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improved treatment of:Stream ciphers and block ciphers, including modes of operation and design principlesAuthenticated encryption and secure communication sessionsHash functions, including hash-function applications and design principles Attacks on poorly implemented cryptography, including attacks on chained-CBC encryption, padding-oracle attacks, and timing attacksThe random-oracle model and its application to several standardized, widely used public-key encryption and signature schemesElliptic-curve cryptography and associated standards such as DSA/ECDSA and DHIES/ECIESContaining updated exercises and worked examples, Introduction to Modern Cryptography, Second Edition can serve as a textbook for undergraduate- or graduate-level courses in cryptography, a valuable reference for researchers and practitioners, or a general introduction suitable for self-study. "--