Record Nr. UNINA9910298970103321 Autore Huang Yongzhen **Titolo** Feature coding for image representation and recognition / / by Yongzhen Huang, Tieniu Tan Pubbl/distr/stampa Berlin, Heidelberg:,: Springer Berlin Heidelberg:,: Imprint: Springer, , 2014 **ISBN** 3-662-45000-3 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (80 p.) Collana SpringerBriefs in Computer Science, , 2191-5768 004 Disciplina 005.1 006.3 006.37 Soggetti Pattern recognition Optical data processing Artificial intelligence Algorithms Pattern Recognition Image Processing and Computer Vision Artificial Intelligence Algorithm Analysis and Problem Complexity 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. 1. Introduction -- 2. Taxonomy -- 3. Representative Feature Coding Nota di contenuto Algorithms -- 4. Evolution of Feature Coding -- 5. Experimental Study of Feature Coding -- 6. Enhancement via Integrating Spatial Information -- 7. Enhancement via Integrating High Order Coding Information -- 8. Conclusion. Sommario/riassunto This brief presents a comprehensive introduction to feature coding, which serves as a key module for the typical object recognition pipeline. The text offers a rich blend of theory and practice while reflects the recent developments on feature coding, covering the following five aspects: (1) Review the state-of-the-art, analyzing the

motivations and mathematical representations of various feature

coding methods; (2) Explore how various feature coding algorithms evolve along years; (3) Summarize the main characteristics of typical feature coding algorithms and categorize them accordingly; (4) Discuss the applications of feature coding in different visual tasks, analyze the influence of some key factors in feature coding with intensive experimental studies; (5) Provide the suggestions of how to apply different feature coding methods and forecast the potential directions for future work on the topic. It is suitable for students, researchers, practitioners interested in object recognition.