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KEY=EDITION - AUDRINA ASIA

MATHEMATICAL STATISTICS

John Wiley & Sons This book requires knowledge of probability theory (combinatorics, probability distributions, functions and sequences of random variables) which is typically taught in the earlier semesters of scientific and mathematical study courses. After the basic ideas of mathematical statistics, Mathematical Statistics gives an introduction to point estimation, confidence intervals and statistical tests. Based on the general theory of linear models, the book provides an in-depth overview of the following: Analysis of variance for models with fixed, random and mixed effects Regression analysis is also first presented for linear models with fixed, random and mixed effects before being expanded to nonlinear models. Statistical multi-decision problems like statistical selection procedures (Bechhofer and Gupta) and sequential tests Design of experiments from a mathematical-statistical point of view. The chapters also contain exercises with hints for solutions.

MATHEMATICS FOR MACHINE LEARNING

Cambridge University Press Distills key concepts from linear algebra, geometry, matrices, calculus, optimization, probability and statistics that are used in machine learning.

APPLIED MATHEMATICS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES

Cengage Learning A traditional book with a modern feel, market-leading APPLIED MATHEMATICS FOR THE MANAGERIAL, LIFE, AND SOCIAL SCIENCES, Seventh Edition,

teaches by application and uses real-world examples to motivate students. It combines solid theory with innovative technology, includes a robust supplement package, and offers unmatched flexibility that caters to both traditional and modern practitioners. Accessible for majors and non-majors alike, the Seventh Edition utilizes an intuitive approach that marries real-life instances to what would otherwise be abstract concepts. This is the focus of the insightful Portfolios, which highlight the careers of real people and discuss how they use math in their professions. Numerous exercises ensure that students have a solid understanding of concepts before advancing to the next topic. By offering a powerful array of supplements such as Enhanced WebAssign, the Seventh Edition enables students to maximize their study time and succeed in class. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

MATHEMATICAL ANALYSIS, APPROXIMATION THEORY AND THEIR APPLICATIONS

Springer Designed for graduate students, researchers, and engineers in mathematics, optimization, and economics, this self-contained volume presents theory, methods, and applications in mathematical analysis and approximation theory. Specific topics include: approximation of functions by linear positive operators with applications to computer aided geometric design, numerical analysis, optimization theory, and solutions of differential equations. Recent and significant developments in approximation theory, special functions and q-calculus along with their applications to mathematics, engineering, and social sciences are discussed and analyzed. Each chapter enriches the understanding of current research problems and theories in pure and applied research.

COMPLEX VARIABLES AND APPLICATIONS

MATHEMATICAL STATISTICS WITH APPLICATIONS IN R

Elsevier *Mathematical Statistics with Applications in R, Second Edition*, offers a modern calculus-based theoretical introduction to mathematical statistics and applications. The book covers many modern statistical computational and simulation concepts that are not covered in other texts, such as the Jackknife, bootstrap methods, the EM algorithms, and Markov chain Monte Carlo (MCMC) methods such as the Metropolis algorithm, Metropolis-Hastings algorithm and the Gibbs sampler. By combining the discussion on the theory of statistics with a wealth of real-world applications, the book helps students to approach statistical problem solving in a logical manner. This book provides a step-by-step procedure to solve real problems, making the topic more accessible. It includes goodness of fit methods to identify the probability distribution that characterizes the probabilistic behavior or a given set of data. Exercises as well as practical, real-world chapter projects are included, and each chapter has an optional section on using Minitab, SPSS and SAS commands. The text also boasts a wide array of coverage of ANOVA, nonparametric, MCMC, Bayesian and empirical methods; solutions to selected problems; data sets; and an image bank for students. Advanced undergraduate and graduate students taking a

one or two semester mathematical statistics course will find this book extremely useful in their studies. Step-by-step procedure to solve real problems, making the topic more accessible Exercises blend theory and modern applications Practical, real-world chapter projects Provides an optional section in each chapter on using Minitab, SPSS and SAS commands Wide array of coverage of ANOVA, Nonparametric, MCMC, Bayesian and empirical methods

ANOMALOUS TRANSPORT: APPLICATIONS, MATHEMATICAL PERSPECTIVES, AND BIG DATA

[Frontiers Media SA](#)

MODERN DISCRETE MATHEMATICS AND ANALYSIS

WITH APPLICATIONS IN CRYPTOGRAPHY, INFORMATION SYSTEMS AND MODELING

[Springer](#) A variety of modern research in analysis and discrete mathematics is provided in this book along with applications in cryptographic methods and information security, in order to explore new techniques, methods, and problems for further investigation. Distinguished researchers and scientists in analysis and discrete mathematics present their research. Graduate students, scientists and engineers, interested in a broad spectrum of current theories, methods, and applications in interdisciplinary fields will find this book invaluable.

UP PGT MATHEMATICS: 30+ MOCK TEST IN ENGLISH PDF DOWNLOAD

[MYUPSC](#) UP PGT Mathematics: 30+ Mock Test in English: Uttar Pradesh Madhyamik Shiksha Sewa Chayan Board (UPSESSB) Allahabad has announced the exam dates for Trained Graduate Teachers (TGT) on 07th-08th August 2021 and Post Graduate Teachers (PGT) on date 17th- 18th August 2021. The candidates who have applied for 15198 vacancies must buckle up their preparation as they have left with very less time. The proper preparation is a must to score good marks in the recruitment exam and get posted as a teacher in the government school. To help you, we have discussed the detailed exam pattern, syllabus, study material and test series that will be followed by UPSESSB in recruiting eligible candidates for TGT and PGT posts. UP PGT Online Test Series 2021 for Mathematics UP PGT Mathematics: 30+ Mock Test in English Details: Total Tests - 30+ Practice Test Subject - Mathematics Language - English Useful for UP PGT Exam Preparation. All the best.

UPHESC ASSISTANT PROFESSOR: 34 MOCK TEST FOR MATHEMATICS IN ENGLISH PDF DOWNLOAD

[MYUPSC](#) UPHESC Assistant Professor: 34 Mock Test for Mathematics in English PDF Download: UPHESC Assistant Professor: 30 Mock Test for Mathematics in English: UPHESC Assistant Professor Exam 2021: UPHESC Assistant Professor Recruitment 2021- Uttar Pradesh Higher Education Services Commission has started accepting online application form for 2003 vacancies for Assistant Professor Posts on its official website @uphesconline.org from 27th February 2021. The notice includes the dates

and events for UPHESC recruitment. UPHESC Assistant Professor Mock Test for Mathematics UP government is providing an opportunity for those candidates who are looking forward to teaching as their career. The online applications will be accepted by 26th March 2021. Bookmark this page and stay tuned with us for every latest update for UPHESC Assistant Professor Jobs 2021. UPHESC Assistant Professor Vacancy 2021 announced for 2003 Assistant Professor Post which includes 2002 posts of Assistant Acharya in 47 subjects and 01 post of Assistant Acharya Geoscience of Advertisement No. -46. The application form for UPHESC Assistant Professor 2021 began on 27 February 2021 and the last date to apply online was 8 July 2021. What is the date of exam for UPHESC Assistant Professor 2021? Exam dates: UPHESC Assistant Professor Examination advertisement no. 50 written exam date has announced and the dates are: 30 October, 06 November, 14 November, 26 November and 12 December 2021. As per the new exam pattern, it is necessary to include mathematics practice tests in your preparation strategy. We, at MYUPSC, have designed mathematics mock test series that will provide you with in-depth coverage of the latest syllabus of UPHESC Exam. Details: Total Tests - 34 Practice Test Subject - Mathematics Language - English Useful for UPHESC Assistant Professor Exam Preparation. All the best !!

EXPERIMENTAL AND COMPUTATIONAL MATHEMATICS

SELECTED WRITINGS

PSIpress A quiet revolution in mathematical computing and scientific visualization took place in the latter half of the 20th century. These developments have dramatically enhanced modes of mathematical insight and opportunities for "exploratory" computational experimentation. This volume collects the experimental and computational contributions of Jonathan and Peter Borwein over the past quarter century.

CYBERNETICS AND MATHEMATICS APPLICATIONS IN INTELLIGENT SYSTEMS

PROCEEDINGS OF THE 6TH COMPUTER SCIENCE ON-LINE CONFERENCE 2017 (CSOC2017), VOL 2

Springer This book presents new methods for and approaches to real-world problems as well as exploratory research describing novel mathematics and cybernetics applications in intelligent systems. It focuses on modern trends in selected fields of technological systems and automation control theory. It also introduces new algorithms, methods and applications of intelligent systems in automation, technological and industrial applications. This book constitutes the refereed proceedings of the Cybernetics and Mathematics Applications in Intelligent Systems Section of the 6th Computer Science On-line Conference 2017 (CSOC 2017), held in April 2017.

MATHEMATICS FOR BUSINESS, SCIENCE, AND TECHNOLOGY

WITH MATLAB AND EXCEL COMPUTATIONS

Orchard Publications This text is written for high school graduates preparing to take business or science courses at community colleges or universities, working professionals who feel they need a math review from the basics, and young students and working professionals.

MATHEMATICAL OPTIMIZATION THEORY AND OPERATIONS RESEARCH

18TH INTERNATIONAL CONFERENCE, MOTOR 2019, EKATERINBURG, RUSSIA, JULY 8-12, 2019, PROCEEDINGS

Springer This book constitutes the proceedings of the 18th International Conference on Mathematical Optimization Theory and Operations Research, MOTOR 2019, held in Ekaterinburg, Russia, in July 2019. The 48 full papers presented in this volume were carefully reviewed and selected from 170 submissions. MOTOR 2019 is a successor of the well-known International and All-Russian conference series, which were organized in Ural, Siberia, and the Far East for a long time. The selected papers are organized in the following topical sections: mathematical programming; bi-level optimization; integer programming; combinatorial optimization; optimal control and approximation; data mining and computational geometry; games and mathematical economics.

DISCRETE MATHEMATICS AND ITS APPLICATIONS

McGraw-Hill Science, Engineering & Mathematics *Discrete Mathematics and its Applications* is a focused introduction to the primary themes in a discrete mathematics course, as introduced through extensive applications, expansive discussion, and detailed exercise sets. These themes include mathematical reasoning, combinatorial analysis, discrete structures, algorithmic thinking, and enhanced problem-solving skills through modeling. Its intent is to demonstrate the relevance and practicality of discrete mathematics to all students. The Fifth Edition includes a more thorough and linear presentation of logic, proof types and proof writing, and mathematical reasoning. This enhanced coverage will provide students with a solid understanding of the material as it relates to their immediate field of study and other relevant subjects. The inclusion of applications and examples to key topics has been significantly addressed to add clarity to every subject. True to the Fourth Edition, the text-specific web site supplements the subject matter in meaningful ways, offering additional material for students and instructors. Discrete math is an active subject with new discoveries made every year. The continual growth and updates to the web site reflect the active nature of the topics being discussed. The book is appropriate for a one- or two-term introductory discrete mathematics course to be taken by students in a wide variety of majors, including computer science, mathematics, and engineering. College Algebra is the only explicit prerequisite.

AN INVITATION TO APPLIED CATEGORY THEORY

SEVEN SKETCHES IN COMPOSITIONALITY

Cambridge University Press *Category theory reveals commonalities between structures of all sorts. This book shows its potential in science, engineering, and beyond.*

RESEARCH IN MATHEMATICS EDUCATION IN AUSTRALASIA 2004 - 2007

BRILL *Every four years, beginning in 1984, the Mathematics Education Research Group of Australasia (MERGA) produces a review of Australasian research in mathematics education. The authors of the chapters in this volume have summarised and critiqued research conducted during the period 2004-2007.*

CONVEX OPTIMIZATION

Cambridge University Press *A comprehensive introduction to the tools, techniques and applications of convex optimization.*

ARTIFICIAL INTELLIGENCE AND APPLIED MATHEMATICS IN ENGINEERING PROBLEMS

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE AND APPLIED MATHEMATICS IN ENGINEERING (ICAIME 2019)

Springer Nature *This book features research presented at the 1st International Conference on Artificial Intelligence and Applied Mathematics in Engineering, held on 20–22 April 2019 at Antalya, Manavgat (Turkey). In today's world, various engineering areas are essential components of technological innovations and effective real-world solutions for a better future. In this context, the book focuses on problems in engineering and discusses research using artificial intelligence and applied mathematics. Intended for scientists, experts, M.Sc. and Ph.D. students, postdocs and anyone interested in the subjects covered, the book can also be used as a reference resource for courses related to artificial intelligence and applied mathematics.*

PROCEEDINGS OF SEVENTH INTERNATIONAL CONGRESS ON INFORMATION AND COMMUNICATION TECHNOLOGY

ICICT 2022, LONDON, VOLUME 2

Springer Nature *This book gathers selected high-quality research papers presented at the Seventh International Congress on Information and Communication Technology, held at Brunel University, London, on February 21–24, 2022. It discusses emerging topics pertaining to information and communication technology (ICT) for managerial applications, e-governance, e-agriculture, e-education and computing*

technologies, the Internet of Things (IoT) and e-mining. Written by respected experts and researchers working on ICT, the book offers a valuable asset for young researchers involved in advanced studies. The work is presented in four volumes.

THE CALCULUS OF COMPLEX FUNCTIONS

American Mathematical Society The book introduces complex analysis as a natural extension of the calculus of real-valued functions. The mechanism for doing so is the extension theorem, which states that any real analytic function extends to an analytic function defined in a region of the complex plane. The connection to real functions and calculus is then natural. The introduction to analytic functions feels intuitive and their fundamental properties are covered quickly. As a result, the book allows a surprisingly large coverage of the classical analysis topics of analytic and meromorphic functions, harmonic functions, contour integrals and series representations, conformal maps, and the Dirichlet problem. It also introduces several more advanced notions, including the Riemann hypothesis and operator theory, in a manner accessible to undergraduates. The last chapter describes bounded linear operators on Hilbert and Banach spaces, including the spectral theory of compact operators, in a way that also provides an excellent review of important topics in linear algebra and provides a pathway to undergraduate research topics in analysis. The book allows flexible use in a single semester, full-year, or capstone course in complex analysis. Prerequisites can range from only multivariate calculus to a transition course or to linear algebra or real analysis. There are over one thousand exercises of a variety of types and levels. Every chapter contains an essay describing a part of the history of the subject and at least one connected collection of exercises that together comprise a project-level exploration.

THE MATH OF LIFE AND DEATH

7 MATHEMATICAL PRINCIPLES THAT SHAPE OUR LIVES

Scribner A brilliant and entertaining mathematician illuminates seven mathematical principles that shape our lives. “Kit Yates shows how our private and social lives are suffused by mathematics. Ignorance may bring tragedy or farce. This is an exquisitely interesting book. It’s a deeply serious one too and, for those like me who have little math, it’s delightfully readable.” —Ian McEwan, author of *Atonement* “Kit Yates is a natural storyteller. Through fascinating stories and examples, he shows how maths is the beating heart of so much of modern life. An exciting new voice in the world of science communication.” —Marcus du Sautoy, author of *The Music of the Primes* From birthdays to birth rates to how we perceive the passing of time, mathematical patterns shape our lives. But for those of us who left math behind in high school, the numbers and figures hurled at us as we go about our days can sometimes leave us scratching our heads and feeling as if we’re fumbling through a mathematical minefield. In this eye-opening and extraordinarily accessible book, mathematician Kit Yates illuminates hidden principles that can help us understand and navigate the chaotic and often opaque surfaces of our world. In *The Math of Life and Death*, Yates takes us on a fascinating tour of everyday situations and grand-

scale applications of mathematical concepts, including exponential growth and decay, optimization, statistics and probability, and number systems. Along the way he reveals the mathematical undersides of controversies over DNA testing, medical screening results, and historical events such as the Chernobyl disaster and the Amanda Knox trial. Readers will finish this book with an enlightened perspective on the news, the law, medicine, and history, and will be better equipped to make personal decisions and solve problems with math in mind, whether it's choosing the shortest checkout line at the grocery store or halting the spread of a deadly disease.

MATHEMATICAL ANALYSIS IN INTERDISCIPLINARY RESEARCH

Springer Nature

MODELLING AND APPLICATIONS IN MATHEMATICS EDUCATION

THE 14TH ICMI STUDY

Springer Science & Business Media The book aims at showing the state-of-the-art in the field of modeling and applications in mathematics education. This is the first volume to do this. The book deals with the question of how key competencies of applications and modeling at the heart of mathematical literacy may be developed; with the roles that applications and modeling may play in mathematics teaching, making mathematics more relevant for students.

VII LATIN AMERICAN CONGRESS ON BIOMEDICAL ENGINEERING CLAIB 2016, BUCARAMANGA, SANTANDER, COLOMBIA, OCTOBER 26TH -28TH, 2016

Springer This volume presents the proceedings of the CLAIB 2016, held in Bucaramanga, Santander, Colombia, 26, 27 & 28 October 2016. The proceedings, presented by the Regional Council of Biomedical Engineering for Latin America (CORAL), offer research findings, experiences and activities between institutions and universities to develop Bioengineering, Biomedical Engineering and related sciences. The conferences of the American Congress of Biomedical Engineering are sponsored by the International Federation for Medical and Biological Engineering (IFMBE), Society for Engineering in Biology and Medicine (EMBS) and the Pan American Health Organization (PAHO), among other organizations and international agencies to bring together scientists, academics and biomedical engineers in Latin America and other continents in an environment conducive to exchange and professional growth.

INTELLIGENT COMPUTER MATHEMATICS

16TH SYMPOSIUM, CALCULEMUS 2009, 8TH INTERNATIONAL CONFERENCE, MKM 2009, GRAND BEND, CANADA, JULY 6-12, 2009, PROCEEDINGS

Springer Science & Business Media As computers and communications technology advance, greater opportunities arise for intelligent mathematical computation. While computer algebra, automated deduction and mathematical publishing each have long

and successful histories, we are now seeing increasing opportunities for synergy among them. The Conferences on Intelligent Computer Mathematics (cicm 2009) is a collection of co-located meetings, allowing researchers and practitioners active in these related areas to share recent results and identify the next challenges. The specific areas of the cicm conferences and workshops are described below, but the unifying theme is the computerized handling of mathematical knowledge. The successful formalization of much of mathematics, as well as a better understanding of its internal structure, makes mathematical knowledge in many ways more tractable than general knowledge, as traditionally treated in artificial intelligence. Similarly, we can also expect the problem of effectively using mathematical knowledge in automated ways to be much more tractable. This is the goal of the work in the cicm conferences and workshops. In the long view, solving the problems addressed by cicm is an important milestone in formulating the next generation of mathematical software.

MBJ-NEUTROSOPHIC STRUCTURES AND ITS APPLICATIONS IN BCK=BCI-ALGEBRAS

Infinite Study Smarandache (F. Smarandache. Neutrosophy, neutrosophic probability, set, and logic, ProQuest Information & Learning, Ann Arbor, Michigan, USA, 105 p., 1998) initiated neutrosophic sets which can be used as a mathematical tool for dealing with indeterminates and inconsistent information.

INTRODUCTION TO MATHEMATICAL STATISTICS

TAPAS IN EXPERIMENTAL MATHEMATICS

AMS SPECIAL SESSION ON EXPERIMENTAL MATHEMATICS, JANUARY 5, 2007, NEW ORLEANS, LOUISIANA

American Mathematical Soc. Experimental Mathematics is a recently structured field of Mathematics that uses a computer and advanced computing technology as tools to perform experiments such as analysis of examples, testing of new ideas, and the search of patterns. The development of a broad spectrum of mathematical software products such as MathematicaR and MapleTM has allowed mathematicians of diverse backgrounds and interests to make the computer an essential part of their daily working environment. This volume represents the AMS Special Session on Experimental Mathematics held in January 2007 in New Orleans. This gathering is part of an annual meeting of a growing number of scientists that have been labeled experimental mathematicians. The guiding principles of the field, some of which are included in the introduction to these proceedings, are similar to those of laboratory experiments in the physical and biological sciences.

MATHEMATICAL STATISTICS WITH APPLICATIONS

Duxbury Press This is the most widely used mathematical statistics text at the top 200 universities in the United States. Premiere authors Dennis Wackerly, William Mendenhall, and Richard L. Scheaffer present a solid undergraduate foundation in

statistical theory while conveying the relevance and importance of the theory in solving practical problems in the real world. The authors' use of practical applications and excellent exercises helps students discover the nature of statistics and understand its essential role in scientific research.

NEUTROSOPHIC SETS AND SYSTEMS, BOOK SERIES, VOL. 31, 2020. AN INTERNATIONAL BOOK SERIES IN INFORMATION SCIENCE AND ENGINEERING

Infinite Study "Neutrosophic Sets and Systems" has been created for publications on advanced studies in neutrosophy, neutrosophic set, neutrosophic logic, neutrosophic probability, neutrosophic statistics that started in 1995 and their applications in any field, such as the neutrosophic structures developed in algebra, geometry, topology, etc.

FUNDAMENTAL TRENDS IN FLUID-STRUCTURE INTERACTION

World Scientific The interaction of a fluid with a solid body is a widespread phenomenon in nature, occurring at different scales and different applied disciplines. Interestingly enough, even though the mathematical theory of the motion of bodies in a liquid is one of the oldest and most classical problems in fluid mechanics, mathematicians have, only very recently, become interested in a systematic study of the basic problems related to fluid-structure interaction, from both analytical and numerical viewpoints. *Fundamental Trends in Fluid-Structure Interaction* is a unique collection of important papers written by world-renowned experts aimed at furnishing the highest level of development in several significant areas of fluid-structure interactions. The contributions cover several aspects of this discipline, from mathematical analysis, numerical simulation and modeling viewpoints, including motion of rigid and elastic bodies in a viscous liquid, particulate flow and hemodynamic.

JOHN E. FREUND'S MATHEMATICAL STATISTICS WITH APPLICATIONS

"This text is designed primarily for a two-semester or three-quarter calculus-based course in mathematical statistics."--

ENGINEERING MATHEMATICS THROUGH APPLICATIONS

Bloomsbury Publishing Teaches maths in a step-by-step fashion, ideal for students in first-year engineering courses. Includes hundreds of examples and exercises, mainly set in an applied engineering context -- Back cover.

SYSTEM MODELING AND OPTIMIZATION

27TH IFIP TC 7 CONFERENCE, CSMO 2015, SOPHIA ANTIPOLIS, FRANCE, JUNE 29 - JULY 3, 2015, REVISED SELECTED PAPERS

Springer This book is a collection of thoroughly refereed papers presented at the 27th IFIP TC 7 Conference on System Modeling and Optimization, held in Sophia Antipolis, France, in June/July 2015. The 48 revised papers were carefully reviewed

and selected from numerous submissions. They cover the latest progress in their respective areas and encompass broad aspects of system modeling and optimization, such as modeling and analysis of systems governed by Partial Differential Equations (PDEs) or Ordinary Differential Equations (ODEs), control of PDEs/ODEs, nonlinear optimization, stochastic optimization, multi-objective optimization, combinatorial optimization, industrial applications, and numericsof PDEs.

THE MATH TEACHER'S PROBLEM-A-DAY, GRADES 4-8

OVER 180 REPRODUCIBLE PAGES OF QUICK SKILL BUILDERS

John Wiley & Sons *Reproducible worksheets cover the concepts and skills identified by the National Council of Teachers of Mathematics as curriculum focal points for grades four through eight.*

OMDOC -- AN OPEN MARKUP FORMAT FOR MATHEMATICAL DOCUMENTS [VERSION 1.2]

FOREWORD BY ALAN BUNDY

Springer Science & Business Media *Open Mathematical Documents (OMDoc) is a content markup scheme for mathematical documents including articles, textbooks, interactive books, and courses. OMDoc also serves as the content language for agent communication of mathematical services and a mathematical software bus. This book documents OMDoc version 1.2, the final and mature release of OMDoc 1. The system has been validated in varied applications, and features modularized language design, OPENMATH and MATHML for the representation of mathematical objects.*

MATHEMATICAL ECONOMICS

APPLICATION OF FRACTIONAL CALCULUS

MDPI *This book is devoted to the application of fractional calculus in economics to describe processes with memory and non-locality. Fractional calculus is a branch of mathematics that studies the properties of differential and integral operators that are characterized by real or complex orders. Fractional calculus methods are powerful tools for describing the processes and systems with memory and nonlocality. Recently, fractional integro-differential equations have been used to describe a wide class of economical processes with power law memory and spatial nonlocality. Generalizations of basic economic concepts and notions the economic processes with memory were proposed. New mathematical models with continuous time are proposed to describe economic dynamics with long memory. This book is a collection of articles reflecting the latest mathematical and conceptual developments in mathematical economics with memory and non-locality based on applications of fractional calculus.*

USING MOBILE TECHNOLOGIES IN THE TEACHING AND LEARNING OF

MATHEMATICS

Springer Mobile technologies influence the way that we interact with the world, the way that we live. We use them for communication, entertainment, information and research. In education settings, there has been substantial investment in mobile devices, often without a concomitant investment in developing pedagogy and practices. With mobile technologies evolving rapidly, and the number of educational apps growing, there is a need for research into how they facilitate mathematics learning. Such research is of particular importance regarding how such devices may be used to open up new ways of envisaging mathematics and mathematics education, and to help develop conceptual rather than procedural or declarative knowledge. This volume draws upon international research and reports on a range of research projects that have incorporated mobile technologies for mathematics education. It presents research on the use of mobile technologies, such as iPads, iPods, iPhones, Androids, and Tablets, across a diverse range of cultures, year levels and contexts. It examines the ways in which mobile technologies, including apps, might influence students' engagement, cognition, collaboration and attitudes, through the reshaping of the learning experience. In addition, the book presents appropriate ways to integrate mobile technologies into teaching and learning programmes. It is a significant reference book for those involved with teaching mathematics or using mobile technologies in education, while also offering insights and examples that are applicable to the use of digital technologies in education generally.

THE 'RESOURCE' APPROACH TO MATHEMATICS EDUCATION

Springer Nature This edited volume will help educators better analyze methodological and practical tools designed to aid classroom instruction. It features papers that explore the need to create a system in order to fully meet the uncertainties and developments of modern educational phenomena. These have emerged due to the abundance of digital resources and new forms of collective work. The collected papers offer new perspectives to a rising field of research known as the Documentational Approach to Didactics. This framework was first created by the editors of this book. It seeks to develop a deeper understanding of mathematics teaching expertise. Readers will gain insight into how to meet the theoretical questions brought about by digitalization. These include: how to analyze teachers' work when they prepare for their teaching, how to conceptualize the relationships between individual and collective work, and how to follow the related processes over the long term. The contributors also provide a comparative view in terms of contrasting selected phenomena across different educational cultures and education systems. For instance, they consider how differences in curriculum resources are available to teachers and how teachers make use of them to shape instruction. Coverage also considers the extent to which teachers make use of additional material, particularly those available through the global marketplace on the Internet. This book builds on works from the Re(s)ources 2018 Conference, Understanding teachers' work through their interactions with resources for teaching, held in Lyon, France.