1. Record Nr. UNISA996465670303316

Titolo	Applied Algebra, Algebraic Algorithms and Error-Correcting Codes [[electronic resource]] : 9th International Symposium, AAECC-9, New Orleans, LA, USA, October 7-11, 1991. Proceedings / / edited by Harold F. Mattson, Teo Mora, T.R.N. Rao
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 1991
ISBN	3-540-38436-7
Edizione	[1st ed. 1991.]
Descrizione fisica	1 online resource (XII, 496 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 539
Disciplina	005.7/2
Soggetti	Discrete mathematics Algebra Computers Coding theory Information theory Computer science—Mathematics Combinatorics Discrete Mathematics Theory of Computation Coding and Information Theory Symbolic and Algebraic Manipulation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Algorithms for the shape of semialgebraic sets a new approach -- On the parameters of algebraic geometric codes -- On wiedemann's method of solving sparse linear systems -- Fast algorithms for decoding orthogonal and related codes -- Jacobian matrices and constructions in algebra -- Homogenity, pseudo-homogenity, and Gröbner basis computations -- Arithmetic on non supersingular elliptic curves -- Implementing some algorithms of kantor -- Computing roadmaps of general semi-algebraic sets -- An improved sign determination algorithm -- The 2-nd generalized Hamming weight of double-error correcting binary BCH codes and their dual codes --

Buchberger algorithm and integer programming -- New systolic architectures for cyclic code encoding -- Algebraic constructions of efficient broadcast networks -- Error-correction for WIMs and WUMs -- Some constructions in rings of differential polynomials -- Concurrent error detection in sequential circuits using convolutional codes -- An algorithm for the computation of the radical of an ideal in the ring of polynomials -- Integer multiplication in PARSAC-2 on stock microprocessors -- Polynomial-time construction of spherical codes -- Algorithms for a multiple algebraic extension II -- On the orphans and covering radius of the reed-muller codes -- A joint authentication and encryption scheme based on algebraic coding theory -- Arithmetic codes - Survey, recent and new results -- Some results on linear unequal-error-protection codes specified by their generator matrix -- An ackermannian polynomial ideal -- Complexity of the computation of the canonical Whitney stratification of an algebraic set in Cn -- Some undecidability results for weakly confluent monadic string-rewriting systems -- Calculating multidimensional symmetric functions using Jacobi's formula -- Multivariate Sturm theory -- Binary spherical geometric codes -- An algebraic construction of generalized Beenker's codes -- Improving the time complexity of the computation of irreducible and primitive polynomials in finite fields -- Completely transitive codes and distance transitive graphs -- Placement of curved polygons -- On the weights of the elements of the duals of binary BCH codes -- Computation of the openness of some loci of modules -- Random and byte error correcting codes for asymmetric or unidirectional error control -- Finding a minimal polynomial vector set of a vector of nD arrays -- Covering codes and combinatorial optimization -- Decoding of quadrature partial response- trellis coded signals (QPR-TCM) in the presence of intersymbol interference and noise -- On algebraic solutions of linear differential equations with primitive unimodular Galois group -- Error detection and correction in numerical computations -- d-Functions in V k (F 2) and self-decimation of m-sequences -- Multilevel modulation codes for rayleigh fading channels.

Sommario/riassunto

The AAECC conferences focus on the algebraic aspects of modern computer science, which includes the most up-to-date and advanced topics. The topic of error-correcting codes is one where theory and implementation are unifiedinto a subject both of mathematical beauty and of practical importance. Algebraic algorithms are not only interesting theoretically but also important in computer and communication engineering and many other fields. This volume contains the proceedings of the 9th AAECC conference, held in New Orleans, LA, in October 1991. Researchers from Europe, America, Japan and other regions of the world presented papers at the conference. The papers present new results of recent theoretical and application-oriented research in the field.