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| Disciplina | 005.72 |
| Soggetti | Data structures (Computer science) Information theory Coding theory Cryptography Data encryption (Computer science) Computer science—Mathematics Discrete mathematics Algorithms Data Structures and Information Theory Coding and Information Theory Cryptology Discrete Mathematics in Computer Science Symbolic and Algebraic Manipulation |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Note generali | Includes index. |
| Nota di contenuto | Invited Contributions -- List Decoding and Pseudorandom Constructions -- A Survey of Recent Attacks on the Filter Generator -- Iterative List Decoding of LDPC Codes -- Inverted Edwards Coordinates -- Spectra of Boolean Functions, Subspaces of Matrices, and Going Up Versus Going Down -- Efficient List Decoding of Explicit Codes with Optimal Redundancy -- Algebraic Structure Theory of Tail-Biting Trellises -- Nice Codes from Nice Curves -- Regular Contributions -- |

Generalized Sudan's List Decoding for Order Domain Codes -- Bent Functions and Codes with Low Peak-to-Average Power Ratio for Multi-Code CDMA -- Determining the Nonlinearity of a New Family of APN Functions -- An Improvement of Tardos's Collusion-Secure Fingerprinting Codes with Very Short Lengths -- Space-Time Codes from Crossed Product Algebras of Degree 4 -- On Non-randomness of the Permutation After RC4 Key Scheduling -- Correctable Errors of Weight Half the Minimum Distance Plus One for the First-Order Reed-Muller Codes -- Fault-Tolerant Finite Field Computation in the Public Key Cryptosystems -- A Note on a Class of Quadratic Permutations over \mathbb{F}_q -- Constructions of Orthonormal Lattices and Quaternion Division Algebras for Totally Real Number Fields -- Quaternary Plotkin Constructions and Quaternary Reed-Muller Codes -- Joint Source-Cryptographic-Channel Coding Based on Linear Block Codes -- On the Key-Privacy Issue of McEliece Public-Key Encryption -- Lattices for Distributed Source Coding: Jointly Gaussian Sources and Reconstruction of a Linear Function -- Linear Complexity and Autocorrelation of Prime Cube Sequences -- The "Art of Trellis Decoding" Is NP-Hard -- On the Structure of Inversive Pseudorandom Number Generators -- Subcodes of Reed-Solomon Codes Suitable for Soft Decoding -- Normalized Minimum Determinant Calculation for Multi-block and Asymmetric Space-Time Codes -- On the Computation of Non-uniform Input for List Decoding on Bezerra-Garcia Tower -- Dense MIMO Matrix Lattices -- A Meeting Point for Class Field Theory and Invariant Theory -- Secure Cross-Realm Client-to-Client Password-Based Authenticated Key Exchange Against Undetectable On-Line Dictionary Attacks -- Links Between Discriminating and Identifying Codes in the Binary Hamming Space -- Construction of Rotation Symmetric Boolean Functions on Odd Number of Variables with Maximum Algebraic Immunity -- A Path to Hadamard Matrices -- The Tangent FFT -- Novel Algebraic Structure for Cyclic Codes -- Distribution of Trace Values and Two-Weight, Self-orthogonal Codes over $\text{GF}(p,2)$ -- Generalized Rotation Symmetric and Dihedral Symmetric Boolean Functions ? 9 Variable Boolean Functions with Nonlinearity 242 -- On Quasi-cyclic Codes over Integer Residue Rings -- Extended Norm-Trace Codes with Optimized Correction Capability -- On Generalized Hamming Weights and the Covering Radius of Linear Codes -- Homomorphic Encryptions of Sums of Groups.

Sommario/riassunto

This book constitutes the refereed proceedings of the 17th International Symposium on Applied Algebra, Algebraic Algorithms and Error-Correcting Codes, AAecc-17, held in Bangalore, India, in December 2007. The 33 revised full papers presented together with 8 invited papers were carefully reviewed and selected from 61 submissions. Among the subjects addressed are block codes, including list-decoding algorithms; algebra and codes: rings, fields, algebraic geometry codes; algebra: rings and fields, polynomials, permutations, lattices; cryptography: cryptanalysis and complexity; computational algebra: algebraic algorithms and transforms; sequences and boolean functions.
