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Prize 2013-2017 Meeting under the Integral Sign?: The Oslo Congress of Mathematicians on the Eve of the Second World War Mathematical Analysis I.G.Petrovskii:Selected Wrks P Kolmogorov in Perspective Bibliography of Statistical Literature: Pre-1940, with supplements to the volumes for 1940-49 and 1950-58

Continued Fractions

1997-05-14

elementary level text by noted soviet mathematician offers superb introduction to positive integral elements of theory of continued fractions clear straightforward presentation of the properties of the apparatus the representation of numbers by continued fractions and the measure theory of continued fractions 1964 edition prefaces

Random Summation

2020-07-24

this book provides an introduction to the asymptotic theory of random summation combining a strict exposition of the foundations of this theory and recent results it also includes a description of its applications to solving practical problems in hardware and software reliability insurance finance and more the authors show how practice interacts with theory and how new mathematical formulations of problems appear and develop attention is mainly focused on transfer theorems description of the classes of limit laws and criteria for convergence of distributions of sums for a random number of random variables theoretical background is given for the choice of approximations for the distribution of stock prices or surplus processes general mathematical theory of reliability growth of modified systems including software is presented special sections deal with doubling with repair rarefaction of renewal processes limit theorems for supercritical galton watson processes information properties of probability distributions and asymptotic

behavior of doubly stochastic poisson processes random summation limit theorems and applications will be of use to specialists and students in probability theory mathematical statistics and stochastic processes as well as to financial mathematicians actuaries and to engineers desiring to improve probability models for solving practical problems and for finding new approaches to the construction of mathematical models

An Elementary Introduction to the Theory of Probability

2014-09-04

this encyclopaedia of mathematics aims to be a reference work for all parts of mathe matics it is a translation with updates and editorial comments of the soviet mathematical encyclopaedia published by soviet encyclopaedia publishing house in five volumes in 1977 1985 the annotated translation consists of ten volumes including a special index volume there are three kinds of articles in this encyclopaedia first of all there are survey type articles dealing with the various main directions in mathematics where a rather fine subdivi sion has been used the main requirement for these articles has been that they should give a reasonably complete up to date account of the current state of affairs in these areas and that they should be maximally accessible on the whole these articles should be understandable to mathematics students in their first specialization years to graduates from other mathematical areas and depending on the specific subject to specialists in other domains of science en gineers and teachers of mathematics these articles treat their material at a fairly

general level and aim to give an idea of the kind of problems techniques and concepts involved in the area in question they also contain background and motivation rather than precise statements of precise theorems with detailed definitions and technical details on how to carry out proofs and constructions the second kind of article of medium length contains more detailed concrete problems results and techniques

Encyclopaedia of Mathematics

2013-12-01

this compact volume equips the reader with all the facts and principles essential to a fundamental understanding of the theory of probability it is an introduction no more throughout the book the authors discuss the theory of probability for situations having only a finite number of possibilities and the mathematics employed is held to the elementary level but within its purposely restricted range it is extremely thorough well organized and absolutely authoritative it is the only english translation of the latest revised russian edition and it is the only current translation on the market that has been checked and approved by gnedenko himself after explaining in simple terms the meaning of the concept of probability and the means by which an event is declared to be in practice impossible the authors take up the processes involved in the calculation of probabilities they survey the rules for addition and multiplication of probabilities the concept of conditional probability the formula for total probability bayes s formula bernoulli s scheme and theorem the concepts of random variables insufficiency of the mean value for the characterization of a random variable methods of

measuring the variance of a random variable theorems on the standard deviation the chebyshev inequality normal laws of distribution distribution curves properties of normal distribution curves and related topics the book is unique in that while there are several high school and college textbooks available on this subject there is no other popular treatment for the layman that contains quite the same material presented with the same degree of clarity and authenticity anyone who desires a fundamental grasp of this increasingly important subject cannot do better than to start with this book new preface for dover edition by b v gnedenko

Encyclopaedia of Mathematics

2013-11-11

这是一本全面的数学百科全书 涵盖了从基础数学到高级数学研究的广泛主题为读者提供了丰富的数学知识和参考资料

The Legacy of A.Ya. Khintchine's Work in Probability Theory
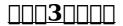
2010-01-01

the creative work of andrei n kolmogorov is exceptionally wide ranging in his studies on trigonometric and orthogonal series the theory of measure and integral mathematical logic approximation theory geometry topology functional analysis classical mechanics ergodic theory superposition of functions and in formation theory he solved many conceptual and fundamental problems and posed new questions which gave rise to a great deal of

further research kolmogorov is one of the founders of the soviet school of probability theory mathematical statistics and the theory of turbulence in these areas he obtained a number of central results with many applications to mechanics geophysics linguistics and biology among other subjects this edition includes kolmogorov s most important papers on mathematics and the natural sciences it does not include his philosophical and pedagogical studies his articles written for the bolshaya sovetskaya entsiklopediya his papers on prosody and applications of mathematics or his publications on general questions the material of this edition was selected and compiled by kolmogorov himself the first volume consists of papers on mathematics and also on turbulence and classical mechanics the second volume is devoted to probability theory and mathematical statistics the focus of the third volume is on information theory and the theory of algorithms

An Elementary Introduction to the Theory of Probability

1962-01-01

first comprehensive introduction to information theory explores the work of shannon mcmillan feinstein and khinchin topics include the entropy concept in probability theory fundamental theorems and other subjects 1957 edition

数学奥林3匹克问题

2000-09

part ii of the selected works of ivan georgievich petrowsky contains his major papers on second order partial differential equations systems of ordinary differential equations the theory of probability the theory of functions and the calculus of variations many of the articles contained in this book have profoundly influenced the development of modern mathematics of exceptional value is the article on the equation of diffusion with growing quantity of the substance this work has found extensive application in biology genetics economics and other branches of natural science also of great importance is petrowsky s work on a problem which still remains unsolved that of the number of limit cycles for ordinary differential equations with rational right hand sides

Selected Works of A. N. Kolmogorov

1992-02-29

first comprehensive introduction to information theory explores the work of shannon mcmillan feinstein and khinchin topics include the entropy concept in probability theory fundamental theorems and other subjects 1957 edition

Mathematical Foundations of Information Theory

2013-04-09

the central theme of this monograph is khinchin type representation theorems an abstract framework for

unimodality an example of applied functional analysis is developed for the introduction of different types of unimodality and the study of their behaviour also several useful consequences or ramifications tied to these notions are provided being neither an encyclopaedia nor a historical overview this book aims to serve as an understanding of the basic features of unimodality chapter 1 lays a foundation for the mathematical reasoning in the chapters following chapter 2 deals with the concept of khinchin space which leads to the introduction of beta unimodality in chapter 3 a discussion on several existing multivariate notions of unimodality concludes this chapter chapter 4 concerns khinchin s classical unimodality and chapter 5 is devoted to discrete unimodality chapters 6 and 7 treat the concept of strong unimodality on r and to ibragimov type results characterising the probability measures which preserve unimodality by convolution and the concept of slantedness respectively most chapters end with comments referring to historical aspects or supplying complementary information and open questions a practical bibliography as well as symbol name and subject indices ensure efficient use of this volume audience both researchers and applied mathematicians in the field of unimodality will value this monograph and it may be used in graduate courses or seminars on this subject too

The Teaching of Mathematics

1968

from the reviews to call this work encyclopedic would not give an accurate picture of its content and style some parts read like a textbook but others are more technical and contain relatively new results the exposition is robust and

explicit as one has come to expect of the russian tradition of mathematical writing k l chung american scientist 1977

Encyclopedia of Statistical Sciences: In-L

2006

this book is the sixth edition of a classic text that was first published in 1950 in the former soviet union the clear presentation of the subject and extensive applications supported with real data helped establish the book as a standard for the field to date it has been published into more that ten languages and has gone through five editions the sixth edition is a major revision over the fifth it contains new material and results on the local limit theorem the integral law of large numbers and characteristic functions the new edition retains the feature of developing the subject from intuitive concepts and demonstrating techniques and theory through large numbers of examples the author has for the first time included a brief history of probability and its development exercise problems and examples have been revised and new ones added

Differential Equations

2019-08-16

a coherent well organized look at the basis of quantum statistics computational methods the determination of the mean values of occupation numbers the foundations of the statistics of photons and material particles

thermodynamics

Mathematical Foundations of Information Theory

1957-01-01

written by a prominent russian mathematician this concise monograph examines aspects of queuing theory as an application of probability prerequisites include a familiarity with the theory of probability and mathematical analysis students and professionals in operations research as well as applied mathematicians will find this elegant ground breaking work of substantial interest 1960 edition

Unimodality of Probability Measures

2013-04-17

these 3 puzzles require proof of a basic law governing the world of numbers features van der waerden s theorem the landau schnirelmann hypothesis and mann s theorem and a solution to waring s problem solutions included

The Theory of Stochastic Processes II

2004-03-22

this anthology consisting of two volumes is intended to equip background researchers practitioners and students

of international mathematics education with intimate knowledge of mathematics education in russia volume i entitled russian mathematics education history and world significance consists of several chapters written by distinguished authorities from russia the united states and other nations it examines the history of mathematics education in russia and its relevance to mathematics education throughout the world the second volume entitled russian mathematics education programs and practices will examine specific russian programs in mathematics their impact and methodological innovations although russian mathematics education is highly respected for its achievements and was once very influential internationally it has never been explored in depth this publication does just that

Theory of Probability

2018-10-08

rigorous exposition suitable for elementary instruction covers measure theory axiomatization of probability theory processes with independent increments markov processes and limit theorems for random processes more a wealth of results ideas and techniques distinguish this text introduction bibliography 1969 edition

Mathematical Foundations of Quantum Statistics

1998-01-01

this book studies the problem of the decomposition of a

given random variable introduction a sum of independent random variables components the central feature of the book is feldman s use of powerful analytical techniques

A Course of Mathematical Analysis

1961

this book deals with different modern topics in probability statistics and operations research it has been written lucidly in a novel way wherever necessary the theory is explained in great detail with suitable illustrations numerous references are given so that young researchers who want to start their work in a particular area will benefit immensely from the book the contributors are distinguished statisticians and operations research experts from all over the world

Mathematical Methods in the Theory of Queuing

2013-01-01

this book studies the problem of the decomposition of a given random variable introduction a sum of independent random variables components the central feature of the book is feldman s use of powerful analytical techniques

Three Pearls of Number Theory

1998-01-01

the soviet school one of the glories of twentieth century

mathematics faced a serious crisis in the summer of 1936 it was suffering from internal strains due to generational conflicts between the young talents and the old establishment at the same time soviet leaders including stalin himself were bent on sovietizing all of science in the ussr by requiring scholars to publish their works in russian in the soviet union ending the nearly universal practice of publishing in the west a campaign to sovietize mathematics in the ussr was launched with an attack on nikolai nikolaevich luzin the leader of the soviet school of mathematics in pravda luzin was fortunate in that only a few of the most ardent ideologues wanted to destroy him utterly as a result luzin though humiliated and frightened was allowed to make a statement of public repentance and then let off with a relatively mild reprimand a major factor in his narrow escape was the very abstractness of his research area descriptive set theory which was difficult to incorporate into a propaganda campaign aimed at the broader public the present book contains the transcripts of five meetings of the academy of sciences commission charged with investigating the accusations against luzin meetings held in july of 1936 ancillary material from the soviet press of the time is included to place these meetings in context

Russian Mathematics Education

2011

phase space ergodic problems central limit theorem dispersion and distribution of sum functions chapters include geometry and kinematics of the phase space ergodic problem reduction to the problem of the theory of probability application of the central limit theorem ideal

monatomic gas the foundation of thermodynamics and more

Russian Mathematics Education

1968

mathematical methods of reliability theory discusses fundamental concepts of probability theory mathematical statistics and an exposition of the relationships among the fundamental quantitative characteristics encountered in the theory the book deals with the set theoretic approach to reliability theory and the central concepts of set theory to the phenomena it also presents methods of finding estimates for reliability parameters based on observations and methods of testing reliability hypotheses based on mathematical statistics the book also explains formulation of some selected results it presents a method that increases the reliability of manufactured articles redundancy an important part of product quality control is the standards of acceptance sampling plans which require simplicity wide content for flexibility comprehensive characteristics and variability the book also tackles economical and rational methods of sampling inspections highlighting the need for a correct evaluation of environmental conditions the factors which predetermine the choice of the inspection method the book then explains how to estimate the efficiency of the operation of the sampling plan after its selection the book can be helpful for engineers mathematicians economists or industrial managers as well as for other professionals who work in the technological political research structural and physico chemical areas

Bibliography of Statistical Literature

1996-01-01

the subject of this monograph is to describe orbits of slowly chaotic motion the study of geodesic flow on the unit torus is motivated by the irrational rotation sequence where the most outstanding result is the kronecker weyl equidistribution theorem and its time quantitative enhancements including superuniformity another important result is the khinchin density theorem on superdensity a best possible form of time quantitative density the purpose of this monograph is to extend these classical time quantitative results to some non integrable flat dynamical systems the theory of dynamical systems is on the most part about the qualitative behavior of typical orbits and not about individual orbits thus our study deviates from and indeed is in complete contrast to what is considered the mainstream research in dynamical systems we establish non trivial results concerning explicit individual orbits and describe their long term behavior in a precise time quantitative way our non ergodic approach gives rise to a few new methods these are based on a combination of ideas in combinatorics number theory geometry and linear algebra approximately half of this monograph is devoted to a time quantitative study of two concrete simple non integrable flat dynamical systems the first concerns billiard in the l shape region which is equivalent to geodesic flow on the l surface the second concerns geodesic flow on the surface of the unit cube in each we give a complete description of time quantitative equidistribution for every geodesic with a quadratic

irrational slope

Introduction to the Theory of Random Processes

1991-03-22

the book presents the winners of the abel prize in mathematics for the period 2013 17 pierre deligne 2013 yakov g sinai 2014 john nash jr and louis nirenberg 2015 sir andrew wiles 2016 and yves meyer 2017 the profiles feature autobiographical information as well as a scholarly description of each mathematician s work in addition each profile contains a curriculum vitae a complete bibliography and the full citation from the prize committee the book also includes photos for the period 2003 2017 showing many of the additional activities connected with the abel prize as an added feature video interviews with the laureates as well as videos from the prize ceremony are provided at an accompanying website extras springer com this book follows on the abel prize 2003 2007 the first five years springer 2010 and the abel prize 2008 2012 springer 2014 which profile the work of the previous abel prize winners

Arithmetic of Probability Distributions, and Characterization Problems on Abelian Groups

1993

this book examines the historically unique conditions under which the international congress of mathematicians took

place in oslo in 1936 this congress was the only one on this level to be held during the period of the nazi regime in germany 1933 1945 and after the wave of emigrations from it relying heavily on unpublished archival sources the authors consider the different goals of the various participants in the congress most notably those of the norwegian organizers and the nazi led german delegation they also investigate the reasons for the absence of the proposed soviet and italian delegations in addition aiming to shed light onto the mathematical dimension of the congress the authors provide overviews of the nineteen plenary presentations as well as their planning and development biographical information about each of the plenary speakers rounds off the picture the oslo congress the first at which fields medals were awarded is used as a lens through which the reader of this book can view the state of the art of mathematics in the mid 1930s

Thermodynamics: History And Philosophy - Facts, Trends, Debates

2016-05-25

this volume contains three articles asymptotic methods in the theory of ordinary differential equations b y v f butuzov a b vasil eva and m v fedoryuk the theory of best ap proximation in dormed linear spaces by a l garkavi and dy namical systems with invariant measure by a vi vershik and s a yuzvinskii the first article surveys the literature on linear and non linear singular asymptotic problems in particular differential equations with a small parameter the period covered by the survey is primarily 1962 1967 the second article is devoted to the problem of existence

characterization and uniqueness of best approximations in banach spaces one of the chapters also deals with the problem of the convergence of positive operators inasmuch as the ideas and methods of this theory are close to those of the theory of best ap proximation the survey covers the literature of the decade 1958 1967 the third article is devoted to a comparatively new and rapid ly growing branch of mathematics which is closely related to many classical and modern mathematical disciplines a survey is given of results in entropy theory classical dynamic systems ergodic theorems etc the results surveyed were primarily published during the period 1956 1967

Arithmetic of Probability Distributions, and Characterization Problems on Abelian Groups

1968

this book contains the major works of ivan georgievich petrowsky on systems of partial differential equations and algebraic geometry the articles are of crucial importance for the topology of real algebraic manifolds and are the source of intensive development of theory of real algebraic manifolds

The Case of Academician Nikolai Nikolaevich Luzin

1949-01-01

the editorial board for the history of mathematics series

has selected for this volume a series of translations from two russian publications kolmogorov in remembrance and mathematics and its historical development this book kolmogorov in perspective includes articles written by kolmogorov s students and colleagues and his personal accounts of shared experiences and lifelong mathematical friendships the articles combine to give an excellent personal and scientific biography of this important mathematician there is also an extensive bibliography with the complete list of kolmogorov s work

Bibliography of Statistical Literature: pre 1940 with supplements to volumes 1 and 2

2014-06-20

Mathematical Foundations of Statistical Mechanics

2023-08-24

Mathematical Methods of Reliability Theory

2000

Non-integrable Dynamics: Time-quantitative Results

2019-02-23

Wolf Prize in Mathematics

2020-04-08

The Abel Prize 2013-2017

2012-12-06

Meeting under the Integral Sign?: The Oslo Congress of Mathematicians on the Eve of the Second World War

2023-05-31

Mathematical Analysis

2000

I.G.Petrovskii:Selected Wrks P

1962

Kolmogorov in Perspective

Bibliography of Statistical Literature: Pre-1940, with supplements to the volumes for 1940-49 and 1950-58

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