Riemann Zeta Function Edwards

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p-adic Numbers, p-adic Analysis, and Zeta-Functions Neal Koblitz 2012-12-06 The first edition of this work has become the standard introduction to the theory of p-adic numbers at both the advanced undergraduate and beginning graduate level. This second edition includes a deeper treatment of p-adic functions in Ch. 4 to include the Iwasawa logarithm and the p-adic gamma-function, the rearrangement and addition of some exercises, the inclusion of an extensive appendix of answers and hints to the exercises, as well as numerous clarifications.
Stalking The Riemann Hypothesis Daniel Nahum Rockmore 2011-06-08 Like a hunter who sees 'a bit of blood' on the trail, that's how Princeton mathematician Peter Sarnak describes the feeling of chasing an idea that seems to have a chance of success. If this is so, then the jungle of abstractions that is mathematics is full of frenzied hunters these days. They are out stalking big game: the resolution of 'The Riemann Hypothesis', seems to be in their sights. The Riemann Hypothesis is about the prime numbers, the fundamental numerical elements. Stated in 1859 by Professor Bernhard Riemann, it proposes a simple law which Riemann believed a 'very likely' explanation for the way in which the primes are distributed among the whole numbers, indivisible stars scattered without end throughout a boundless numerical universe. Just eight years later, at the tender age of thirty-nine Riemann would be dead from tuberculosis, cheated of the opportunity to settle his conjecture. For over a century, the Riemann Hypothesis has stumped the greatest of mathematical minds, but these days frustration has begun to give way to excitement. This unassuming comment is revealing astounding connections among nuclear physics, chaos and number theory, creating a frenzy of intellectual excitement amplified by the recent promise of a one million dollar bounty. The story of the quest to settle the Riemann Hypothesis is one of scientific exploration. It is peopled with solitary hermits and gregarious cheerleaders, cool calculators and wild-eyed visionaries, Nobel Prize-winners and Fields Medalists. To delve into the Riemann Hypothesis is to gain a window into the world of modern mathematics and the nature of mathematics research. Stalking the Riemann Hypothesis will open wide this window so that all may gaze through it in amazement.
The Prime Numbers and Their Distribution Gerald Tenenbaum 2000 One notable new direction this century in the study of primes has been the influx of ideas from probability. The goal of this book is to provide insights into the prime numbers and to describe how a sequence so tautly determined can incorporate such a striking amount of randomness. The book opens with some classic topics of number theory. It ends with a discussion of some of the outstanding conjectures in number theory. In between are an excellent chapter on the stochastic properties of primes and a walk through an elementary proof of the Prime Number Theorem. This book is suitable for anyone who has had a little number theory and some advanced calculus involving estimates. Its engaging style and invigorating point of view will make refreshing reading for advanced undergraduates through research mathematicians.
Homotopy Theory: An Introduction to Algebraic Topology 1975-11-12 Homotopy Theory: An Introduction to Algebraic Topology
Theory of Functions Titchmarch E. C. 1992
In Pursuit of Zeta-3 Paul J. Nahin 2021-10-19 "For centuries, mathematicians have tried, and failed, to solve the zeta-3 problem. This problem is simple in its formulation, but remains unsolved to this day, despite the attempts of some of the world's greatest mathematicians to solve it. The problem can be stated as follows: is there a simple symbolic formula for the following sum: 1+(1/2)^3+(1/3)^3+(1/4)^3+...? Although it is possible to calculate the approximate numerical value of the sum (for those interested, it's 1.20205...), there is no known symbolic expression. A symbolic formula would not only provide an exact value for the sum, but would allow for greater insight into its characteristics and properties. The answers to these questions are not of purely academic interest; the zeta-3 problem has close connections to physics, engineering, and other areas of mathematics. Zeta-3 arises in quantum electrodynamics and in number theory, for instance, and it is closely connected to the Riemann hypothesis. In In Pursuit of zeta-3, Paul Nahin turns his sharp, witty eye on the zeta-3 problem. He describes the problem's history, and provides numerous "challenge questions" to engage readers, along with Matlab code. Unlike other, similarly challenging problems, anyone with a basic mathematical background can understand the problem-making it an ideal choice for a pop math book"--
Exploring the Riemann Zeta Function Hugh Montgomery 2017-09-11 Exploring the Riemann Zeta Function: 190 years from Riemann's Birth presents a collection of chapters contributed by eminent experts devoted to the Riemann Zeta Function, its generalizations, and their various applications to several scientific disciplines, including Analytic Number Theory, Harmonic Analysis, Complex Analysis, Probability Theory, and related subjects. The book focuses on both old and new results towards the solution of long-standing problems as well as it features some key historical remarks. The purpose of this volume is to present in a unified way broad and deep areas of research in a self-contained manner. It will be particularly useful for graduate courses and seminars as well as it will make an excellent reference tool for graduate students and researchers in Mathematics, Mathematical Physics, Engineering and Cryptography.
The Riemann Hypothesis Peter B. Borwein 2008 The Riemann Hypothesis has become the Holy Grail of mathematics in the century and a half since 1859 when Bernhard Riemann, one of the extraordinary mathematical talents of the 19th century, originally posed the problem. While the problem is notoriously difficult, and complicated even to state carefully, it can be loosely formulated as "the number of integers with an even number of prime factors is the same as the number of integers with an odd number of prime factors." The Hypothesis makes a very precise connection between two seemingly unrelated mathematical objects, namely prime numbers and the zeros of analytic functions. If solved, it would give us profound insight into number theory and, in particular, the nature of prime numbers. This book is an introduction to the theory surrounding the Riemann Hypothesis. Part I serves as a compendium of known results and as a primer for the material presented in the 20 original papers contained in Part II. The original papers place the material into historical context and illustrate the motivations for research on and around the Riemann Hypothesis. Several of these papers focus on computation of the zeta function, while others give proofs of the Prime Number Theorem, since the Prime Number Theorem is so closely connected to the Riemann Hypothesis. The text is suitable for a graduate course or seminar or simply as a reference for anyone interested in this extraordinary conjecture.
RiemannÆs zeta function 1974-05-31 RiemannÆs zeta function
On the Riemann Hypothesis William Fidler 2021-04-15 Academic Paper from the year 2021 in the subject Mathematics - Analysis, grade: 2.00, , language: English, abstract: It is demonstrated in this work that we may construct an infinite number of strips in the complex plane having the same 'dimensions as the Critical Strip and which are devoid of Riemann zeros except on the line of symmetry. It is shown that the

number of zeros on each line is infinite, indeed, there is a Riemann zero at infinity. It is posited that a form of the Riemann conjecture is verified in each strip. It is shown that each integer in the infinite set of the integers has an associated Riemann zero and that the imaginary parts of the complex number at which the zeros are located are proportional to the 'local' asymptote to the prime counting function. A connection between the prime counting function and the zeta function is established. A limited distribution of the Riemann zeros corresponding to their respective prime numbers is constructed and it is seen that, at least over this range, the two are correlated, albeit non-linearly. It is demonstrated that the imaginary part of the complex number locating a Riemann zero may, for any integer that can be articulated, be obtained by a few keystrokes of a hand calculator.

Advanced Analytic Number Theory: L-Functions Carlos J. Moreno 2005 Since the pioneering work of Euler, Dirichlet, and Riemann, the analytic properties of L-functions have been used to study the distribution of prime numbers. With the advent of the Langlands Program, L-functions have assumed a greater role in the study of the interplay between Diophantine questions about primes and representation theoretic properties of Galois representations. The present book provides a complete introduction to the most significant class of L-functions: the Artin-Hecke L-functions associated to finite-dimensional representations of Weil groups and to automorphic L-functions of principal type on the general linear group. In addition to establishing functional equations, growth estimates, and non-vanishing theorems, a thorough presentation of the explicit formulas of Riemann type in the context of Artin-Hecke and automorphic L-functions is also given. The survey is aimed at mathematicians and graduate students who want to learn about the modern analytic theory of L-functions and their applications in number theory and in the theory of automorphic representations. The requirements for a profitable study of this monograph are a knowledge of basic number theory and the rudiments of abstract harmonic analysis on locally compact abelian groups.

Automorphic Forms on GL (2) H. Jacquet 2006-11-15

A Study of Bernhard Riemann's 1859 Paper Terrence Murphy 2020-09-15 The primary purpose of this book is to deeply study Bernhard Riemann's seminal 1859 paper: "On the Number of Primes Less Than a Given Magnitude". Our goal in this book is to provide rigorous proofs for all of the proofs and (provable) assertions in Riemann's Paper. Of course, that necessarily excludes the Riemann Hypothesis. While Riemann's Paper is our focus, our study would be incomplete without also noting some of the advances made as a result of his paper. Most notably, we provide two proofs of the Prime Number Theorem.

Riemann's Zeta Function Harold M. Edwards 2001

The Prime Number Theorem G. J. O. Jameson 2003-04-17 At first glance the prime numbers appear to be distributed in a very irregular way amongst the integers, but it is possible to produce a simple formula that tells us (in an approximate but well defined sense) how many primes we can expect to find that are less than any integer we might choose. The prime number theorem tells us what this formula is and it is indisputably one of the great classical theorems of mathematics. This textbook gives an introduction to the prime number theorem suitable for advanced undergraduates and beginning graduate students. The author's aim is to show the reader how the tools of analysis can be used in number theory to attack a 'real' problem, and it is based on his own experiences of teaching this material.

The Riemann Zeta-Function Aleksandar Ivic 2012-07-12 This text covers exponential integrals and sums, 4th power moment, zero-free region, mean value estimates over short intervals, higher power moments, omega results, zeros on the critical line, zero-density estimates, and more. 1985 edition.

Nonlinearity and Functional Analysis Melvyn S. Berger 1977-10-27 Nonlinearity and Functional Analysis is a collection of lectures that aim to present a systematic description of fundamental nonlinear results and their applicability to a variety of concrete problems taken from various fields of mathematical analysis. For decades, great mathematical interest has focused on problems associated with linear operators and the extension of the well-known results of linear algebra to an infinite-dimensional context. This interest has been crowned with deep insights, and the substantial theory that has been developed has had a profound influence throughout the mathematical sciences. This volume comprises six chapters and begins by presenting some background material, such as differential-geometric sources, sources in mathematical physics, and sources from the calculus of variations, before delving into the subject of nonlinear operators. The following chapters then discuss local analysis of a single mapping and parameter dependent perturbation phenomena before going into analysis in the large. The final chapters conclude the collection with a discussion of global theories for general nonlinear operators and critical point theory for gradient mappings. This book will be of interest to practitioners in the fields of mathematics and physics, and to those with interest in conventional linear functional analysis and ordinary and partial differential equations.

An Introduction to the Theory of the Riemann Zeta-Function S. J. Patterson 1995-02-02 This is a modern introduction to the analytic techniques used in the investigation of zeta functions, through the example of the Riemann zeta function. Riemann introduced this function in connection with his study of prime numbers and from this has developed the subject of analytic number theory. Since then many other classes of 'zeta function' have been introduced and they are now some of the most intensively studied objects in number theory. Professor Patterson has emphasised central ideas of broad application, avoiding technical results and the customary function-theoretic approach. Thus, graduate students and non-specialists will find this an up-to-date and accessible introduction, especially for the purposes of algebraic number theory. There are many exercises included throughout, designed to encourage active learning.

Fermat's Last Theorem Harold M. Edwards 2000-01-14 This introduction to algebraic number theory via the famous problem of "Fermats Last Theorem" follows its historical development, beginning with the work of Fermat and ending with Kummers theory of "ideal" factorization. The more elementary topics, such as Eulers proof of the impossibilty of x+y=z, are treated in an uncomplicated way, and new concepts and techniques are introduced only after having been motivated by specific problems. The book also covers in detail the application of Kummers theory to quadratic integers and relates this to Gauss'theory of binary quadratic forms, an interesting and important connection that is not explored in any other book.

From Natural Numbers to Quaternions Jürg Kramer 2017-11-15 This textbook offers an invitation to modern algebra through number systems of increasing complexity, beginning with the natural numbers and culminating with Hamilton's quaternions. Along the way, the authors carefully develop the necessary concepts and methods from abstract algebra: monoids, groups, rings, fields, and skew fields. Each chapter ends with an appendix discussing related topics from algebra and number theory, including recent developments reflecting the relevance of the material to current research. The present volume is intended for undergraduate courses in abstract algebra or elementary number theory. The inclusion of exercises with solutions also makes it suitable for self-study and accessible to anyone with an interest in modern algebra and number theory.

From Number Theory to Physics Michel Waldschmidt 2013-03-09 The present book contains fourteen expository contributions on various topics connected to Number Theory, or Arithmetics, and its relationships to Theoreti cal Physics. The first part is mathematically oriented; it deals mostly with ellip tic curves, modular forms, zeta functions, Galois theory, Riemann surfaces, and p-adic analysis. The second part reports on matters with more direct physical interest, such as periodic and quasiperiodic lattices, or classical and quantum dynamical systems. The contribution of each author represents a short self-contained course on a specific subject. With very few prerequisites, the reader is offered a didactic exposition, which follows the author's original viewpoints, and often incorpo rates the most recent developments. As we shall explain below, there are strong relationships between the different chapters, even though every single contri bution can be read independently of the others. This volume originates in a meeting entitled Number Theory and Physics, which took place at the Centre de Physique, Les Houches

(Haute-Savoie, France), on March 7 - 16, 1989. The aim of this interdisciplinary meeting was to gather physicists and mathematicians, and to give to members of both com munities the opportunity of exchanging ideas, and to benefit from each other's specific knowledge, in the area of Number Theory, and of its applications to the physical sciences. Physicists have been given, mostly through the program of lectures, an exposition of some of the basic methods and results of Num ber Theory which are the most actively used in their branch.
Solution of Equations and Systems of Equations A. M. Ostrowski 2016-06-03 Solution of Equations and Systems of Equations, Second Edition deals with the Laguerre iteration, interpolating polynomials, method of steepest descent, and the theory of divided differences. The book reviews the formula for confluent divided differences, Newton's interpolation formula, general interpolation problems, and the triangular schemes for computing divided differences. The text explains the method of False Position (Regula Falsi) and cites examples of computation using the Regula Falsi. The book discusses iterations by monotonic iterating functions and analyzes the connection of the Regula Falsi with the theory of iteration. The text also explains the idea of the Newton-Raphson method and compares it with the Regula Falsi. The book also cites asymptotic behavior of errors in the Regula Falsi iteration, as well as the theorem on the error of the Taylor approximation to the root. The method of steepest descent or gradient method proposed by Cauchy ensures "global convergence" in very general conditions. This book is suitable for mathematicians, students, and professor of calculus, and advanced mathematics.
Supersymmetry and Trace Formulae Igor V. Lerner 2012-10-08 The motion of a particle in a random potential in two or more dimensions is chaotic, and the trajectories in deterministically chaotic systems are effectively random. It is therefore no surprise that there are links between the quantum properties of disordered systems and those of simple chaotic systems. The question is, how deep do the connec tions go? And to what extent do the mathematical techniques designed to understand one problem lead to new insights into the other? The canonical problem in the theory of disordered mesoscopic systems is that of a particle moving in a random array of scatterers. The aim is to calculate the statistical properties of, for example, the quantum energy levels, wavefunctions, and conductance fluctuations by averaging over different arrays; that is, by averaging over an ensemble of different realizations of the random potential. In some regimes, corresponding to energy scales that are large compared to the mean level spacing, this can be done using diagrammatic perturbation theory. In others, where the discreteness of the quantum spectrum becomes important, such an approach fails. A more powerful method, devel oped by Efetov, involves representing correlation functions in terms of a supersymmetric nonlinear sigma-model. This applies over a wider range of energy scales, covering both the perturbative and non-perturbative regimes. It was proved using this method that energy level correlations in disordered systems coincide with those of random matrix theory when the dimensionless conductance tends to infinity.
Number Theory and Physics Jean-Marc Luck 2012-12-06 7 Les Houches Number theory, or arithmetic, sometimes referred to as the queen of mathematics, is often considered as the purest branch of mathematics. It also has the false repu tation of being without any application to other areas of knowledge. Nevertheless, throughout their history, physical and natural sciences have experienced numerous unexpected relationships to number theory. The book entitled Number Theory in Science and Communication, by M.R. Schroeder (Springer Series in Information Sciences, Vol. 7, 1984) provides plenty of examples of cross-fertilization between number theory and a large variety of scientific topics. The most recent developments of theoretical physics have involved more and more questions related to number theory, and in an increasingly direct way. This new trend is especially visible in two broad families of physical problems. The first class, dynamical systems and quasiperiodicity, includes classical and quantum chaos, the stability of orbits in dynamical systems, K.A.M. theory, and problems with "small denominators", as well as the study of incommensurate structures, aperiodic tilings, and quasicrystals. The second class, which includes the string theory of fundamental interactions, completely integrable models, and conformally invariant two-dimensional field theories, seems to involve modular forms and p adic numbers in a remarkable way.
Riemann's Zeta Function Harold M. Edwards 2001-01-01 Superb high-level study of one of the most influential classics in mathematics examines landmark 1859 publication entitled “On the Number of Primes Less Than a Given Magnitude,” and traces developments in theory inspired by it. Topics include Riemann's main formula, the prime number theorem, the Riemann-Siegel formula, large-scale computations, Fourier analysis, and other related topics. English translation of Riemann's original document appears in the Appendix.
Higher Arithmetic Harold M. Edwards 2008 Although number theorists have sometimes shunned and even disparaged computation in the past, today's applications of number theory to cryptography and computer security demand vast arithmetical computations. These demands have shifted the focus of studies in number theory and have changed attitudes toward computation itself. The important new applications have attracted a great many students to number theory, but the best reason for studying the subject remains what it was when Gauss published his classic Disquisitiones Arithmeticae in 1801: Number theory is the equal of Euclidean geometry--some would say it is superior to Euclidean geometry--as a model of pure, logical, deductive thinking. An arithmetical computation, after all, is the purest form of deductive argument. Higher Arithmetic explains number theory in a way that gives deductive reasoning, including algorithms and computations, the central role. Hands-on experience with the application of algorithms to computational examples enables students to master the fundamental ideas of basic number theory. This is a worthwhile goal for any student of mathematics and an essential one for students interested in the modern applications of number theory. Harold M. Edwards is Emeritus Professor of Mathematics at New York University. His previous books are Advanced Calculus (1969, 1980, 1993), Riemann's Zeta Function (1974, 2001), Fermat's Last Theorem (1977), Galois Theory (1984), Divisor Theory (1990), Linear Algebra (1995), and Essays in Constructive Mathematics (2005). For his masterly mathematical exposition he was awarded a Steele Prize as well as a Whiteman Prize by the American Mathematical Society.
Character Theory of Finite Groups I. Martin Isaacs 2006-11-21 Character theory is a powerful tool for understanding finite groups. In particular, the theory has been a key ingredient in the classification of finite simple groups. Characters are also of interest in their own right, and their properties are closely related to properties of the structure of the underlying group. The book begins by developing the module theory of complex group algebras. After the module-theoretic foundations are laid in the first chapter, the focus is primarily on characters. This enhances the accessibility of the material for students, which was a major consideration in the writing. Also with students in mind, a large number of problems are included, many of them quite challenging. In addition to the development of the basic theory (using a cleaner notation than previously), a number of more specialized topics are covered with accessible presentations. These include projective representations, the basics of the Schur index, irreducible character degrees and group structure, complex linear groups, exceptional characters, and a fairly extensive introduction to blocks and Brauer characters. This is a corrected reprint of the original 1976 version, later reprinted by Dover. Since 1976 it has become the standard reference for character theory, appearing in the bibliography of almost every research paper in the subject. It is largely self-contained, requiring of the reader only the most basic facts of linear algebra, group theory, Galois theory and ring and module theory.
Essays in Constructive Mathematics Harold M. Edwards 2007-02-17 Contents and treatment are fresh and very different from the standard treatments Presents a fully constructive version of what it means to do algebra The exposition is not only clear, it is friendly, philosophical, and considerate even to the most naive or inexperienced reader
The Gamma Function Emil Artin 2015-01-28 This brief monograph on the gamma function was designed by the author to fill what he perceived as a gap in the

literature of mathematics, which often treated the gamma function in a manner he described as both sketchy and overly complicated. Author Emil Artin, one of the twentieth century's leading mathematicians, wrote in his Preface to this book, "I feel that this monograph will help to show that the gamma function can be thought of as one of the elementary functions, and that all of its basic properties can be established using elementary methods of the calculus." Generations of teachers and students have benefitted from Artin's masterly arguments and precise results. Suitable for advanced undergraduates and graduate students of mathematics, his treatment examines functions, the Euler integrals and the Gauss formula, large values of x and the multiplication formula, the connection with sin x, applications to definite integrals, and other subjects.

Lectures on the Riemann Zeta Function H. Iwaniec 2014-10-07 The Riemann zeta function was introduced by L. Euler (1737) in connection with questions about the distribution of prime numbers. Later, B. Riemann (1859) derived deeper results about the prime numbers by considering the zeta function in the complex variable. The famous Riemann Hypothesis, asserting that all of the non-trivial zeros of zeta are on a critical line in the complex plane, is one of the most important unsolved problems in modern mathematics. The present book consists of two parts. The first part covers classical material about the zeros of the Riemann zeta function with applications to the distribution of prime numbers, including those made by Riemann himself, F. Carlson, and Hardy-Littlewood. The second part gives a complete presentation of Levinson's method for zeros on the critical line, which allows one to prove, in particular, that more than one-third of non-trivial zeros of zeta are on the critical line. This approach and some results concerning integrals of Dirichlet polynomials are new. There are also technical lemmas which can be useful in a broader context.

Collected Papers Bernhard Riemann 2004

The Riemann Zeta-function A. Ivi? 2003-01-01 Comprehensive and coherent, this text covers exponential integrals and sums, 4th power moment, zero-free region, mean value estimates over short intervals, higher power moments, omega results, zeros on the critical line, zero-density estimates, distribution of primes, Dirichlet and various other divisor problems, and more. 1985 edition.

Basic Linear Partial Differential Equations TREVES 1975-08-08 Basic Linear Partial Differential Equations

Prime Numbers and the Riemann Hypothesis Barry Mazur 2016-04-11 This book introduces prime numbers and explains the famous unsolved Riemann hypothesis.

Prime Obsession John Derbyshire 2003-04-15 In August 1859 Bernhard Riemann, a little-known 32-year old mathematician, presented a paper to the Berlin Academy titled: "On the Number of Prime Numbers Less Than a Given Quantity." In the middle of that paper, Riemann made an incidental remark â€" a guess, a hypothesis. What he tossed out to the assembled mathematicians that day has proven to be almost cruelly compelling to countless scholars in the ensuing years. Today, after 150 years of careful research and exhaustive study, the question remains. Is the hypothesis true or false? Riemann's basic inquiry, the primary topic of his paper, concerned a straightforward but nevertheless important matter of arithmetic â€" defining a precise formula to track and identify the occurrence of prime numbers. But it is that incidental remark â€" the Riemann Hypothesis â€" that is the truly astonishing legacy of his 1859 paper. Because Riemann was able to see beyond the pattern of the primes to discern traces of something mysterious and mathematically elegant shrouded in the shadows â€" subtle variations in the distribution of those prime numbers. Brilliant for its clarity, astounding for its potential consequences, the Hypothesis took on enormous importance in mathematics. Indeed, the successful solution to this puzzle would herald a revolution in prime number theory. Proving or disproving it became the greatest challenge of the age. It has become clear that the Riemann Hypothesis, whose resolution seems to hang tantalizingly just beyond our grasp, holds the key to a variety of scientific and mathematical investigations. The making and breaking of modern codes, which depend on the properties of the prime numbers, have roots in the Hypothesis. In a series of extraordinary developments during the 1970s, it emerged that even the physics of the atomic nucleus is connected in ways not yet fully understood to this strange conundrum. Hunting down the solution to the Riemann Hypothesis has become an obsession for many â€" the veritable "great white whale" of mathematical research. Yet despite determined efforts by generations of mathematicians, the Riemann Hypothesis defies resolution. Alternating passages of extraordinarily lucid mathematical exposition with chapters of elegantly composed biography and history, Prime Obsession is a fascinating and fluent account of an epic mathematical mystery that continues to challenge and excite the world. Posited a century and a half ago, the Riemann Hypothesis is an intellectual feast for the cognoscenti and the curious alike. Not just a story of numbers and calculations, Prime Obsession is the engrossing tale of a relentless hunt for an elusive proof â€" and those who have been consumed by it.

The Riemann Hypothesis Roland van der Veen 2016-01-06 This book introduces interested readers to one of the most famous and difficult open problems in mathematics: the Riemann Hypothesis. Finding a proof will not only make you famous, but also earns you a one million dollar prize. The book originated from an online internet course at the University of Amsterdam for mathematically talented secondary school students. Its aim was to bring them into contact with challenging university level mathematics and show them why the Riemann Hypothesis is such an important problem in mathematics. After taking this course, many participants decided to study in mathematics at university.

Galois Theory Harold M. Edwards 1984

The Distribution of Prime Numbers A. E. Ingham 1990-09-28 Originally published in 1934, this volume presents the theory of the distribution of the prime numbers in the series of natural numbers. Despite being long out of print, it remains unsurpassed as an introduction to the field.

The Riemann Zeta-Function Anatoly A. Karatsuba 1992-01-01 The aim of the series is to present new and important developments in pure and applied mathematics. Well established in the community over two decades, it offers a large library of mathematics including several important classics. The volumes supply thorough and detailed expositions of the methods and ideas essential to the topics in question. In addition, they convey their relationships to other parts of mathematics. The series is addressed to advanced readers wishing to thoroughly study the topic. Editorial Board Lev Birbrair, Universidade Federal do Ceará, Fortaleza, Brasil Victor P. Maslov, Russian Academy of Sciences, Moscow, Russia Walter D. Neumann, Columbia University, New York, USA Markus J. Pflaum, University of Colorado, Boulder, USA Dierk Schleicher, Jacobs University, Bremen, Germany

Advanced Calculus Harold M. Edwards 2013-12-01 This book is a high-level introduction to vector calculus based solidly on differential forms. Informal but sophisticated, it is geometrically and physically intuitive yet mathematically rigorous. It offers remarkably diverse applications, physical and mathematical, and provides a firm foundation for further studies.