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Soggetti	Data encryption (Computer science) Database management Mathematical statistics Computers and civilization Computers Law and legislation Artificial intelligence Cryptology Database Management Probability and Statistics in Computer Science Computers and Society Legal Aspects of Computing Artificial Intelligence
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Methods for Tabular Protection -- A Method for Preserving Statistical Distributions Subject to Controlled Tabular Adjustment -- Automatic Structure Detection in Constraints of Tabular Data -- A New Approach to Round Tabular Data -- Harmonizing Table Protection: Results of a Study -- Utility and Risk in Tabular Protection -- Effects of Rounding on the Quality and Confidentiality of Statistical Data -- Disclosure

Analysis for Two-Way Contingency Tables -- Statistical Disclosure Control Methods Through a Risk-Utility Framework -- A Generalized Negative Binomial Smoothing Model for Sample Disclosure Risk Estimation -- Entry Uniqueness in Margined Tables -- Methods for Microdata Protection -- Combinations of SDC Methods for Microdata Protection -- A Fixed Structure Learning Automaton Micro-aggregation Technique for Secure Statistical Databases -- Optimal Multivariate 2-Microaggregation for Microdata Protection: A 2-Approximation -- Using the Jackknife Method to Produce Safe Plots of Microdata -- Combining Blanking and Noise Addition as a Data Disclosure Limitation Method -- Why Swap When You Can Shuffle? A Comparison of the Proximity Swap and Data Shuffle for Numeric Data -- Adjusting Survey Weights When Altering Identifying Design Variables Via Synthetic Data -- Utility and Risk in Microdata Protection -- Risk, Utility and PRAM -- Distance Based Re-identification for Time Series, Analysis of Distances -- Beyond k-Anonymity: A Decision Theoretic Framework for Assessing Privacy Risk -- Using Mahalanobis Distance-Based Record Linkage for Disclosure Risk Assessment -- Improving Individual Risk Estimators -- Protocols for Private Computation -- Single-Database Private Information Retrieval Schemes : Overview, Performance Study, and Usage with Statistical Databases -- Privacy-Preserving Data Set Union -- "Secure" Log-Linear and Logistic Regression Analysis of Distributed Databases -- Case Studies -- Measuring the Impact of Data Protection Techniques on Data Utility: Evidence from the Survey of Consumer Finances -- Protecting the Confidentiality of Survey Tabular Data by Adding Noise to the Underlying Microdata: Application to the Commodity Flow Survey -- Italian Household Expenditure Survey: A Proposal for Data Dissemination -- Software -- The ARGUS Software in CENEX -- Software Development for SDC in R -- On Secure e-Health Systems -- IPUMS-International High Precision Population Census Microdata Samples: Balancing the Privacy-Quality Tradeoff by Means of Restricted Access Extracts.

## Sommario/riassunto

Privacy in statistical databases is a discipline whose purpose is to provide solutions to the conflict between the increasing social, political and economical demand of accurate information, and the legal and ethical obligation to protect the privacy of the individuals and enterprises to which statistical data refer. Beyond law and ethics, there are also practical reasons for statistical agencies and data collectors to invest in this topic: if individual and corporate respondents feel their privacy guaranteed, they are likely to provide more accurate responses. There are at least two traditions in statistical database privacy: one stems from official statistics, where the discipline is also known as statistical disclosure control (SDC), and the other originates from computer science and database technology. Both started in the 1970s, but the 1980s and the early 1990s saw little privacy activity on the computer science side. The Internet era has strengthened the interest of both statisticians and computer scientists in this area. Along with the traditional topics of tabular and microdata protection, some research lines have revived and/or appeared, such as privacy in queryable databases and protocols for private data computation.