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Nota di contenuto	Elliptic and Hyperelliptic Curve Arithmetic -- Faster Halvings in Genus 2 -- Efficient Pairing Computation on Genus 2 Curves in Projective Coordinates -- On Software Parallel Implementation of Cryptographic Pairings -- Block Ciphers I -- The Cryptanalysis of Reduced-Round SMS4 -- Building Secure Block Ciphers on Generic Attacks Assumptions

-- First Invited Talk -- Lifting and Elliptic Curve Discrete Logarithms -- Hash Functions I -- Preimage Attacks on One-Block MD4, 63-Step MD5 and More -- Preimage Attacks on 3-Pass HAVAL and Step-Reduced MD5 -- Cryptanalysis of Tweaked Versions of SMASH and Reparation -- Mathematical Aspects of Applied Cryptography I -- Counting Functions for the k-Error Linear Complexity of 2 n -Periodic Binary Sequences -- On the Exact Success Rate of Side Channel Analysis in the Gaussian Model -- Stream Ciphers Cryptanalysis -- Algebraic and Correlation Attacks against Linearly Filtered Non Linear Feedback Shift Registers -- A Cache Timing Analysis of HC-256 -- An Improved Fast Correlation Attack on Stream Ciphers -- Hash Functions II -- A Three-Property-Secure Hash Function -- Analysis of the Collision Resistance of RadioGatúnUsing Algebraic Techniques -- A Scheme to Base a Hash Function on a Block Cipher -- Collisions and Other Non-random Properties for Step-Reduced SHA-256 -- Cryptography with Algebraic Curves -- Public Verifiability from Pairings in Secret Sharing Schemes -- The Elliptic Curve Discrete Logarithm Problem and Equivalent Hard Problems for Elliptic Divisibility Sequences -- Second Invited Talk – Stafford Tavares Lecture -- The “Coefficients H” Technique -- Mathematical Aspects of Applied Cryptography II -- Distinguishing Multiplications from Squaring Operations -- Subquadratic Polynomial Multiplication over GF(2 m) Using Trinomial Bases and ChineseRemaindering -- Bounds on Fixed Input/Output Length Post-processing Functions for Biased Physical Random Number Generators -- Curve-Based Primitives in Hardware -- HECC Goes Embedded: An Area-Efficient Implementation of HECC -- ECC Is Ready for RFID – A Proof in Silicon -- Block Ciphers II -- Cryptanalysis of a Generic Class of White-Box Implementations -- New Linear Cryptanalytic Results of Reduced-Round of CAST-128 and CAST-256 -- Improved Impossible Differential Cryptanalysis of Reduced-Round Camellia.

Sommario/riassunto

The book in front of you contains the proceedings of SAC 2008, the 15th - nual Workshop on Selected Areas in Cryptography. SAC 2008 took place during August 14-15 at Mount Allison University, Sackville, New Brunswick, Canada. This was the ?rst time that SAC was hosted in New Brunswick, and the second time in an Atlantic Canadian province. Previous SAC workshops were held at Queen's University in Kingston (1994, 1996, 1998, 1999, and 2005), at Carleton University in Ottawa (1995, 1997, 2003), at the University of Waterloo (2000, 2004), at the Fields Institute in Toronto (2001), at Memorial University of N-foundland at St. John's (2002), at Concordia University in Montreal (2006) and at the University of Ottawa (2007). The intent ofthe workshopseriesis to provide a relaxedatmospherein which researchers in cryptography can present and discuss new work on selected areas of current interest. The SAC workshop series has ?rmly established itself as an international forum for intellectual exchange in cryptological research. Theresponsibilityforchoosingthe venueofeachSACworkshopandappoi- ingtheCo-chairslieswiththeSACOrganizingBoard.TheCo-chairsthenchoose the Program Committee in consultation with the Board. Hence, we would like to expressour gratitudeto the SAC OrganizingBoardfor giving usthe mandate to organize SAC 2008, and for their invaluable feedback while assembling the Program Committee.