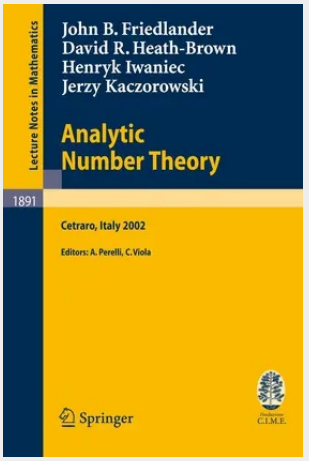
Friedlander / Perelli / Heath-Brown

Analytic Number Theory

Lectures given at the C.I.M.E. Summer School held in Cetraro, Italy, July 11-18, 2002

The four papers collected in this book discuss advanced results in analytic number theory, including recent achievements of sieve theory leading to asymptotic formulae for the number of primes represented by suitable polynomials; counting integer solutions to Diophantine equations, using results from algebraic geometry and the geometry of numbers; the theory of Siegel's zeros and of exceptional characters of L-functions; and an up-to-date survey of the axiomatic theory of L-functions introduced by Selberg.

The origins of analytic number theory, i.e. of the study of arithmetical pr- lems by analytic methods, can be traced back to Euler's 1737 proof of the divergence of the series 1/p wherep runs through all prime numbers, a simple, yet powerful, combination of arithmetic and analysis. One century later, during the years 1837-40, Dirichlet produced a major development in prime number theory by extending Euler's result to primesp in an arithmetic progression,p?a (modq) for any coprime integersa andq. To this end Dirichlet introduced group characters? andL-functions, and obtained a key result, the non-vanishing ofL(1,?), through his celebrated formula on the number of equivalence classes of binary quadratic forms with a given discr- inant. The study of the distribution of prime numbers was deeply transformed in 1859 by the appearance of the famous nine pages long paper by Riemann, ¨ Uber die Anzahl der Primzahlen unter einer gegebenen Gr¨ osse, where the authorintroducedtherevolutionaryideasofstudyingthezeta-function?(s)=



48,10 €
44,95 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9783540363637
Medium: Buch
ISBN: 978-3-540-36363-7
Verlag: Springer Berlin Heidelberg
Erscheinungstermin: 15.09.2006
Sprache(n): Englisch
Auflage: 2006
Serie: Lecture Notes in Mathematics
Produktform: Kartoniert
Gewicht: 359 g
Seiten: 217
Format (B x H): 155 x 235 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)