1. Record Nr. UNINA9910143909903321

Titolo	Inference Control in Statistical Databases : From Theory to Practice / / edited by Josep Domingo-Ferrer
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2002
ISBN	3-540-47804-3
Edizione	[1st ed. 2002.]
Descrizione fisica	1 online resource (VIII, 231 p.)
Collana	Lecture Notes in Computer Science, , 0302-9743 ; ; 2316
Disciplina	005.8
Soggetti	Computer security Data encryption (Computer science) Mathematical statistics Database management Computers and civilization Artificial intelligence Systems and Data Security Cryptology Probability and Statistics in Computer Science Database Management Computers and Society Artificial Intelligence
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Advances in Inference Control in Statistical Databases: An Overview -- Advances in Inference Control in Statistical Databases: An Overview -- Tabular Data Protection -- Cell Suppression: Experience and Theory -- Bounds on Entries in 3-Dimensional Contingency Tables Subject to Given Marginal Totals -- Extending Cell Suppression to Protect Tabular Data against Several Attackers -- Network Flows Heuristics for Complementary Cell Suppression: An Empirical Evaluation and Extensions -- HiTaS: A Heuristic Approach to Cell Suppression in Hierarchical Tables -- Microdata Protection -- Model Based Disclosure Protection -- Microdata Protection through Noise Addition -- Sensitive

Micro Data Protection Using Latin Hypercube Sampling Technique -- Integrating File and Record Level Disclosure Risk Assessment -- Disclosure Risk Assessment in Perturbative Microdata Protection -- LHS-Based Hybrid Microdata vs Rank Swapping and Microaggregation for Numeric Microdata Protection -- Post-Masking Optimization of the Tradeoff between Information Loss and Disclosure Risk in Masked Microdata Sets -- Software and User Case Studies -- The CASC Project -- Tools and Strategies to Protect Multiple Tables with the GHQUAR Cell Suppression Engine -- SDC in the 2000 U.S. Decennial Census -- Applications of Statistical Disclosure Control at Statistics Netherlands -- Empirical Evidences on Protecting Population Uniqueness at Idescat.

Sommario/riassunto

Inference control in statistical databases, also known as statistical disclosure limitation or statistical confidentiality, is about finding tradeoffs to the tension between the increasing societal need for accurate statistical data and the legal and ethical obligation to protect privacy of individuals and enterprises which are the source of data for producing statistics. Techniques used by intruders to make inferences compromising privacy increasingly draw on data mining, record linkage, knowledge discovery, and data analysis and thus statistical inference control becomes an integral part of computer science. This coherent state-of-the-art survey presents some of the most recent work in the field. The papers presented together with an introduction are organized in topical sections on tabular data protection, microdata protection, and software and user case studies.