

1. Record Nr.	UNINA9910647782503321
Autore	Zhang Yu-Jin
Titolo	3-D Computer Vision : Principles, Algorithms and Applications // by Yu-Jin Zhang
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023
ISBN	981-19-7580-9
Edizione	[1st ed. 2023.]
Descrizione fisica	1 online resource (453 pages)
Disciplina	006.37
Soggetti	Computer vision Image processing—Digital techniques Image processing Computer science User interfaces (Computer systems) Human-computer interaction Computer Vision Computer Imaging, Vision, Pattern Recognition and Graphics Image Processing Theory and Algorithms for Application Domains Computer Science User Interfaces and Human Computer Interaction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Camera Calibration -- Chapter 3. 3-D Image Acquisition -- Chapter 4. Video and Motion Information -- Chapter 5. Moving Object Detection and Tracking -- Chapter 6. Binocular Stereo Vision -- Chapter 7. Monocular Multiple Image Reconstruction -- Chapter 8. Monocular Single Image Reconstruction -- Chapter 9. 3-D Scene Representation -- Chapter 10. Scene Matching -- Chapter 11. Knowledge and Scene Interpretation -- Chapter 12. Spatial-Temporal Behavior Understanding.
Sommario/riassunto	This textbook offers advanced content on computer vision (basic content can be found in its prerequisite textbook, "2D Computer Vision: Principles, Algorithms and Applications"), including the basic

principles, typical methods and practical techniques. It is intended for graduate courses on related topics, e.g. Computer Vision, 3-D Computer Vision, Graphics, Artificial Intelligence, etc. The book is mainly based on my lecture notes for several undergraduate and graduate classes I have offered over the past several years, while a number of topics stem from my research publications co-authored with my students. This book takes into account the needs of learners with various professional backgrounds, as well as those of self-learners. Furthermore, it can be used as a reference guide for practitioners and professionals in related fields. To aid in comprehension, the book includes a wealth of self-test questions (with hints and answers). On the one hand, these questions help teachers to carry out online teaching and interact with students during lectures; on the other, self-learners can use them to assess whether they have grasped the key content.
