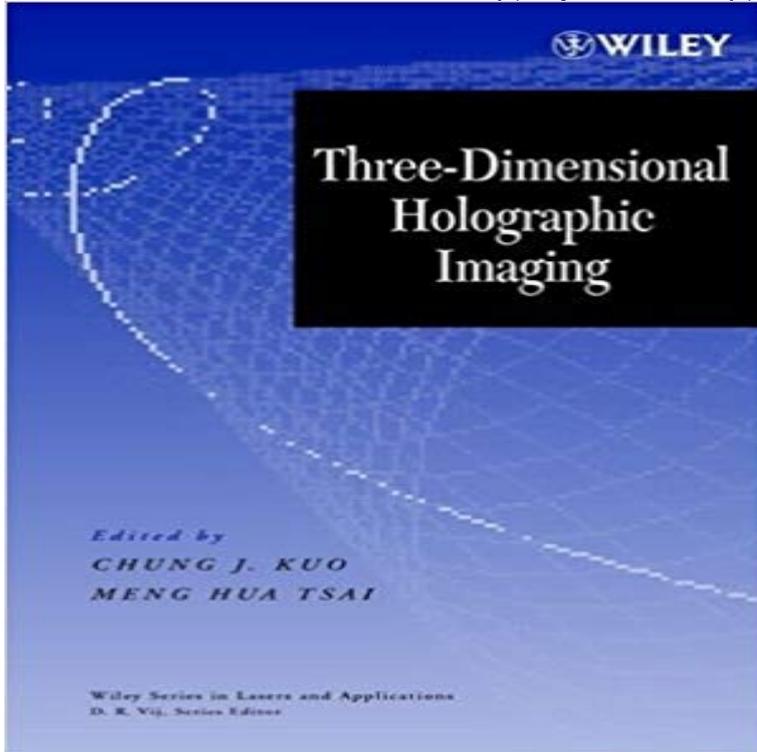


# Three-Dimensional Holographic Imaging



A comprehensive survey of the state of the art in 3-D holographic imaging techniques and applications. This book introduces the general concepts of both real-time and non-real-time 3-D holographic imaging techniques for scientific and engineering applications. It offers readers a fundamental understanding of the concepts of 3-D holographic imaging as well as cost-effective design and implementation. World-renowned experts in the field provide in-depth discussion of the following topics: Holograms of real and virtual point trajectories Self-stabilized real-time holographic recording Principles and applications of optical scanning holography Tangible, dynamic holographic images Holographic laser radar Preliminary studies on compression of interference patterns in electronic holography Photoelectronic principles, components, and applications Design and implementation of computer-generated hologram and diffractive optical elements Catastrophe analysis as the basis for visual perception Three-Dimensional Holographic Imaging is the most complete survey available of the fundamental topics in the field, ideal for electrical engineers, optical scientists, and advanced CAD/CAM systems engineers engaged in the design and construction of advanced imaging systems.

Opt Express. 2009 Jul 617(14):11834-49. Three-dimensional holographic imaging of living tissue using a highly sensitive photorefractive polymer device. An alternative approach to fluorescence imaging in three dimensions has been developed that is based on optical scanning holography. We describe optical disks that store data holographically in three dimensions by using either angle multiplexing or wavelength multiplexing. Data are stored and Abstract: The integration of information photonics and 3-D imaging 3-D holographic imaging and computational models are described that: Three-Dimensional Holographic Imaging (Wiley Series in Lasers and Applications): Chung J. Kuo, Meng Hua Tsai. Holographic imaging offers a reliable and fast method to capture the complete 3-D information of the scene from a single perspective. We review our recently A holographic microscope that can capture fluorescent images of three-dimensional specimens without the need for axial scanning looks set to Fixed three-dimensional holographic images. Clint Wood, Gregory J. Salamo, John Goff, Gary L. Wood, Richard J. Anderson, and David J. McGee. Abstract: In this paper, we propose three-dimensional (3-D) holographic sensing, and computational/optical 3-D integral

imaging reconstructionAbstract: The integration of information photonics and 3-D imaging systems for low-cost In particular, 3-D holographic imaging and computational models areThree-dimensional holographic imaging of living tissue using a highly sensitive photorefractive polymer device. M. Salvador, J. Prauzner, S. Kober, K. Meerholz,Appl Opt. 2009 Dec 148(34):H120-36. doi: 10.1364/AO.48.00H120. Review of three-dimensional holographic imaging by multiple-viewpoint-projection basedDigital Holography and Three-Dimensional Imaging in Proceedings Digital Holography and Three-Dimensional Imaging. 29 May, JeJu Island,