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Modification - Marcin Morzycki 2016

An accessible guide to the linguistic semantics of adjectives, adverbs, gradability, vagueness, comparatives, and modification more generally.

Applied combinatorics - 1980

An Invitation to Modern Number Theory - Steven J. Miller

2006-03-26

In a manner accessible to beginning undergraduates, An Invitation to Modern Number Theory introduces many of the central problems, conjectures, results, and techniques of the field, such as the Riemann Hypothesis, Roth's Theorem, the Circle Method, and Random Matrix Theory. Showing how experiments are used to test conjectures and prove theorems, the book allows students to do original work on such problems, often using little more than calculus (though there are numerous remarks for those with deeper backgrounds). It shows students what number theory theorems are used for and what led to them and suggests problems for further research. Steven Miller and Ramin Takloo-Bighash introduce the problems and the computational skills required to numerically investigate them, providing background material (from probability to statistics to Fourier analysis) whenever necessary. They guide students through a variety of problems, ranging

from basic number theory, cryptography, and Goldbach's Problem, to the algebraic structures of numbers and continued fractions, showing connections between these subjects and encouraging students to study them further. In addition, this is the first undergraduate book to explore Random Matrix Theory, which has recently become a powerful tool for predicting answers in number theory. Providing exercises, references to the background literature, and Web links to previous student research projects, An Invitation to Modern Number Theory can be used to teach a research seminar or a lecture class.

Foundations of Combinatorics with Applications - Edward A. Bender
2013-01-18

Suitable for upper-level undergraduates and graduate students in engineering, science, and mathematics, this introductory text explores counting and listing, graphs, induction and recursion, and generating functions. Includes numerous exercises (some with solutions), notes, and references.

Combinatorics and Graph Theory - John Harris 2009-04-03

These notes were first used in an introductory course team taught by the authors at Appalachian State University to advanced undergraduates and beginning graduates. The text was written with four pedagogical goals in mind: offer a variety of topics in one course, get to the main themes and

tools as efficiently as possible, show the relationships between the different topics, and include recent results to convince students that mathematics is a living discipline.

Discrete Mathematics and Combinatorics - T. Sengadir 2009-09
Discrete Mathematics and Combinatorics provides a concise and practical introduction to the core components of discrete mathematics, featuring a balanced mix of basic theories and applications. The book covers both fundamental concepts such as sets and logic, as well as advanced topics such as graph theory and Turing machines. The example-driven approach will help readers in understanding and applying the concepts. Other pedagogical tools - illustrations, practice questions, and suggested reading - facilitate learning and mastering the subject."--Cover

Data Structures and Algorithm Analysis in Java - Mark Allen Weiss 2014-09-24

Data Structures and Algorithm Analysis in Java is an advanced algorithms book that fits between traditional CS2 and Algorithms Analysis courses. In the old ACM Curriculum Guidelines, this course was known as CS7. It is also suitable for a first-year graduate course in algorithm analysis. As the speed and power of computers increases, so does the need for effective programming and algorithm analysis. By approaching these skills in tandem, Mark Allen Weiss teaches readers to develop well-constructed, maximally efficient programs in Java. Weiss clearly explains topics from binary heaps to sorting to NP-completeness, and dedicates a full chapter to amortized analysis and advanced data structures and their implementation. Figures and examples illustrating successive stages of algorithms contribute to Weiss' careful, rigorous and in-depth analysis of each type of algorithm. A logical organization of topics and full access to source code complement the text's coverage.

Fascinating Mathematical People - Donald J. Albers 2011-09-06
Top mathematicians talk about their work and lives Fascinating Mathematical People is a collection of informal interviews and memoirs of sixteen prominent members of the mathematical community of the twentieth century, many still active. The candid portraits collected here

demonstrate that while these men and women vary widely in terms of their backgrounds, life stories, and worldviews, they all share a deep and abiding sense of wonder about mathematics. Featured here—in their own words—are major research mathematicians whose cutting-edge discoveries have advanced the frontiers of the field, such as Lars Ahlfors, Mary Cartwright, Dusa McDuff, and Atle Selberg. Others are leading mathematicians who have also been highly influential as teachers and mentors, like Tom Apostol and Jean Taylor. Fern Hunt describes what it was like to be among the first black women to earn a PhD in mathematics. Harold Bacon made trips to Alcatraz to help a prisoner learn calculus. Thomas Banchoff, who first became interested in the fourth dimension while reading a Captain Marvel comic, relates his fascinating friendship with Salvador Dalí and their shared passion for art, mathematics, and the profound connection between the two. Other mathematical people found here are Leon Bankoff, who was also a Beverly Hills dentist; Arthur Benjamin, a part-time professional magician; and Joseph Gallian, a legendary mentor of future mathematicians, but also a world-renowned expert on the Beatles. This beautifully illustrated collection includes many photographs never before published, concise introductions by the editors to each person, and a foreword by Philip J. Davis.

Selected Papers of Alan Hoffman with Commentary - Alan Jerome Hoffman 2003

Dr Alan J Hoffman is a pioneer in linear programming, combinatorial optimization, and the study of graph spectra. In his principal research interests, which include the fields of linear inequalities, combinatorics, and matrix theory, he and his collaborators have contributed fundamental concepts and theorems, many of which bear their names. This volume of Dr Hoffman's selected papers is divided into seven sections: geometry; combinatorics; matrix inequalities and eigenvalues; linear inequalities and linear programming; combinatorial optimization; greedy algorithms; graph spectra. Dr Hoffman has supplied background commentary and anecdotal remarks for each of the selected papers. He has also provided autobiographical notes showing how he chose

mathematics as his profession, and the influences and motivations which shaped his career. Contents: The Variation of the Spectrum of a Normal Matrix (with H W Wielandt); Integral Boundary Points of Convex Polyhedra (with J Kruskal); On Moore Graphs with Diameters 2 and 3 (with R R Singleton); Cycling in the Simplex Algorithm; On Approximate Solutions of Systems of Linear Inequalities; On the Polynomial of a Graph; Some Recent Applications of the Theory of Linear Inequalities of Extremal Combinatorial Analysis; On Simple Linear Programming Problems; Self-Orthogonal Latin Squares (with R K Brayton & D Coppersmith); On the Nonsingularity of Complex Matrices (with P Camion); A Generalization of Max Flow-Min Cut; A Characterization of Comparability Graphs and of Interval Graphs (with P C Gilmore); and 33 other papers. Readership: Researchers in linear programming and inequalities, combinatorics, combinatorial optimization, graph theory, matrix theory and operations research.

Lectures, Problems and Solutions for Ordinary Differential Equations - Deng Yuefan 2017-08-11

This unique book on ordinary differential equations addresses practical issues of composing and solving differential equations by demonstrating the detailed solutions of more than 1,000 examples. The initial draft was used to teach more than 10,000 advanced undergraduate students in engineering, physics, economics, as well as applied mathematics. It is a good source for students to learn problem-solving skills and for educators to find problems for homework assignments and tests. The 2nd edition, with at least 100 more examples and five added subsections, has been restructured to flow more pedagogically.

Combinatorics And Graph Theory (As Per U.P.T.U. Syllabus) - C. Vasudev 2007-01-01

About the Book: This text has been carefully designed for flexible use for First Semester M.C.A. course of Uttar Pradesh Technical University (U.P.T.U.), and it contains the following features: Precise mathematical language is used without excessive formalism and abstraction. Over 900 exercises (problem sets) in the text with many different types of questions posed. Care has been taken to balance the mix of notation and

words in mathematical statements. Problem sets (exercises) are stated clearly and unambiguously and all are carefully graded for various levels of difficulty. Contents.

How I Became a Quant - Richard R. Lindsey 2011-01-11

Praise for How I Became a Quant "Led by two top-notch quants, Richard R. Lindsey and Barry Schachter, How I Became a Quant details the quirky world of quantitative analysis through stories told by some of today's most successful quants. For anyone who might have thought otherwise, there are engaging personalities behind all that number crunching!" --Ira Kawaller, Kawaller & Co. and the Kawaller Fund "A fun and fascinating read. This book tells the story of how academics, physicists, mathematicians, and other scientists became professional investors managing billions." --David A. Krell, President and CEO, International Securities Exchange "How I Became a Quant should be must reading for all students with a quantitative aptitude. It provides fascinating examples of the dynamic career opportunities potentially open to anyone with the skills and passion for quantitative analysis." --Roy D. Henriksson, Chief Investment Officer, Advanced Portfolio Management "Quants"--those who design and implement mathematical models for the pricing of derivatives, assessment of risk, or prediction of market movements--are the backbone of today's investment industry. As the greater volatility of current financial markets has driven investors to seek shelter from increasing uncertainty, the quant revolution has given people the opportunity to avoid unwanted financial risk by literally trading it away, or more specifically, paying someone else to take on the unwanted risk. How I Became a Quant reveals the faces behind the quant revolution, offering you?the?chance to learn firsthand what it's like to be a?quant today. In this fascinating collection of Wall Street war stories, more than two dozen quants detail their roots, roles, and contributions, explaining what they do and how they do it, as well as outlining the sometimes unexpected paths they have followed from the halls of academia to the front lines of an investment revolution.

A First Look at Graph Theory - Clark John 1995

Combinatorics: A Guided Tour - David R. Mazur 2020-02-19

Combinatorics is mathematics of enumeration, existence, construction, and optimization questions concerning finite sets. This text focuses on the first three types of questions and covers basic counting and existence principles, distributions, generating functions, recurrence relations, Pólya theory, combinatorial designs, error correcting codes, partially ordered sets, and selected applications to graph theory including the enumeration of trees, the chromatic polynomial, and introductory Ramsey theory. The only prerequisites are single-variable calculus and familiarity with sets and basic proof techniques. The text emphasizes the brands of thinking that are characteristic of combinatorics: bijective and combinatorial proofs, recursive analysis, and counting problem classification. It is flexible enough to be used for undergraduate courses in combinatorics, second courses in discrete mathematics, introductory graduate courses in applied mathematics programs, as well as for independent study or reading courses. What makes this text a guided tour are the approximately 350 reading questions spread throughout its eight chapters. These questions provide checkpoints for learning and prepare the reader for the end-of-section exercises of which there are over 470. Most sections conclude with Travel Notes that add color to the material of the section via anecdotes, open problems, suggestions for further reading, and biographical information about mathematicians involved in the discoveries.

Applied Combinatorics - Alan Tucker 2012-02-01

The new 6th edition of *Applied Combinatorics* builds on the previous editions with more in depth analysis of computer systems in order to help develop proficiency in basic discrete math problem solving. As one of the most widely used book in combinatorial problems, this edition explains how to reason and model combinatorially while stressing the systematic analysis of different possibilities, exploration of the logical structure of a problem, and ingenuity. Although important uses of combinatorics in computer science, operations research, and finite probability are mentioned, these applications are often used solely for motivation. Numerical examples involving the same concepts use more interesting

settings such as poker probabilities or logical games. This book is designed for use by students with a wide range of ability and maturity (sophomores through beginning graduate students). The stronger the students, the harder the exercises that can be assigned. The book can be used for one-quarter, two-quarter, or one-semester course depending on how much material is used.

The Almanack Of Naval Ravikant - Eric Jorgenson 2021-09-30

GETTING RICH IS NOT JUST ABOUT LUCK; HAPPINESS IS NOT JUST A TRAIT WE ARE BORN WITH. These aspirations may seem out of reach, but building wealth and being happy are skills we can learn. So what are these skills, and how do we learn them? What are the principles that should guide our efforts? What does progress really look like? Naval Ravikant is an entrepreneur, philosopher, and investor who has captivated the world with his principles for building wealth and creating long-term happiness. The *Almanack of Naval Ravikant* is a collection of Naval's wisdom and experience from the last ten years, shared as a curation of his most insightful interviews and poignant reflections. This isn't a how-to book, or a step-by-step gimmick. Instead, through Naval's own words, you will learn how to walk your own unique path toward a happier, wealthier life.

Combinatorics - Peter J. Cameron 1994-10-06

Combinatorics is a subject of increasing importance, owing to its links with computer science, statistics and algebra. This is a textbook aimed at second-year undergraduates to beginning graduates. It stresses common techniques (such as generating functions and recursive construction) which underlie the great variety of subject matter and also stresses the fact that a constructive or algorithmic proof is more valuable than an existence proof. The book is divided into two parts, the second at a higher level and with a wider range than the first. Historical notes are included which give a wider perspective on the subject. More advanced topics are given as projects and there are a number of exercises, some with solutions given.

Logic, Epistemology, and the Unity of Science - Shahid Rahman 2009-03-15

The first volume in this new series explores, through extensive co-operation, new ways of achieving the integration of science in all its diversity. The book offers essays from important and influential philosophers in contemporary philosophy, discussing a range of topics from philosophy of science to epistemology, philosophy of logic and game theoretical approaches. It will be of interest to philosophers, computer scientists and all others interested in the scientific rationality.

[An Introduction to Mathematical Reasoning](#) - Peter J. Eccles 2013-06-26

This book eases students into the rigors of university mathematics. The emphasis is on understanding and constructing proofs and writing clear mathematics. The author achieves this by exploring set theory, combinatorics, and number theory, topics that include many fundamental ideas and may not be a part of a young mathematician's toolkit. This material illustrates how familiar ideas can be formulated rigorously, provides examples demonstrating a wide range of basic methods of proof, and includes some of the all-time-great classic proofs. The book presents mathematics as a continually developing subject. Material meeting the needs of readers from a wide range of backgrounds is included. The over 250 problems include questions to interest and challenge the most able student but also plenty of routine exercises to help familiarize the reader with the basic ideas.

[Graph Theory with Applications](#) - John Adrian Bondy 1976

A History of the Theory of Investments - Mark Rubinstein 2011-09-02

"This exceptional book provides valuable insights into the evolution of financial economics from the perspective of a major player." -- Robert Litzenberger, Hopkinson Professor Emeritus of Investment Banking, Univ. of Pennsylvania; and retired partner, Goldman Sachs A History of the Theory of Investments is about ideas -- where they come from, how they evolve, and why they are instrumental in preparing the future for new ideas. Author Mark Rubinstein writes history by rewriting history. In unearthing long-forgotten books and journals, he corrects past oversights to assign credit where credit is due and assembles a remarkable history that is unquestionable in its accuracy and

unprecedented in its power. Exploring key turning points in the development of investment theory, through the critical prism of award-winning investment theory and asset pricing expert Mark Rubinstein, this groundbreaking resource follows the chronological development of investment theory over centuries, exploring the inner workings of great theoretical breakthroughs while pointing out contributions made by often unsung contributors to some of investment's most influential ideas and models.

[Differential Equations](#) - Paul Blanchard 2012-07-25

Incorporating an innovative modeling approach, this book for a one-semester differential equations course emphasizes conceptual understanding to help users relate information taught in the classroom to real-world experiences. Certain models reappear throughout the book as running themes to synthesize different concepts from multiple angles, and a dynamical systems focus emphasizes predicting the long-term behavior of these recurring models. Users will discover how to identify and harness the mathematics they will use in their careers, and apply it effectively outside the classroom. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Explorations in Computing - John S. Conery 2014-09-24

An Active Learning Approach to Teaching the Main Ideas in Computing Explorations in Computing: An Introduction to Computer Science and Python Programming teaches computer science students how to use programming skills to explore fundamental concepts and computational approaches to solving problems. The book gives beginning students an introduction to

[Applied Combinatorics](#) - Fred Roberts 2009-06-03

Now with solutions to selected problems, Applied Combinatorics, Second Edition presents the tools of combinatorics from an applied point of view. This bestselling textbook offers numerous references to the literature of combinatorics and its applications that enable readers to delve more deeply into the topics. After introducing fundamental counting

[Learn Better](#) - Ulrich Boser 2019-09-03

For centuries, experts have argued that learning was about memorizing information: You're supposed to study facts, dates, and details; burn them into your memory; and then apply that knowledge at opportune times. But this approach to learning isn't nearly enough for the world that we live in today, and in *Learn Better* journalist and education researcher Ulrich Boser demonstrates that how we learn can matter just as much as what we learn. In this brilliantly researched book, Boser maps out the new science of learning, showing how simple techniques like comprehension check-ins and making material personally relatable can help people gain expertise in dramatically better ways. He covers six key steps to help you "learn how to learn," all illuminated with fascinating stories like how Jackson Pollock developed his unique painting style and why an ancient Japanese counting device allows kids to do math at superhuman speeds. Boser's witty, engaging writing makes this book feel like a guilty pleasure, not homework. *Learn Better* will revolutionize the way students and society alike approach learning and makes the case that being smart is not an innate ability—learning is a skill everyone can master. With Boser as your guide, you will be able to fully capitalize on your brain's remarkable ability to gain new skills and open up a whole new world of possibilities.

Applied Combinatorics - Alan Tucker 2002

"T. 1. Graph Theory. 1. Ch. 1. Elements of Graph Theory. 3. Ch. 2. Covering Circuits and Graph Coloring. 53. Ch. 3. Trees and Searching. 95. Ch. 4. Network Algorithms. 129. Pt. 2. Enumeration. 167. Ch. 5. General Counting Methods for Arrangements and Selections. 169. Ch. 6. Generating Functions. 241. Ch. 7. Recurrence Relations. 273. Ch. 8. Inclusion-Exclusion. 309. Pt. 3. Additional Topics. 341. Ch. 9. Polya's Enumeration Formula. 343. Ch. 10. Games with Graphs. 371. . Appendix. 387. . Glossary of Counting and Graph Theory Terms. 403. . Bibliography. 407. . Solutions to Odd-Numbered Problems. 409. . Index. 441.

Theory of Linear and Integer Programming - Alexander Schrijver
1998-06-11

Theory of Linear and Integer Programming Alexander Schrijver Centrum

voor Wiskunde en Informatica, Amsterdam, The Netherlands This book describes the theory of linear and integer programming and surveys the algorithms for linear and integer programming problems, focusing on complexity analysis. It aims at complementing the more practically oriented books in this field. A special feature is the author's coverage of important recent developments in linear and integer programming. Applications to combinatorial optimization are given, and the author also includes extensive historical surveys and bibliographies. The book is intended for graduate students and researchers in operations research, mathematics and computer science. It will also be of interest to mathematical historians. Contents 1 Introduction and preliminaries; 2 Problems, algorithms, and complexity; 3 Linear algebra and complexity; 4 Theory of lattices and linear diophantine equations; 5 Algorithms for linear diophantine equations; 6 Diophantine approximation and basis reduction; 7 Fundamental concepts and results on polyhedra, linear inequalities, and linear programming; 8 The structure of polyhedra; 9 Polarity, and blocking and anti-blocking polyhedra; 10 Sizes and the theoretical complexity of linear inequalities and linear programming; 11 The simplex method; 12 Primal-dual, elimination, and relaxation methods; 13 Khachiyan's method for linear programming; 14 The ellipsoid method for polyhedra more generally; 15 Further polynomiality results in linear programming; 16 Introduction to integer linear programming; 17 Estimates in integer linear programming; 18 The complexity of integer linear programming; 19 Totally unimodular matrices: fundamental properties and examples; 20 Recognizing total unimodularity; 21 Further theory related to total unimodularity; 22 Integral polyhedra and total dual integrality; 23 Cutting planes; 24 Further methods in integer linear programming; Historical and further notes on integer linear programming; References; Notation index; Author index; Subject index

Chromatic Polynomials and Chromaticity of Graphs - F M Dong
2005-06-23

' This is the first book to comprehensively cover chromatic polynomials of graphs. It includes most of the known results and unsolved problems in

the area of chromatic polynomials. Dividing the book into three main parts, the authors take readers from the rudiments of chromatic polynomials to more complex topics: the chromatic equivalence classes of graphs and the zeros and inequalities of chromatic polynomials. The early material is well suited to a graduate level course while the latter parts will be an invaluable resource for postgraduate students and researchers in combinatorics and graph theory. Contents: The Number of λ -Colourings and Its Enumerations Chromatic Polynomials Chromatic Equivalence of Graphs Chromaticity of Multi-Partite Graphs Chromaticity of Subdivisions of Graphs Graphs in Which any Two Colour Classes Induce a Tree Graphs in Which All but One Pair of Colour Classes Induce Trees Chromaticity of Extremal 3-Colorable Graphs Polynomials Related to Chromatic Polynomials Real Roots of Chromatic Polynomials Integral Roots of Chromatic Polynomials Complex Roots of Chromatic Polynomials Inequalities on Chromatic Polynomials Readership: Postgraduate students and researchers in combinatorics and graph theory. Keywords: Graph; Chromatic Polynomial; Equivalence; Uniqueness; Chromatic Root Key Features: Includes many exercises on chromatic polynomials Contains a comprehensive bibliography including a significant number of articles that have previously appeared only in Chinese The first three chapters can be used as an introductory course for graduate students Reviews: "This book is clearly written, well illustrated, and supplied with carefully designed exercises, it takes pleasure in using it as an graduate textbook or for independent study. It leads the reader to the frontiers of present research in the theory of chromatic polynomials and offers insight into some exciting development." Zentralblatt MATH '102 Combinatorial Problems - Titu Andreescu 2013-11-27 "102 Combinatorial Problems" consists of carefully selected problems that have been used in the training and testing of the USA International Mathematical Olympiad (IMO) team. Key features: * Provides in-depth enrichment in the important areas of combinatorics by reorganizing and enhancing problem-solving tactics and strategies * Topics include: combinatorial arguments and identities, generating functions, graph

theory, recursive relations, sums and products, probability, number theory, polynomials, theory of equations, complex numbers in geometry, algorithmic proofs, combinatorial and advanced geometry, functional equations and classical inequalities The book is systematically organized, gradually building combinatorial skills and techniques and broadening the student's view of mathematics. Aside from its practical use in training teachers and students engaged in mathematical competitions, it is a source of enrichment that is bound to stimulate interest in a variety of mathematical areas that are tangential to combinatorics.

The Art and Craft of Problem Solving - Paul Zeitz 2016-12-01

Appealing to everyone from college-level majors to independent learners, *The Art and Craft of Problem Solving*, 3rd Edition introduces a problem-solving approach to mathematics, as opposed to the traditional exercises approach. The goal of *The Art and Craft of Problem Solving* is to develop strong problem solving skills, which it achieves by encouraging students to do math rather than just study it. Paul Zeitz draws upon his experience as a coach for the international mathematics Olympiad to give students an enhanced sense of mathematics and the ability to investigate and solve problems.

Mathematical Foundations of Computer Networking - Srinivasan Keshav 2012

Mathematical techniques pervade current research in computer networking, yet are not taught to most computer science undergraduates. This self-contained, highly-accessible book bridges the gap, providing the mathematical grounding students and professionals need to successfully design or evaluate networking systems. The only book of its kind, it brings together information previously scattered amongst multiple texts. It first provides crucial background in basic mathematical tools, and then illuminates the specific theories that underlie computer networking. Coverage includes: * Basic probability * Statistics * Linear Algebra * Optimization * Signals, Systems, and Transforms, including Fourier series and transforms, Laplace transforms, DFT, FFT, and Z transforms * Queuing theory * Game Theory * Control theory * Information theory

Problem Solving in the Mathematics Curriculum - Alan H. Schoenfeld 1983

Handbook of Discrete and Combinatorial Mathematics - Kenneth H. Rosen 2017-10-19

Handbook of Discrete and Combinatorial Mathematics provides a comprehensive reference volume for mathematicians, computer scientists, engineers, as well as students and reference librarians. The material is presented so that key information can be located and used quickly and easily. Each chapter includes a glossary. Individual topics are covered in sections and subsections within chapters, each of which is organized into clearly identifiable parts: definitions, facts, and examples. Examples are provided to illustrate some of the key definitions, facts, and algorithms. Some curious and entertaining facts and puzzles are also included. Readers will also find an extensive collection of biographies. This second edition is a major revision. It includes extensive additions and updates. Since the first edition appeared in 1999, many new discoveries have been made and new areas have grown in importance, which are covered in this edition.

Toward a Lean and Lively Calculus - Ronald G. Douglas 1986

Decision Making under Deep Uncertainty - Vincent A. W. J. Marchau 2019-04-04

This open access book focuses on both the theory and practice associated with the tools and approaches for decisionmaking in the face of deep uncertainty. It explores approaches and tools supporting the design of strategic plans under deep uncertainty, and their testing in the real world, including barriers and enablers for their use in practice. The book broadens traditional approaches and tools to include the analysis of actors and networks related to the problem at hand. It also shows how lessons learned in the application process can be used to improve the approaches and tools used in the design process. The book offers guidance in identifying and applying appropriate approaches and tools to design plans, as well as advice on implementing these plans in the real

world. For decisionmakers and practitioners, the book includes realistic examples and practical guidelines that should help them understand what decisionmaking under deep uncertainty is and how it may be of assistance to them. Decision Making under Deep Uncertainty: From Theory to Practice is divided into four parts. Part I presents five approaches for designing strategic plans under deep uncertainty: Robust Decision Making, Dynamic Adaptive Planning, Dynamic Adaptive Policy Pathways, Info-Gap Decision Theory, and Engineering Options Analysis. Each approach is worked out in terms of its theoretical foundations, methodological steps to follow when using the approach, latest methodological insights, and challenges for improvement. In Part II, applications of each of these approaches are presented. Based on recent case studies, the practical implications of applying each approach are discussed in depth. Part III focuses on using the approaches and tools in real-world contexts, based on insights from real-world cases. Part IV contains conclusions and a synthesis of the lessons that can be drawn for designing, applying, and implementing strategic plans under deep uncertainty, as well as recommendations for future work. The publication of this book has been funded by the Radboud University, the RAND Corporation, Delft University of Technology, and Deltares.

Applied Discrete Structures - Ken Levasseur 2012-02-25

Applied Discrete Structures, is a two semester undergraduate text in discrete mathematics, focusing on the structural properties of mathematical objects. These include matrices, functions, graphs, trees, lattices and algebraic structures. The algebraic structures that are discussed are monoids, groups, rings, fields and vector spaces. Website: <http://discretemath.org> Applied Discrete Structures has been approved by the American Institute of Mathematics as part of their Open Textbook Initiative. For more information on open textbooks, visit <http://www.aimath.org/textbooks/>. This version was created using Mathbook XML (<https://mathbook.pugetsound.edu/>) Al Doerr is Emeritus Professor of Mathematical Sciences at UMass Lowell. His interests include abstract algebra and discrete mathematics. Ken Levasseur is a Professor of Mathematical Sciences at UMass Lowell. His interests include discrete

mathematics and abstract algebra, and their implementation using computer algebra systems.

Nim-type Games - E. W. Adams 1956

Applied Combinatorics with Problem Solving - Bradley W. Jackson 1990

Problem-Solving Methods in Combinatorics - Pablo Soberón 2013-03-20

Every year there is at least one combinatorics problem in each of the major international mathematical olympiads. These problems can only be solved with a very high level of wit and creativity. This book explains all the problem-solving techniques necessary to tackle these problems, with clear examples from recent contests. It also includes a large problem section for each topic, including hints and full solutions so that the reader can practice the material covered in the book. The material will

be useful not only to participants in the olympiads and their coaches but also in university courses on combinatorics.

Hexaflexagons and Other Mathematical Diversions - Martin Gardner 2020-10-05

Martin Gardner's Mathematical Games columns in Scientific American inspired and entertained several generations of mathematicians and scientists. Gardner in his crystal-clear prose illuminated corners of mathematics, especially recreational mathematics, that most people had no idea existed. His playful spirit and inquisitive nature invite the reader into an exploration of beautiful mathematical ideas along with him. These columns were both a revelation and a gift when he wrote them; no one--before Gardner--had written about mathematics like this. They continue to be a marvel. This volume, originally published in 1959, contains the first sixteen columns published in the magazine from 1956-1958. They were reviewed and briefly updated by Gardner for this 1988 edition.