questions hot assignments mcqs and know more for student s practices purpose practical projects activity also given in each unit for enhancing the student s capability to increase the feeling of team work to clarify the subject the text has been supplemented through notes observations and remarks an attempt has been made to explain the topic

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Engineering Mathematics

2005-12-01

this book is for software engineering enthusiasts regression testers ios testers and combinatorial testers can get hint on how to apply machine learning and data science to software testing which are left as an exercise and future work

Engineering Mathematics Vol-2

2021-11-01

mankind now faces even more challenging environment and health related problems than ever before readily available transportation systems facilitate the swift spread of diseases as large populations migrate from one part of the world to another studies on the spread of the communicable diseases are very important this book mathematical population dynamics and epidemiology in temporal and spatio-temporal domains provides a useful experimental tool for making practical predictions building and testing theories answering specific questions determining sensitivities of the parameters forming control strategies and much more this volume focuses on the study of population dynamics with special emphasis on the migration of populations and the spreading of epidemics among human and animal populations it also provides the background needed to interpret construct and analyze a wide variety of mathematical models most of the techniques presented in the book can be readily applied to model other phenomena in biology as well as in other disciplines

MATHEMATICS - I (Calculus and Linear Algebra) For Computer Science Engineering Branches | AICTE Prescribed Textbook - English

2021-11-01

the book provides primary information about civil engineering to both a civil and non civil engineering audience in areas such as construction management estate management and building basic civil engineering topics like surveying building materials construction technology and management concrete technology steel structures soil mechanics and foundations water resources transportation and environment engineering are explained in detail codal provisions of us uk and india are included to cater to a global audience insights into techniques like modern surveying equipment and technologies sustainable construction materials and modern construction materials are also included key features provides a concise presentation of theory and practice for all technical in civil engineering contains detailed theory with lucid illustrations focuses on the management aspects of a civil engineer's job addresses contemporary issues such as permitting globalization sustainability and emerging technologies includes codal provisions of us uk and india the book is aimed at professionals and senior undergraduate students in civil engineering non specialist civil engineering audience

MATHEMATICS - I (Calculus and Linear Algebra) For Non-Computer Science Engineering Branches | AICTE Prescribed Textbook - English

2019-07-28

this book includes high quality papers presented at proceedings of first international conference on computational electronics for wireless communications iccwc 2021 held at national institute of technology kurukshetra haryana india during june 11 12 2021 the book presents original research work of academics and industry professionals to exchange their knowledge of the state of the art research and development in computational electronics with an emphasis on wireless communications the topics covered in the book are radio frequency and microwave signal processing microelectronics and wireless networks

Design and Implementation of Combinatorial Testing based Test Suites for Operating Systems used for Internet of Things

2018-12-07

this textbook covers the basic concepts and applications of finite element analysis it is specifically aimed at introducing this advanced topic to undergraduate level engineering students and practicing engineers in a lucid manner it also introduces a structural and heat transfer analysis software feastsmt which has wide applications in civil mechanical nuclear and automobile engineering domains this software has been developed by generations of scientists and engineers of vikram sarabhai space centre and indian space research organisation supported with many illustrative examples the textbook covers the classical methods of estimating solutions of mathematical models the book is written in an easy to understand manner this textbook also contains numeral exercise problems to aid self learning of the students the solutions to these problems are demonstrated using finite element software furthermore the textbook contains several tutorials and associated online resources on usage of the feastsmt software given the contents this textbook is highly useful for the undergraduate students of various disciplines of engineering it is also a good reference book for the practicing engineers

Mathematical Population Dynamics and Epidemiology in Temporal and Spatio-Temporal Domains

2021-05-04

this the 26th issue of the transactions on computational science journal is comprised of ten extended versions of selected papers from the international conference on cyberworlds 2014 held in santander spain in june 2014 the topics covered include areas of virtual reality games social networks haptic modeling cybersecurity and applications in education and arts

Practical Civil Engineering

2022-01-03

fourier transform is an efficient method and a powerful tool for solving certain types of differential and integral equations it is frequently applied for attaining the solutions to the problems of science and engineering such as image analysis image filtering image reconstruction image compression signal analyzing and circuit analysis this transform is also effectively applied to initial and boundary value problems this book is to explore the basic concepts of fourier transforms in a simple systematic and easy to understand manner the present book is divided into six chapters that cover all the important topics like fourier transform fourier sine transform fourier cosine transform finite fourier sine transform finite fourier cosine transform and application of fourier transforms

Proceedings of First International Conference on Computational Electronics for Wireless Communications

2023-10-09

this book is intended for academic and industrial developers exploring and developing applications in the area of big data and machine learning including those that are solving technology requirements evaluation of methodology advances and algorithm demonstrations the intent of this book is to provide awareness of algorithms used for machine learning and big data in the academic and professional community the 17 chapters are divided into 5 sections theoretical fundamentals big data and pattern recognition machine learning algorithms applications machine learning s next frontier and hands on and case study while it dwells on the foundations of machine learning and big data as a part of analytics it also focuses on contemporary topics for research and development in this regard the book covers machine learning algorithms and their modern applications in developing automated systems subjects covered in detail include mathematical foundations of machine learning with various examples an empirical study of supervised learning algorithms like naïve bayes knn and semi supervised learning algorithms viz s3vm graph based multiview precise study on unsupervised learning

algorithms like gmm k mean clustering dirichlet process mixture model x means and reinforcement learning algorithm with q learning r learning td learning sarsa learning and so forth hands on machine learning open source tools viz apache mahout h2o case studies for readers to analyze the prescribed cases and present their solutions or interpretations with intrusion detection in manets using machine learning showcase on novel user cases implications of electronic governance as well as pragmatic study of bd ml technologies for agriculture healthcare social media industry banking insurance and so on

Introduction to Finite Element Analysis

2016-01-22

aiming at undergraduate and postgraduate students of mechanical engineering the book has been written with a long teaching experience of the author lucid and beyond traditional writing style makes the text different from other books in this text every effort has been taken to make the subject easy and interesting the concepts have been explained in such a manner that students do not require any prerequisite knowledge the text amalgamated with real world examples help students adhere to the book and learn the concepts on their own throughout the book engaging and thought provoking approach has been followed it discusses free and forced vibrations of undamped and damped single degree freedom systems self excited vibrations vibrations of two and multi degree freedom systems vibrations of continuous systems and lagrangian formulation a chapter on set up a mechanical vibration laboratory helps students and teachers to learn how to develop a basic laboratory without involving a heavy cost besides undergraduate and postgraduate students this text also serves as a launch pad for those who want to pursue research key features simple practical demonstrations helps the student in developing important skills such as reasoning interpretation and physical visualisation helps to develop software prepares for competitive examinations there are nearly 50 problems illustrated and around 200 problems given in exercises for practice

Transactions on Computational Science XXVI

2021-09-01

the two volume set ccis 1030 and 1031 constitutes the refereed proceedings of the second international conference on computational intelligence communications and business analytics cicba 2018 held in kalyani india in july 2018 the 76 revised full papers presented in the two volumes were carefully reviewed and selected from 240 submissions the papers are organized in topical sections on computational intelligence signal processing and communications microelectronics sensors and intelligent networks data science advanced data analytics intelligent data mining data warehousing and computational forensics privacy and security

FOURIER TRANSFORMS WITH APPLICATIONS

2020-09-01

optimization is a key concept in mathematics computer science and operations research and is essential to the modeling of any system playing an integral role in computer aided design fundamentals of optimization techniques with algorithms presents a complete package of various traditional and advanced optimization techniques along with a variety of example problems algorithms and matlab code optimization techniques for linear and nonlinear single variable and multivariable models as well as multi objective and advanced optimization techniques it presents both theoretical and numerical perspectives in a clear and approachable way in order to help the reader apply optimization techniques in practice the book details program codes and computer aided designs in relation to real world problems ten chapters cover an introduction to optimization linear programming single variable nonlinear optimization multivariable unconstrained nonlinear optimization multivariable constrained nonlinear optimization geometric programming dynamic programming integer programming multi objective optimization and nature inspired optimization this book provides accessible coverage of optimization techniques and helps the reader to apply them in practice presents optimization techniques clearly including worked out examples from traditional to advanced maps out the relations between optimization and other mathematical topics and disciplines provides systematic coverage of algorithms to facilitate computer coding gives matlab codes in relation to optimization techniques and their use in computer aided design presents nature inspired optimization techniques including genetic algorithms and artificial neural networks

Machine Learning and Big Data

2014-11-01

the book contains the extended version of the works that have been presented and discussed in the second international doctoral symposium on applied computation and security systems acss 2015 held during may 23 25 2015 in kolkata india the symposium has been jointly organized by the agh university of science technology cracow poland ca foscari university venice italy and university of calcutta india the book is divided into volumes and presents dissertation works in the areas of image processing biometrics based authentication soft computing data mining next generation networking and network security remote healthcare communications embedded systems software engineering and service engineering

MECHANICAL VIBRATIONS

2003

this three volume book contains the proceedings of 5th international conference on advanced computing networking and informatics icacni 2017 the book focuses on the recent advancement of the broad areas of advanced computing networking and informatics it also includes novel approaches devised by researchers from across the globe this book brings together academic scientists professors research scholars and students to share and disseminate information on knowledge and scientific research works related to computing networking and informatics to discuss the practical challenges encountered and the solutions adopted the book also promotes translation of basic research into applied investigation and convert applied investigation into practice

Indian Books in Print

2019-06-24

micro and nanofluid convection with magnetic field effects for heat and mass transfer applications using matlab examines the performance of micro and nanofluids with various physical effects such as magnetic field slip effects radiation and heat sources heat and mass transfer enhancement techniques are widely used in many applications in the heating and cooling or freezing process to make possible a reduction in weight and size or enhance performance during heat and mass exchanges the book covers the two categories of flow techniques active and passive it discusses various considerations in the engineering sciences in the melting process polymer industry and in metallurgy to be more precise it may be pointed out that many metal surgical developments involve the cooling of continuous strips or filaments by drawing them through a quiescent fluid and in that process of drawing these strips are sometimes stretched in all these cases the properties of the final product depend to a great extent on the rate of cooling by drawing such strips in an electrically conducting fluid subject to a magnetic field and thermal radiation provides information about the governing equations for all three types of flow geometries explains micro polar fluid flow modeling offers detailed coverage of boundary value problems using matlab

Computational Intelligence, Communications, and Business Analytics

2020-08-25

m u s mathematical uniform space is a new number of π pi representing the reality of the universe in which we live with this number we created a new geometry hyperelliptical geometry which will provide the unification of physics thus uniting the theory of relativity and quantum theory a new geometry for a new mathematics and a new physics isbn 978 65 00 98107 0

Fundamentals of Optimization Techniques with Algorithms

2015-11-18

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Advanced Computing and Systems for Security

2018-11-03

information technology it can be collectively described as that used by man to gather store and retrieve manipulate and communicate data and information today in the information age this takes place over and across vast geographical demographical socio political and economic scopes and the ceasing of it will choke society as know it today to a pre historic standstill it is understandably implemented through various aspects of computing and electronic technology with the growing complexity of the information processing needs throughout fields as diverse as business science technology exploration and entertainment several issues involving data security time complexity bandwidth and thought put parallel and alternative computing technology and the technology used in an ever increasing band of newer types of devices are posing the most crucial questions to the future of society in general and it in particular the book is a collection of articles written by professors industry persons and researchers if international repute and comprises the latest breakthrough sin the fields of information theory and coding information security next generation internet technology data mining and knowledge management mobile computing and communication bioinformatics soft computing multimedia systems and communication quantum computing image processing and other areas which together comprise it this book is a must read for those seeking to expand their knowledge about various aspects of information technology

Philosophy and Practice of Valuation

2022-06-02

Recent Findings in Intelligent Computing Techniques

2024-03-25

Micro and Nanofluid Convection with Magnetic Field Effects for Heat and Mass Transfer Applications using MATLAB®

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International Books in Print

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Indian Books

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Review Projector (India).

2001-08

Indian Journal of Chemistry

2007

       

A Handbook of Information Technology

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