Record Nr. UNINA9910829837203321 Autore Cover T. M. <1938-2012.> Titolo Elements of information theory [[electronic resource] /] / Thomas M. Cover, Joy A. Thomas Hoboken, N.J.,: Wiley-Interscience, c2006 Pubbl/distr/stampa **ISBN** 1-118-58577-1 1-280-51749-2 9786610517497 0-470-30315-8 0-471-74882-X 0-471-74881-1 Edizione [2nd ed.] Descrizione fisica 1 online resource (774 p.) Altri autori (Persone) Thomas Joy A Disciplina 003.54 003/.54 Soggetti Information theory Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references (p. 689-721) and index. Nota di contenuto ELEMENTS OF INFORMATION THEORY; CONTENTS; Preface to the Second Edition; Preface to the First Edition; Acknowledgments for the Second Edition; Acknowledgments for the First Edition; 1 Introduction and Preview; 1.1 Preview of the Book; 2 Entropy, Relative Entropy, and Mutual Information; 2.1 Entropy; 2.2 Joint Entropy and Conditional Entropy: 2.3 Relative Entropy and Mutual Information: 2.4 Relationship Between Entropy and Mutual Information; 2.5 Chain Rules for Entropy, Relative Entropy, and Mutual Information; 2.6 Jensen's Inequality and Its Consequences 2.7 Log Sum Inequality and Its Applications 2.8 Data-Processing Inequality; 2.9 Sufficient Statistics; 2.10 Fano's Inequality; Summary; Problems: Historical Notes: 3 Asymptotic Equipartition Property: 3.1 Asymptotic Equipartition Property Theorem; 3.2 Consequences of the AEP: Data Compression: 3.3 High-Probability Sets and the Typical Set: Summary: Problems: Historical Notes: 4 Entropy Rates of a Stochastic Process; 4.1 Markov Chains; 4.2 Entropy Rate; 4.3 Example: Entropy

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Sommario/riassunto

The latest edition of this classic is updated with new problem sets and materialThe Second Edition of this fundamental textbook maintains the book's tradition of clear, thought-provoking instruction. Readers are provided once again with an instructive mix of mathematics, physics, statistics, and information theory. All the essential topics in information theory are covered in detail, including entropy, data compression, channel capacity, rate distortion, network information theory, and hypothesis testing. The authors provide readers with a solid understanding of the underlying t