Record Nr. UNINA9910299701803321 Autore Deng Yue **Titolo** High-Dimensional and Low-Quality Visual Information Processing: From Structured Sensing and Understanding / / by Yue Deng Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, 2015 **ISBN** 3-662-44526-3 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (108 p.) Collana Springer Theses, Recognizing Outstanding Ph.D. Research, , 2190-5053 Disciplina 005.74 006.312 006.37 006.6 Soggetti Signal processing Image processing Speech processing systems Optical data processing Data structures (Computer science) Data mining Signal, Image and Speech Processing Image Processing and Computer Vision Data Structures and Information Theory Data Mining and Knowledge Discovery 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 and index. Nota di contenuto Introduction -- Sparse Structure for Visual Signal Sensing -- Graph Structure for Visual Signal Sensing -- Discriminative Structure for Visual Signal Understanding -- Information Theoretic Structure for Visual Signal Understanding -- Conclusions. Sommario/riassunto This thesis primarily focuses on how to carry out intelligent sensing and understand the high-dimensional and low-quality visual

information. After exploring the inherent structures of the visual data, it proposes a number of computational models covering an extensive

range of mathematical topics, including compressive sensing, graph theory, probabilistic learning and information theory. These computational models are also applied to address a number of real-world problems including biometric recognition, stereo signal reconstruction, natural scene parsing, and SAR image processing.