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Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 1838
Disciplina	512/.7
Soggetti	Number theory Data encryption (Computer science) Algorithms Computer science—Mathematics Number Theory Cryptology Algorithm Analysis and Problem Complexity Symbolic and Algebraic Manipulation Discrete Mathematics in Computer Science
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Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Invited Talks -- The Complexity of Some Lattice Problems -- Rational Points Near Curves and Small Nonzero $ x^3 - y^2 $ via Lattice Reduction -- Coverings of Curves of Genus 2 -- Lattice Reduction in Cryptology: An Update -- Contributed Papers -- Construction of Secure C ab Curves Using Modular Curves -- Curves over Finite Fields with Many Rational Points Obtained by Ray Class Field Extensions -- New Results on Lattice Basis Reduction in Practice -- Baby-Step Giant-Step Algorithms for Non-uniform Distributions -- On Powers as Sums of Two Cubes -- Factoring Polynomials over $\mathbb{F}_q$ -Adic Fields -- Strategies in Filtering in the Number Field Sieve -- Factoring Polynomials over Finite Fields and Stable Colorings of Tournaments -- Computing Special Values of Partial Zeta Functions -- Construction of Tables of Quartic Number Fields -- Counting Discriminants of Number Fields of Degree

up to Four -- On Reconstruction of Algebraic Numbers -- Dissecting a Sieve to Cut Its Need for Space -- Counting Points on Hyperelliptic Curves over Finite Fields -- Modular Forms for  $GL(3)$  and Galois Representations -- Modular Symbols and Hecke Operators -- Fast Jacobian Group Arithmetic on  $C$  ab Curves -- Lifting Elliptic Curves and Solving the Elliptic Curve Discrete Logarithm Problem -- A One Round Protocol for Tripartite Diffie–Hellman -- On Exponential Sums and Group Generators for Elliptic Curves over Finite Fields -- Component Groups of Quotients of  $J_0(N)$  -- Fast Computation of Relative Class Numbers of CM-Fields -- On Probable Prime Testing and the Computation of Square Roots mod  $n$  -- Improving Group Law Algorithms for Jacobians of Hyperelliptic Curves -- Central Values of Artin L-Functions for Quaternion Fields -- The Pseudoprimes up to  $10^{13}$  -- Computing the Number of Goldbach Partitions up to  $5 \cdot 10^8$  -- Numerical Verification of the Brumer-Stark Conjecture -- Explicit Models of Genus 2 Curves with Split CM -- Reduction in Purely Cubic Function Fields of Unit Rank One -- Factorization in the Composition Algebras -- A Fast Algorithm for Approximately Counting Smooth Numbers -- Computing All Integer Solutions of a General Elliptic Equation -- A Note on Shanks's Chains of Primes -- Asymptotically Fast Discrete Logarithms in Quadratic Number Fields -- Asymptotically Fast GCD Computation in  $\mathbb{Z}[i]$ .

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