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Autore	Reiss Thomas H
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Nota di contenuto	Translation, rotation, scale and contrast invariants -- Algebraic and projective invariants -- Invariance to affine transformations -- Invariance to projective transformations -- Recognizing partially occluded objects -- Summary and conclusions.
Sommario/riassunto	Given a familiar object extracted from its surroundings, we humans have little difficulty in recognizing it irrespective of its size, position and orientation in our field of view. Changes in lighting and the effects of perspective also pose no problems. How do we achieve this, and more importantly, how can we get a computer to do this? One very promising approach is to find mathematical functions of an object's image, or of an object's 3D description, that are invariant to the transformations caused by the object's motion. This book is devoted to the theory and practice of such invariant image features, so-called image invariants, for planar objects. It gives a comprehensive summary of the field, discussing methods for recognizing both occluded and partially occluded objects, and also contains a definitive treatment of

moment invariants and a tutorial introduction to algebraic invariants, which are fundamental to affine moment invariants and to many projective invariants. A number of novel invariant functions are presented and the results of numerous experiments investigating the stability of new and old invariants are discussed. The main conclusion is that moment invariants are very effective, both for partially occluded objects and for recognizing objects in grey-level images.
