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Descrizione fisica	1 online resource (243 p.)
Altri autori (Persone)	RemondinoFabio StoppaDavid
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	State-of-the-art of ToF Range Image Sensors and their applications -- SPAD-based Sensors -- Electronic-based Sensors -- Sensors based on in-pixel Photo-mixing devices -- Understanding and ameliorating mixed pixels and multipath interference in AMCW LiDAR -- 3D Cameras: errors, calibration and orientation.- ToF cameras for architectural survey -- Indoor navigation using range imaging.-ToF cameras and stereo systems: comparison and data fusion -- ToF cameras in ambient-assisted living applications -- Application overview of commercial ToF cameras.
Sommario/riassunto	Today the cost of solid-state two-dimensional imagers has dramatically dropped, introducing low cost systems on the market suitable for a variety of applications, including both industrial and consumer products. However, these systems can capture only a two-dimensional projection (2D), or intensity map, of the scene under observation, losing a variable of paramount importance, i.e., the arrival time of the impinging photons. Time-Of-Flight (TOF) Range-Imaging (TOF) is an emerging sensor technology able to deliver, at the same time, depth and intensity maps of the scene under observation. Featuring different sensor resolutions, RIM cameras serve a wide

community with a lot of applications like monitoring, architecture, life sciences, robotics, etc. This book will bring together experts from the sensor and metrology side in order to collect the state-of-art researchers in these fields working with RIM cameras. All the aspects in the acquisition and processing chain will be addressed, from recent updates concerning the photo-detectors, to the analysis of the calibration techniques, giving also a perspective onto new applications domains.