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Disciplina	005.7/2
Soggetti	Computers Computer security Data encryption (Computer science) Coding theory Information theory Computer science—Mathematics Combinatorics Theory of Computation Systems and Data Security Cryptology Coding and Information Theory Symbolic and Algebraic Manipulation
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Nota di contenuto	Supports of a code -- Chemical isomerism, a challenge for algebraic combinatorics and for computer science -- On algebraic methods in covering radius problems -- How lower and upper complexity bounds meet in elimination theory -- Bivariate polynomial multiplication patterns -- Division of entire functions by polynomial ideals -- Variations on minimal codewords in linear codes -- On the computation of the radical of polynomial complete intersection ideals -- Which families of long binary linear codes have a binomial weight

distribution? -- The discovery of simple 7-designs with automorphism group $P\Omega(2, 32)$ -- Fast exponentiation in cryptography -- On maximal spherical codes I -- Formal computation of Galois groups with relative resolvents -- A case of automatic theorem proving in Euclidean geometry: the MacLane 83 theorem -- Isometry classes of indecomposable linear codes -- When polynomial equation systems can be "solved" fast? -- Using symmetric functions to describe the solution set of a zero dimensional ideal -- Triangular systems and factorized Gröbner bases -- Computation in algebraic function fields for effective construction of algebraic-geometric codes -- Singly-even self-dual codes and Hadamard matrices -- Implicitization of curves parameterized by generalized trigonometric polynomials -- Randomness properties of partial \mathbb{F}_2 - \mathbb{F}_2 planes as LSI test inputs and their implementations -- Mixed covering codes with two binary and four ternary coordinates -- About approximations of exponentials -- A note on normal bases -- On the covering radius of long Goppa codes -- Integration of multivariate rational functions given by straight-line programs -- Polynomial gcd computations over towers of algebraic extensions -- Displacements of matrix products -- Testing identities of series defined by algebraic partial differential equations -- The complexity of formal resolution of linear partial differential equations -- A fast parallel implementation of the Berlekamp-Massey algorithm with a 1D systolic array architecture -- Tomography of constructible functions -- On the determination of formal solutions of a system of partial differential equations -- D 4, E 6, E 8 and the AGM -- Computation of the Galois groups of the resolvent factors for the direct and inverse Galois problems -- First integrals and Darboux polynomials of homogeneous linear differential systems.

Sommario/riassunto

This book constitutes the proceedings of the 11th International Conference on Applied Algebra, Algebraic Algorithms and Error-Correcting Codes, AAEECC-11, held in Paris, France in July 1995. The volume presents five invited papers and 32 full revised research papers selected from a total of 68 submissions; it is focussed on research directed to the exploitation of algebraic techniques and methodologies for the application in coding and computer algebra. Among the topics covered are coding, cryptology, communication, factorization of polynomials, Gröbner bases, computer algebra, algebraic algorithms, symbolic computation, algebraic manipulation.
