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Nota di contenuto	Part I. Bases of Analytic Number Theory -- 1. Prime Numbers -- 2. Arithmetic Functions -- 3. Dirichlet Series -- 4. Euler’s Gamma Function -- 5. Riemann’s Zeta Function -- 6. The Large Sieve -- 7. The Theorem of Vinogradov -- 8. The van der Corput Method.- Part II. Interactions Between Arithmetics and Dynamics -- 9. A Brief Guide to Reversing and Extended Symmetries of Dynamical Systems -- 10. Kloosterman Sums, Disjointness, and Equidistribution -- 11. Sarnak’s Conjecture – what’s new -- 12. Sarnak’s Conjecture Implies the Chowla Conjecture Along a Subsequence -- 13. On the Logarithmic Probability that a Random Integral Ideal is A-free -- 14. The Lagrange and Markov Spectra from the Dynamical Point of View -- 15. On the missing Log Factor -- 16. Chowla’s Conjecture: From the Liouville Function to the Moebius Function.- Part III. Selected Topics in

Dynamics -- 17. Weak Mixing for Infinite Measure Invertible Transformations -- 18. More on Tame Dynamical Systems -- 19. A Piecewise Rotation of the Circle, IPR Maps and Their Connection with Translation Surfaces.

Sommario/riassunto

This book concentrates on the modern theory of dynamical systems and its interactions with number theory and combinatorics. The greater part begins with a course in analytic number theory and focuses on its links with ergodic theory, presenting an exhaustive account of recent research on Sarnak's conjecture on Möbius disjointness. Selected topics involving more traditional connections between number theory and dynamics are also presented, including equidistribution, homogenous dynamics, and Lagrange and Markov spectra. In addition, some dynamical and number theoretical aspects of aperiodic order, some algebraic systems, and a recent development concerning tame systems are described.