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integer multiplication by block recursive, number theoretical transforms -- Lambda-Upsilon-Omega: An assistant algorithms analyzer -- Global dimension of associative algebras -- Symmetry and duality in normal basis multiplication -- Multiple error correction with Analog Codes -- On the complexity of satisfiability problems for algebraic structures (preliminary report) -- A computational proof of the Noether normalization lemma -- A graphics interface to REDUCE -- Vlsi designs for multiplication over finite fields GF(2m) -- A primality test using cyclotomic extensions -- The method of syndrome coding and its application for data compression and processing in high energy physics experiments -- Nonassociative degree five identities not implied by commutativity: A computer approach -- On completely regular propelinear codes -- N-dimensional Berlekamp-Massey algorithm for multiple arrays and construction of multivariate polynomials with preassigned zeros -- Covering radius: Improving on the sphere-covering bound -- On Goldman's algorithm for solving first-order multinomial autonomous systems -- A covering problem in the odd graphs -- On the computation of Hilbert-Samuel series and multiplicity -- Succinct representations of counting problems -- How to guess ?-th roots modulo n by reducing lattice bases -- A study on Imai-Hirakawa trellis-coded modulation schemes -- Embedding flexible control strategies into object oriented languages -- Majority decoding of large repetition codes for the r-ary symmetric channel -- On binary codes of order 3 -- Polynomial decomposition algorithm of almost quadratic complexity -- The weights of the orthogonals of certain cyclic codes or extended GOPPA codes.

Sommario/riassunto	In 1988, for the first time, the two international conferences AAECC-6 and ISSAC'88 (International Symposium on Symbolic and Algebraic Computation, see Lecture Notes in Computer Science 358) have taken place as a Joint Conference in Rome, July 4-8, 1988. The topics of the two conferences are in fact widely related to each other and the Joint Conference presented a good occasion for the two research communities to meet and share scientific experiences and results. The proceedings of the AAECC-6 are included in this volume. The main topics are: Applied Algebra, Theory and Application of Error-Correcting Codes, Cryptography, Complexity, Algebra Based Methods and Applications in Symbolic Computing and Computer Algebra, and Algebraic Methods and Applications for Advanced Information Processing. Twelve invited papers on subjects of common interest for the two conferences are divided between this volume and the succeeding Lecture Notes volume devoted to ISSACC'88. The proceedings of the 5th conference are published as Vol. 356 of the Lecture Notes in Computer Science.