1. Record Nr. UNINA9911007086103321

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Titolo	Image acquisition and preprocessing for machine vision systems / / P. K. Sinha
Pubbl/distr/stampa	Bellingham, Wash., : SPIE Press, c2012
ISBN	1-5231-3203-5 1-68015-096-0 0-8194-8203-X
Descrizione fisica	1 online resource (750 p.)
Collana	Press monograph ; ; 197
Disciplina	006.3/7
Soggetti	Computer vision Identification Electronic data processing - Data preparation
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	Preface -- Acknowledgments -- Acronyms and abbreviations -- Chapter 1. Introduction -- Chapter 2. Human vision -- Chapter 3. Image-forming optics -- Chapter 4. Scene illumination -- Chapter 5. Image sensors -- Chapter 6. Imaging hardware -- Chapter 7. Image formation -- Chapter 8. Camera calibration -- Chapter 9. Gray-level transformation -- Chapter 10. Spatial transformation -- Chapter 11. Spatial filtering -- Chapter 12. Discrete Fourier transform -- Chapter 13. Spatial frequency filters -- Chapter 14. Review of image parameters -- Appendices -- Index.
Sommario/riassunto	This book provides a combination of the operational details of imaging hardware and analytical theories of low-level image processing functions. By a blend of optics, stage lighting, and framegrabber descriptions, and detailed theories of CCD and CMOS image sensors, image formation, and camera calibration, the image acquisition part of the book provides a comprehensive reference text for image acquisition. The pre-processing part brings together a wide range of enhancement and filtering kernels and imaging functions through well-structured analytical bases. With unified coverage of image acquisition modules and pre-processing functions, this book bridges the gaps

between hardware and software on one hand and theory and applications on the other. With its detailed coverage of imaging hardware and derivations of pre-processing kernels, it is a useful design reference for students, researchers, application and product engineers, and systems integrators.