

Free read Discrete mathematics its applications global edition (PDF)

rosen s discrete mathematics and its applications presents a precise relevant comprehensive approach to mathematical concepts this world renowned best selling text was written to accommodate the needs across a variety of majors and departments including mathematics computer science and engineering as the market leader the book is highly flexible comprehensive and a proven pedagogical teaching tool for instructors discrete mathematics and its applications sixth edition is intended for one or two term introductory discrete mathematics courses taken by students from a wide variety of majors including computer science mathematics and engineering this renowned best selling text which has been used at over 500 institutions around the world gives a focused introduction to the primary themes in a discrete mathematics course and demonstrates the relevance and practicality of discrete mathematics to a wide a wide variety of real world applications from computer science to data networking to psychology to chemistry to engineering to linguistics to biology to business and to many other important fields this text is designed for the sophomore junior level introduction to discrete mathematics taken by students preparing for future coursework in areas such as math computer science and engineering rosen has become a bestseller largely due to how effectively it addresses the main portion of the discrete market which is typically characterized as the mid to upper level in rigor the strength of rosen s approach has been the effective balance of theory with relevant applications as well as the overall comprehensive nature of the topic coverage copyright libri gmbh all rights reserved discover a unique and modern treatment of topology employing a cross disciplinary approach implemented recently to understand diverse topics such as cell biology superconductors and robot motion topology has been transformed from a theoretical field that highlights mathematical theory to a subject that plays a growing role in nearly all fields of scientific investigation moving from the concrete to the abstract topology and its applications displays both the beauty and utility of topology first presenting the essentials of topology followed by its emerging role within the new frontiers in research filling a gap between the teaching of topology and its modern uses in real world phenomena topology and its applications is organized around the mathematical theory of topology a framework of rigorous theorems and clear elegant proofs this book is the first of its kind to present applications in computer graphics economics dynamical systems condensed matter physics biology robotics chemistry cosmology material science computational topology and population modeling as well as other areas of science and engineering many of these applications are presented in optional sections allowing an instructor to customize the presentation the author presents a diversity of topological areas including point set topology geometric topology differential topology and algebraic combinatorial topology topics within these areas include open sets compactness homotopy surface classification index theory on surfaces manifolds and complexes topological groups the fundamental group and homology special core intuition segments throughout the book briefly explain the basic intuition essential to understanding several topics a generous number of figures and examples many of which come from applications such as liquid crystals space probe data and computer graphics are all available from the publisher s site as students of mathematics or its applications progress courses focus increasingly on mathematical theories and applications themselves and less on how to study these complex ideas studying mathematics and its applications aims to bridge this gap by focusing on the essential skills needed by students helping them to study more effectively and successfully the book leads the student through tasks demonstrating how to use examples and cope with symbols and encouraging them to use these tools to apply mathematics and construct proofs offering practical advice on assessment and modes of study this book is an invaluable companion to any mathematics or applications of mathematics course rosen s discrete mathematics and its applications presents a precise relevant comprehensive approach to mathematical concepts this world renowned best selling text was written to accommodate the needs across a variety of majors and departments including mathematics computer science and engineering as the market leader the book is highly flexible comprehensive and a proven pedagogical teaching tool for instructors

digital is becoming increasingly important and gaining popularity crowning connect as the digital leader for this discipline mcgraw hill education s connect available as an optional add on item connect is the only integrated learning system that empowers students by continuously adapting to deliver precisely what they need when they need it how they need it so that class time is more effective connect allows the professor to assign homework quizzes and tests easily and automatically grades and records the scores of the student s work problems are randomized to prevent sharing of answers and may also have a multi step solution which helps move the students learning along if they experience difficulty introducing a unique approach to career self management that draws on a metaphor of physical fitness this helpful guide teaches an upbeat philosophy that can be easily implemented through a regimen of daily weekly monthly and quarterly activities to strengthen capacity and endurance on the job this revolutionary philosophy shows workers how to identify and overcome bully employers gauge the healthiness of their careers build career fitness plans and maintain their career records the system teaches all employees that they have a right to the pursuit of happiness in their careers and outlines what they must do to take charge in today s modern workplace number theory and its applications is a textbook for students pursuing mathematics as major in undergraduate and postgraduate courses please note taylor francis does not sell or distribute the print book in india pakistan nepal bhutan bangladesh and sri lanka the mathematical study of games is an intriguing endeavor with implications and applications that reach far beyond tic tac toe chess and poker to economics business and even biology and politics most texts on the subject however are written at the graduate level for those with strong mathematics economics or business backgrounds in this book is compiled principally from notes and observations made by the author while teaching the subject to students whose mathematical knowledge was very limited the difficulties which beset the beginner are fully explained and the principles of the differential and integral calculus and differential equations are clearly set forth in the simplest language a large number of the problems have been fully worked out for the sake of many who wish to obtain a working knowledge of the subject without the aid of a teacher applications of the calculus to problems in engineering and physics form a feature of the work which concludes with an up to date chapter on harmonic analysis of special interest to electrical engineers and students of electro technics electrical review and western electrician vol 56 this unique textbook combines traditional geometry presents a contemporary approach that is grounded in real world applications it balances the deductive approach with discovery learning introduces axiomatic euclidean and non euclidean and transformational geometry the text integrates applications and examples throughout the third edition offers many updates including expanding on historical notes geometry and its applications is a significant text for any college or university that focuses on geometry s usefulness in other disciplines it is especially appropriate for engineering and science majors as well as future mathematics teachers the third edition streamlines the treatment from the previous two editions treatment of axiomatic geometry has been expanded nearly 300 applications from all fields are included an emphasis on computer science related applications appeals to student interest many new excercises keep the presentation fresh goldstein s finite mathematics it s applications 10 e is a comprehensive print and online program for readers interested in business economics life science or social sciences without sacrificing mathematical integrity the book clearly presents the concepts in a flexible content sequence with a large quantity of exceptional in depth exercise sets note this is the standalone book if you want the book and access code order the isbn below 0321744586 9780321744586 finite mathematics its applications plus mymathlab mystatlab student access code card package consists of 0321431308 9780321431301 mymathlab mystatlab glue in access card 0321571894 9780321571892 finite mathematics its 0321654064 9780321654069 mymathlab inside star sticker renowned professor and author gilbert strang demonstrates that linear algebra is a fascinating subject by showing both its beauty and value while the mathematics is there the effort is not all concentrated on proofs strang s emphasis is on understanding he explains concepts rather than deduces this book is written in an informal and personal style and teaches real mathematics the gears change in chapter 2 as students reach the introduction of vector spaces throughout the book the theory is motivated and reinforced by genuine applications allowing pure mathematicians to teach applied mathematics the fourth edition of kenneth rosen swidely used free and download fundamentals of

elementary number theory and its applications preserves the strengths of the previous editions while enhancing the book's flexibility and depth of content coverage the blending of classical theory with modern applications is a hallmark feature of the text the fourth edition builds on this strength with new examples additional applications and increased cryptology coverage up to date information on the latest discoveries is included elementary number theory and its applications provides a diverse group of exercises including basic exercises designed to help students develop skills challenging exercises and computer projects in addition to years of use and professor feedback the fourth edition of this text has been thoroughly accuracy checked to ensure the quality of the mathematical content and the exercises the summer school and conference on mathematical logic and its applications september 24 october 4 1986 druzhba bulgaria was honourably dedicated to the 80 th anniversary of kurt godel 1906 1978 one of the greatest scientists of this and not only of this century the main topics of the meeting were logic and the foundation of mathematics logic and computer science logic philosophy and the study of language kurt godel's life and deed the scientific program comprised 5 kinds of activities namely a a godel session with 3 invited lecturers b a summer school with 17 invited lecturers c a conference with 13 contributed talks d seminar talks one invited and 12 with no preliminary selection e three discussions the present volume reflects an essential part of this program namely 14 of the invited lectures and all of the contributed talks not presented in the volume remained six of the invited lecturers who did not submit texts yu ershov the language of expressions and its semantics s goncharov mathematical foundations of semantic programming y moschovakis foundations of the theory of algorithms n nagornyj is realizability of propositional formulae a gbdelean property n shanin some approaches to finitization of mathematical analysis v uspensky algorithms and randomness joint with a n this applications driven textbook provides material for an introductory course in graph theory this volume dedicated to the eminent mathematician vladimir arnold presents a collection of research and survey papers written on a large spectrum of theories and problems that have been studied or introduced by arnold himself emphasis is given to topics relating to dynamical systems stability of integrable systems algebraic and differential topology global analysis singularity theory and classical mechanics a number of applications of arnold's groundbreaking work are presented this publication will assist graduate students and research mathematicians in acquiring an in depth understanding and insight into a wide domain of research of an interdisciplinary nature traditionally lie theory is a tool to build mathematical models for physical systems recently the trend is towards geometrisation of the mathematical description of physical systems and objects a geometric approach to a system yields in general some notion of symmetry which is very helpful in understanding its structure geometrisation and symmetries are meant in their broadest sense i e classical geometry differential geometry groups and quantum groups infinite dimensional super algebras and their representations furthermore we include the necessary tools from functional analysis and number theory this is a large interdisciplinary and interrelated field samples of these new trends are presented in this volume based on contributions from the workshop lie theory and its applications in physics held near varna bulgaria in june 2011 this book is suitable for an extensive audience of mathematicians mathematical physicists theoretical physicists and researchers in the field of lie theory this textbook is an introduction to non standard analysis and to its many applications non standard analysis nsa is a subject of great research interest both in its own right and as a tool for answering questions in subjects such as functional analysis probability mathematical physics and topology the book arises from a conference held in july 1986 at the university of hull which was designed to provide both an introduction to the subject through introductory lectures and surveys of the state of research the first part of the book is devoted to the introductory lectures and the second part consists of presentations of applications of nsa to dynamical systems topology automata and orderings on words the non linear boltzmann equation and integration on non standard hulls of vector lattices one of the book's attractions is that a standard notation is used throughout so the underlying theory is easily applied in a number of different settings consequently this book will be ideal for graduate students and research mathematicians coming to the subject for the first time and it will provide an attractive and stimulating account of the subject this volume has been divided into two parts geometry and applications the geometry of fundamentals of

relates primarily to geometric flows laminations integral formulae geometry of vector fields on lie groups and osculation the articles in the applications portion concern some particular problems of the theory of dynamical systems including mathematical problems of liquid flows and a study of cycles for non dynamical systems this work is based on the second international workshop entitled geometry and symbolic computations held on may 15 18 2013 at the university of haifa and is dedicated to modeling using symbolic calculations in differential geometry and its applications in fields such as computer science tomography and mechanics it is intended to create a forum for students and researchers in pure and applied geometry to promote discussion of modern state of the art in geometric modeling using symbolic programs such as mapletm and mathematica as well as presentation of new results the book was written from lectures given at the university of cambridge and maintains throughout a high level of rigour whilst remaining a highly readable and lucid account topics covered include the planchard theory of the existence of fourier transforms of a function of l_2 and tauberian theorems the influence of g h hardy is apparent from the presence of an application of the theory to the prime number theorems of hadamard and de la vallee poussin both pure and applied mathematicians will welcome the reissue of this classic work for this reissue professor kahane s foreword briefly describes the genesis of wiener s work and its later significance to harmonic analysis and brownian motion combining theoretical insights with practical applications this stimulating collection provides a state of the art survey of the finite element method one of the most powerful tools available for the solution of physical problems written by leading experts this volume consider such topics as parabolic galerkin methods nonconforming elements the treatment of singularities in elliptic boundary value problems and conforming methods for self adjoint elliptic problems this will be an invaluable basic reference for computational mathematicians and engineers who use finite element methods in academic or industrial research this book returns geometry to its natural habitats the arts nature and technology throughout the book geometry comes alive as a tool to unlock the understanding of our world assuming only familiarity with high school mathematics the book invites the reader to discover geometry through examples from biology astronomy architecture design photography drawing engineering and more lavishly illustrated with over 1200 figures all of the geometric results are carefully derived from scratch with topics from differential projective and non euclidean geometry as well as kinematics introduced as the need arises the mathematical results contained in the book range from very basic facts to recent results and mathematical proofs are included although not necessary for comprehension with its wide range of geometric applications this self contained volume demonstrates the ubiquity of geometry in our world and may serve as a source of inspiration for architects artists designers engineers and natural scientists this new edition has been completely revised and updated with new topics and many new illustrations an extensive update to a classic text stochastic geometry and spatial statistics play a fundamental role in many modern branches of physics materials sciences engineering biology and environmental sciences they offer successful models for the description of random two and three dimensional micro and macro structures and statistical methods for their analysis the previous edition of this book has served as the key reference in its field for over 18 years and is regarded as the best treatment of the subject of stochastic geometry both as a subject with vital applications to spatial statistics and as a very interesting field of mathematics in its own right this edition presents a wealth of models for spatial patterns and related statistical methods provides a great survey of the modern theory of random tessellations including many new models that became tractable only in the last few years includes new sections on random networks and random graphs to review the recent evergrowing interest in these areas provides an excellent introduction to theory and modelling of point processes which covers some very latest developments illustrate the forefront theory of random sets with many applications adds new results to the discussion of fibre and surface processes offers an updated collection of useful stereological methods includes 700 new references is written in an accessible style enabling non mathematicians to benefit from this book provides a companion website hosting information on recent developments in the field wiley com go cskm stochastic geometry and its applications is ideally suited for researchers in physics materials science biology and ecological sciences as well as mathematicians and statisticians it should also serve as a valuable introduction to the subject for students of mathematics and researchers in fields of

geometry has become one of the most active areas of math publishing yet a small list of older unofficial classics continues to interest the contemporary generation of mathematicians and students this advanced treatment of topics in differential geometry first published in 1957 was praised as well written by the american mathematical monthly and hailed as undoubtedly a valuable addition to the literature its topics include spaces with a non vanishing curvature tensor that admit a group of automorphisms of the maximum order groups of transformations in generalized spaces the study of global properties of the groups of motions in a compact orientable riemannian space lie derivatives in an almost complex space for advanced undergraduates and graduate students in mathematics our objective in this book is to present an exposition of basic principles of statistics along with some indication of applications which satisfies the following ten commandments the focus should be placed on a clear development of basic ideas and principles the exposition of these basic ideas and principles should be streamlined so as to avoid having the undergrowth get in the way of the statistical forest high priority should be given to the assumptions which underlie the application of statistical principles understanding of abuses misuses and misunderstandings which have arisen from the application of statistics is essential for a correct understanding of statistics the coverage should provide students with sufficient preparation for continued study of intermediate and advanced level statistics or disciplines which use statistical methodology the exposition should be readable and understandable by students without sacrifice of mathematical accuracy the organization should clearly distinguish mainstream topics inherent in every basic level statistics course irrespective of applied interests from topics of special interest to particular audience segments the computation dimension should not be given equal billing with statistical principles and ideas statistics is the master and important as it is the computation tool is the servant exercises to provoke thought exercise the little grey cells as hercule poirot would put it should be a prominent part of the exposition exercise banks to help the student see statistics as a whole are important for courses in mathematical statistics renowned for its high quality real world case studies and examples this highly structured text is designed to allow students with an established mathematics background to pursue a more rigorous advanced treatment of probability and statistics it shows how to use statistical methods when to use them and reinforces the calculus that students have covered in previous courses near rings the theory and its applications william j adams professor of mathematics at pace university is a recipient of paces outstanding teacher award he was chairman of the pace n y mathematics department from 1976 through 1991 professor adams is author or co author of over twenty books on mathematics its applications and history including elements of linear programming 1969 calculus for business and social science 1975 fundamentals of mathematics for business social and life sciences 1979 elements of complex analysis 1987 get a grip on your math 1996 slippery math in public affairs price tag and defense 2002 think first apply math think further food for thought 2005 the life and times of the central limit theorem second edition 2009 and alarming the chasm separating basic statistics education from its necessities 2013 his concern with the slippery side of math and what math can do for us and its limitations is a prominent feature of his writings on applications concerning higher education in general he is the author of the nitty gritty in the life of a university 2007 the first chapter deals with idempotent analysis per se to make the pres tation self contained in the first two sections we define idempotent semirings give a concise exposition of idempotent linear algebra and survey some of its applications idempotent linear algebra studies the properties of the semirings $M_n(S)$ over a semiring S with idempotent addition in other words it studies systems of equations that are linear in an idempotent semiring probably the first interesting and nontrivial idempotent semiring namely that of all languages over a finite alphabet as well as linear equations in this semiring was examined by skleene 107 in 1956 this noncommutative semiring was used in applications to compiling and parsing see also 1 presently the literature on idempotent algebra and its applications to theoretical computer science linguistic problems finite automata discrete event systems and petri nets biomathematics logic mathematical physics mathematical economics and optimization is immense e g see 9 10 11 12 13 15 16 17 22 31 32 35 36 37 38 39 40 41 52 53 54 55 61 62 63 64 68 71 72 73 74 77 78 79 80 81 82 83 84 85 86 88 114 125 128 135 136 138 139 141 159 160 167 170 173 174 175 176 177 178 179 180 185 186 187 188 189 in 1 2 we present the most important facts of the idempotent algebra

semimodules are idempotent analogs of the finite dimensional vector spaces and hence endomorphisms of these semi modules can naturally be called idempotent linear operators on them. The series is devoted to the publication of monographs and high level textbooks in mathematics, mathematical methods and their applications, apart from covering important areas of current interest. A major aim is to make topics of an interdisciplinary nature accessible to the non-specialist. The works in this series are addressed to advanced students and researchers in mathematics and theoretical physics. In addition, it can serve as a guide for lectures and seminars on a graduate level. The series de Gruyter Studies in Mathematics was founded ca. 30 years ago by the late Professor Heinz Bauer and Professor Peter Gabriel with the aim to establish a series of monographs and textbooks of high standard written by scholars with an international reputation presenting current fields of research in pure and applied mathematics. While the editorial board of the studies has changed with the years, the aspirations of the studies are unchanged. In times of rapid growth of mathematical knowledge, carefully written monographs and textbooks written by experts are needed more than ever, not least to pave the way for the next generation of mathematicians. In this sense, the editorial board and the publisher of the studies are devoted to continue the studies as a service to the mathematical community. Please submit any book proposals to Niels Jacob. Introducing Game Theory and its Applications presents an easy-to-read introduction to the basic ideas and techniques of game theory.

Discrete Mathematics and Its Applications

2018-07-09

rosen s discrete mathematics and its applications presents a precise relevant comprehensive approach to mathematical concepts this world renowned best selling text was written to accommodate the needs across a variety of majors and departments including mathematics computer science and engineering as the market leader the book is highly flexible comprehensive and a proven pedagogical teaching tool for instructors

Discrete Mathematics and Its Applications

2006-07-26

discrete mathematics and its applications sixth edition is intended for one or two term introductory discrete mathematics courses taken by students from a wide variety of majors including computer science mathematics and engineering this renowned best selling text which has been used at over 500 institutions around the world gives a focused introduction to the primary themes in a discrete mathematics course and demonstrates the relevance and practicality of discrete mathematics to a wide a wide variety of real world applications from computer science to data networking to psychology to chemistry to engineering to linguistics to biology to business and to many other important fields

Student Solutions Guide for Discrete Mathematics and Its Applications

1991

this text is designed for the sophomore junior level introduction to discrete mathematics taken by students preparing for future coursework in areas such as math computer science and engineering rosen has become a bestseller largely due to how effectively it addresses the main portion of the discrete market which is typically characterized as the mid to upper level in rigor the strength of rosen s approach has been the effective balance of theory with relevant applications as well as the overall comprehensive nature of the topic coverage copyright libri gmbh all rights reserved

Topology and Its Applications

2013-06-12

discover a unique and modern treatment of topology employing a cross disciplinary approach implemented recently to understand diverse topics such as cell biology superconductors and robot motion topology has been transformed from a theoretical field that highlights mathematical theory to a subject that plays a growing role in nearly all fields of scientific investigation moving from the concrete to the abstract topology and its applications displays both the beauty and utility of topology first presenting the essentials of topology followed by its emerging role within the new frontiers in research filling a gap between the teaching of topology and its modern uses in real world phenomena topology and its applications is organized around the mathematical theory of topology a framework of rigorous theorems and clear elegant proofs this book is the first of its kind to present applications in computer graphics economics dynamical systems condensed matter physics biology robotics chemistry cosmology material science computational topology and population modeling as well as other areas of science and engineering many of these applications are presented in optional sections allowing an instructor to customize the presentation the author presents a diversity of topological areas including point set topology geometric topology differential topology and algebraic combinatorial topology topics within these areas include open sets compactness homotopy surface classification index theory on

surfaces manifolds and complexes topological groups the fundamental group and homology special core intuition segments throughout the book briefly explain the basic intuition essential to understanding several topics a generous number of figures and examples many of which come from applications such as liquid crystals space probe data and computer graphics are all available from the publisher s site

Studying Mathematics and its Applications

2017-03-02

as students of mathematics or its applications progress courses focus increasingly on mathematical theories and applications themselves and less on how to study these complex ideas studying mathematics and its applications aims to bridge this gap by focusing on the essential skills needed by students helping them to study more effectively and successfully the book leads the student through tasks demonstrating how to use examples and cope with symbols and encouraging them to use these tools to apply mathematics and construct proofs offering practical advice on assessment and modes of study this book is an invaluable companion to any mathematics or applications of mathematics course

Loose Leaf for Discrete Mathematics and Its Applications

2018-07-10

rosen s discrete mathematics and its applications presents a precise relevant comprehensive approach to mathematical concepts this world renowned best selling text was written to accommodate the needs across a variety of majors and departments including mathematics computer science and engineering as the market leader the book is highly flexible comprehensive and a proven pedagogical teaching tool for instructors digital is becoming increasingly important and gaining popularity crowning connect as the digital leader for this discipline mcgraw hill education s connect available as an optional add on item connect is the only integrated learning system that empowers students by continuously adapting to deliver precisely what they need when they need it how they need it so that class time is more effective connect allows the professor to assign homework quizzes and tests easily and automatically grades and records the scores of the student s work problems are randomized to prevent sharing of answers and may also have a multi step solution which helps move the students learning along if they experience difficulty

Finite Mathematics & Its Applications

2001

introducing a unique approach to career self management that draws on a metaphor of physical fitness this helpful guide teaches an upbeat philosophy that can be easily implemented through a regimen of daily weekly monthly and quarterly activities to strengthen capacity and endurance on the job this revolutionary philosophy shows workers how to identify and overcome bully employers gauge the healthiness of their careers build career fitness plans and maintain their career records the system teaches all employees that they have a right to the pursuit of happiness in their careers and outlines what they must do to take charge in today s modern workplace

Number Theory and its Applications

2022-01-31

number theory and its applications is a textbook for students pursuing mathematics as major in undergraduate and postgraduate courses please note taylor francis does not sell or distribute the print book in india pakistan nepal bhutan bangladesh and sri

Introducing Game Theory and its Applications

2016-02-03

the mathematical study of games is an intriguing endeavor with implications and applications that reach far beyond tic tac toe chess and poker to economics business and even biology and politics most texts on the subject however are written at the graduate level for those with strong mathematics economics or business backgrounds in

The Calculus and Its Applications

2016-07-13

this book is compiled principally from notes and observations made by the author while teaching the subject to students whose mathematical knowledge was very limited the difficulties which beset the beginner are fully explained and the principles of the differential and integral calculus and differential equations are clearly set forth in the simplest language a large number of the problems have been fully worked out for the sake of many who wish to obtain a working knowledge of the subject without the aid of a teacher applications of the calculus to problems in engineering and physics form a feature of the work which concludes with an up to date chapter on harmonic analysis of special interest to electrical engineers and students of electro technics electrical review and western electrician vol 56

Geometry and Its Applications

2022-06-19

this unique textbook combines traditional geometry presents a contemporary approach that is grounded in real world applications it balances the deductive approach with discovery learning introduces axiomatic euclidean and non euclidean and transformational geometry the text integrates applications and examples throughout the third edition offers many updates including expanding on historical notes geometry and its applications is a significant text for any college or university that focuses on geometry s usefulness in other disciplines it is especially appropriate for engineering and science majors as well as future mathematics teachers the third edition streamlines the treatment from the previous two editions treatment of axiomatic geometry has been expanded nearly 300 applications from all fields are included an emphasis on computer science related applications appeals to student interest many new excercises keep the presentation fresh

Finite Mathematics and Its Applications

2010

goldstein s finite mathematics it s applications 10 e is a comprehensive print and online program for readers interested in business economics life science or social sciences without sacrificing mathematical integrity the book clearly presents the concepts in a flexible content sequence with a large quantity of exceptional in depth exercise sets note this is the standalone book if you want the book and access code order the isbn below 0321744586 9780321744586 finite mathematics its applications plus mymathlab mystatlab student access code card package consists of 0321431308 9780321431301 mymathlab mystatlab glue in access card 0321571894 9780321571892 finite mathematics its 0321654064 9780321654069 mymathlab inside star sticker

Selected Chapters from Discrete Mathematics and Its Applications, Fifth Edition

2003

renowned professor and author gilbert strang demonstrates that linear algebra is a fascinating subject by showing both its beauty and value while the mathematics is there the effort is not all concentrated on proofs strang s emphasis is on understanding he explains concepts rather than deduces this book is written in an informal and personal style and teaches real mathematics the gears change in chapter 2 as students reach the introduction of vector spaces throughout the book the theory is motivated and reinforced by genuine applications allowing pure mathematicians to teach applied mathematics

Linear Algebra and Its Applications

2006

the fourth edition of kenneth rosen s widely used and successful text elementary number theory and its applications preserves the strengths of the previous editions while enhancing the book s flexibility and depth of content coverage the blending of classical theory with modern applications is a hallmark feature of the text the fourth edition builds on this strength with new examples additional applications and increased cryptology coverage up to date information on the latest discoveries is included elementary number theory and its applications provides a diverse group of exercises including basic exercises designed to help students develop skills challenging exercises and computer projects in addition to years of use and professor feedback the fourth edition of this text has been thoroughly accuracy checked to ensure the quality of the mathematical content and the exercises

Elementary Number Theory and Its Applications

2000-01

the summer school and conference on mathematical logic and its applications september 24 october 4 1986 druzhba bulgaria was honourably dedicated to the 80 th anniversary of kurt godel 1906 1978 one of the greatest scientists of this and not only of this century the main topics of the meeting were logic and the foundation of mathematics logic and computer science logic philosophy and the study of language kurt godel s life and deed the scientific program comprised 5 kinds of activities namely a a godel session with 3 invited lecturers b a summer school with 17 invited lecturers c a conference with 13 contributed talks d seminar talks one invited and 12 with no preliminary selection e three discussions the present volume reflects an essential part of this program namely 14 of the invited lectures and all of the contributed talks not presented in the volltme remaine d si x of the i nvi ted lecturers who di d not submit texts yu ershov the language of expressions and its semantics s goncharov mathematical foundations of semantic programming y moschovakis foundations of the theory of algorithms n nagornyj is realizability of propositional formulae a gbdelean property n shanin some approaches to finitization of mathematical analysis v uspensky algorithms and randomness joint with a n

Mathematical Logic and Its Applications

2012-12-06

this applications driven textbook provides material for an introductory course in graph theory

Graph Theory and Its Applications

1999-01-01

this volume dedicated to the eminent mathematician vladimir arnold presents a collection of research and survey papers written on a large spectrum of theories and problems that have been studied or introduced by arnold himself emphasis is given to topics relating to dynamical systems stability of integrable systems algebraic and differential topology global analysis singularity theory and classical mechanics a number of applications of arnold s groundbreaking work are presented this publication will assist graduate students and research mathematicians in acquiring an in depth understanding and insight into a wide domain of research of an interdisciplinary nature

Essays in Mathematics and its Applications

2016-06-14

traditionally lie theory is a tool to build mathematical models for physical systems recently the trend is towards geometrisation of the mathematical description of physical systems and objects a geometric approach to a system yields in general some notion of symmetry which is very helpful in understanding its structure geometrisation and symmetries are meant in their broadest sense i e classical geometry differential geometry groups and quantum groups infinite dimensional super algebras and their representations furthermore we include the necessary tools from functional analysis and number theory this is a large interdisciplinary and interrelated field samples of these new trends are presented in this volume based on contributions from the workshop lie theory and its applications in physics held near varna bulgaria in june 2011 this book is suitable for an extensive audience of mathematicians mathematical physicists theoretical physicists and researchers in the field of lie theory

Discrete Mathematics and Its Applications

2019

this textbook is an introduction to non standard analysis and to its many applications non standard analysis nsa is a subject of great research interest both in its own right and as a tool for answering questions in subjects such as functional analysis probability mathematical physics and topology the book arises from a conference held in july 1986 at the university of hull which was designed to provide both an introduction to the subject through introductory lectures and surveys of the state of research the first part of the book is devoted to the introductory lectures and the second part consists of presentations of applications of nsa to dynamical systems topology automata and orderings on words the non linear boltzmann equation and integration on non standard hulls of vector lattices one of the book s attractions is that a standard notation is used throughout so the underlying theory is easily applied in a number of different settings consequently this book will be ideal for graduate students and research mathematicians coming to the subject for the first time and it will provide an attractive and stimulating account of the subject

Advances on Computer Mathematics and Its Applications

1993

this volume has been divided into two parts geometry and applications the geometry portion of the book relates primarily to geometric flows laminations integral formulae geometry of vector fields on lie groups and osculation the articles in the applications portion concern some particular problems of the theory of dynamical systems including mathematical problems of liquid flows and a study of cycles for non dynamical systems this work is based on the second international workshop entitled geometry and symbolic

computations held on may 15 18 2013 at the university of haifa and is dedicated to modeling using symbolic calculations in differential geometry and its applications in fields such as computer science tomography and mechanics it is intended to create a forum for students and researchers in pure and applied geometry to promote discussion of modern state of the art in geometric modeling using symbolic programs such as maple and mathematica as well as presentation of new results

Lie Theory and Its Applications in Physics

2013-04-09

the book was written from lectures given at the university of cambridge and maintains throughout a high level of rigour whilst remaining a highly readable and lucid account topics covered include the planchard theory of the existence of fourier transforms of a function of L^2 and tauberian theorems the influence of g h hardy is apparent from the presence of an application of the theory to the prime number theorems of hadamard and de la vallee poussin both pure and applied mathematicians will welcome the reissue of this classic work for this reissue professor kahane s foreword briefly describes the genesis of wiener s work and its later significance to harmonic analysis and brownian motion

Nonstandard Analysis and Its Applications

1988-09-30

combining theoretical insights with practical applications this stimulating collection provides a state of the art survey of the finite element method one of the most powerful tools available for the solution of physical problems written by leading experts this volume consider such topics as parabolic galerkin methods nonconforming elements the treatment of singularities in elliptic boundary value problems and conforming methods for self adjoint elliptic problems this will be an invaluable basic reference for computational mathematicians and engineers who use finite element methods in academic or industrial research

Geometry and its Applications

2016-09-03

this book returns geometry to its natural habitats the arts nature and technology throughout the book geometry comes alive as a tool to unlock the understanding of our world assuming only familiarity with high school mathematics the book invites the reader to discover geometry through examples from biology astronomy architecture design photography drawing engineering and more lavishly illustrated with over 1200 figures all of the geometric results are carefully derived from scratch with topics from differential projective and non euclidean geometry as well as kinematics introduced as the need arises the mathematical results contained in the book range from very basic facts to recent results and mathematical proofs are included although not necessary for comprehension with its wide range of geometric applications this self contained volume demonstrates the ubiquity of geometry in our world and may serve as a source of inspiration for architects artists designers engineers and natural scientists this new edition has been completely revised and updated with new topics and many new illustrations

The Fourier Integral and Certain of Its Applications

1988-11-17

an extensive update to a classic text stochastic geometry and spatial statistics play a fundamental role in many modern branches of physics materials sciences engineering

biology and environmental sciences they offer successful models for the description of random two and three dimensional micro and macro structures and statistical methods for their analysis the previous edition of this book has served as the key reference in its field for over 18 years and is regarded as the best treatment of the subject of stochastic geometry both as a subject with vital applications to spatial statistics and as a very interesting field of mathematics in its own right this edition presents a wealth of models for spatial patterns and related statistical methods provides a great survey of the modern theory of random tessellations including many new models that became tractable only in the last few years includes new sections on random networks and random graphs to review the recent ever growing interest in these areas provides an excellent introduction to theory and modelling of point processes which covers some very latest developments illustrate the forefront theory of random sets with many applications adds new results to the discussion of fibre and surface processes offers an updated collection of useful stereological methods includes 700 new references is written in an accessible style enabling non mathematicians to benefit from this book provides a companion website hosting information on recent developments in the field wiley com go cskm stochastic geometry and its applications is ideally suited for researchers in physics materials science biology and ecological sciences as well as mathematicians and statisticians it should also serve as a valuable introduction to the subject for students of mathematics and statistics

Finite Mathematics and Its Applications

1995

differential geometry has become one of the most active areas of math publishing yet a small list of older unofficial classics continues to interest the contemporary generation of mathematicians and students this advanced treatment of topics in differential geometry first published in 1957 was praised as well written by the american mathematical monthly and hailed as undoubtedly a valuable addition to the literature its topics include spaces with a non vanishing curvature tensor that admit a group of automorphisms of the maximum order groups of transformations in generalized spaces the study of global properties of the groups of motions in a compact orientable riemannian space lie derivatives in an almost complex space for advanced undergraduates and graduate students in mathematics

Finite Mathematics and Its Applications

1998-04-01

our objective in this book is to present an exposition of basic principles of statistics along with some indication of applications which satisfies the following ten commandments the focus should be placed on a clear development of basic ideas and principles the exposition of these basic ideas and principles should be streamlined so as to avoid having the undergrowth get in the way of the statistical forest high priority should be given to the assumptions which underlie the application of statistical principles understanding of abuses misuses and misunderstandings which have arisen from the application of statistics is essential for a correct understanding of statistics the coverage should provide students with sufficient preparation for continued study of intermediate and advanced level statistics or disciplines which use statistical methodology the exposition should be readable and understandable by students without sacrifice of mathematical accuracy the organization should clearly distinguish mainstream topics inherent in every basic level statistics course irrespective of applied interests from topics of special interest to particular audience segments the computation dimension should not be given equal billing with statistical principles and ideas statistics is the master and important as it is the computation tool is the servant exercises to provoke thought exercise the little grey cells as hercule poirot would put it should be a prominent part of the exposition exercise banks to help the student see statistics as a whole are important

The Mathematical Basis of Finite Element Methods with Applications to Partial Differential Equations

1984

for courses in mathematical statistics renowned for its high quality real world case studies and examples this highly structured text is designed to allow students with an established mathematics background to pursue a more rigorous advanced treatment of probability and statistics it shows how to use statistical methods when to use them and reinforces the calculus that students have covered in previous courses

Geometry and its Applications in Arts, Nature and Technology

2020-12-18

near rings the theory and its applications

Stochastic Geometry and Its Applications

2013-06-27

william j adams professor of mathematics at pace university is a recipient of paces outstanding teacher award he was chairman of the pace n y mathematics department from 1976 through 1991 professor adams is author or co author of over twenty books on mathematics its applications and history including elements of linear programming 1969 calculus for business and social science 1975 fundamentals of mathematics for business social and life sciences 1979 elements of complex analysis 1987 get a grip on your math 1996 slippery math in public affairs price tag and defense 2002 think first apply math think further food for thought 2005 the life and times of the central limit theorem second edition 2009 and alarming the chasm separating basic statistics education from its necessities 2013 his concern with the slippery side of math and what math can do for us and its limitations is a prominent feature of his writings on applications concerning higher education in general he is the author of the nitty gritty in the life of a university 2007

The Theory of Lie Derivatives and Its Applications

2020-05-21

the first chapter deals with idempotent analysis per se to make the pres tation self contained in the first two sections we define idempotent semirings give a concise exposition of idempotent linear algebra and survey some of its applications idempotent linear algebra studies the properties of the semir n ules an n e n over a semiring a with idempotent addition in other words it studies systems of equations that are linear in an idempotent semiring pr ably the first interesting and nontrivial idempotent semiring namely that of all languages over a finite alphabet as well as linear equations in this sern ing was examined by s kleene 107 in 1956 this noncommutative semiring was used in applications to compiling and parsing see also 1 presently the literature on idempotent algebra and its applications to theoretical computer science linguistic problems finite automata discrete event systems and petri nets biomathematics logic mathematical physics mathematical economics and optimizat ion is immense e g see 9 10 11 12 13 15 16 17 22 31 32 35 36 37 38 39 40 41 52 53 54 55 61 62 63 64 68 71 72 73 74 77 78 79 80 81 82 83 84 85 86 88 114 125 128 135 136 138 139 141 159 160 167 170 173 174 175 176 177 178 179 180 185 186 187 188 189 in 1 2 we present the most important facts of the idempotent algebra formalism the semimodules an are idempotent analogs of the finite dimensional v n tor spaces lr and hence endomorphisms of these semi modules can naturally be called idempotent linear operators on an

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Instructor Copy

2017

the series is devoted to the publication of monographs and high level textbooks in mathematics mathematical methods and their applications apart from covering important areas of current interest a major aim is to make topics of an interdisciplinary nature accessible to the non specialist the works in this series are addressed to advanced students and researchers in mathematics and theoretical physics in addition it can serve as a guide for lectures and seminars on a graduate level the series de gruyter studies in mathematics was founded ca 30 years ago by the late professor heinz bauer and professor peter gabriel with the aim to establish a series of monographs and textbooks of high standard written by scholars with an international reputation presenting current fields of research in pure and applied mathematics while the editorial board of the studies has changed with the years the aspirations of the studies are unchanged in times of rapid growth of mathematical knowledge carefully written monographs and textbooks written by experts are needed more than ever not least to pave the way for the next generation of mathematicians in this sense the editorial board and the publisher of the studies are devoted to continue the studies as a service to the mathematical community please submit any book proposals to niels jacob

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2009-02-03

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2001

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2011-10-10

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2013-07-15

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2024-08-02

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