

# Holographic Optics II: Principles And Applications 25-28 April 1989, Paris, France

## Applications of digital and analog holography in three-dimensional imaging

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Digital and analog holography, along with its many variations, viz., holographic interferometry, holographic microscopy, holographic tomography, multiwavelength digital holography, phase-shifting holography, compressive holography, coherence holography, etc., have become the methods of choice for various metrological applications in three-dimensional (3D) imaging. In this review, we discuss the basic principles of analog and digital holography and the various topics mentioned above, with selected applications to real-world problems. We also discuss other related topics such as dynamic holography, non-Bragg orders, and compressive holographic tomography, nonlinear holography, holographic TV, as well as a nonholographic technique for 3D visualization, viz., transport of intensity imaging. Finally, we expose interested readers to contemporary topics in the area, viz., nonlinear holography and real-time holographic TV. © 2012 Optical Society of America  
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1. Introduction and Preliminaries .....	474
2. Analog and Digital Holography .....	477
2.1. Analog Holography .....	479
2.2. Digital Holography .....	480
2.2a. Numerical Reconstruction by Discrete Fresnel Transformation .....	481
2.2b. Numerical Reconstruction by the Convolution Approach .....	482
2.2c. Numerical Reconstruction by the Angular Spectrum Approach .....	483
2.2d. Suppression of dc During Reconstruction .....	483
2.3. Experimental Results .....	484
3. Phase Unwrapping .....	485
4. Phase-Shifting Digital Holography .....	487
4.1. Traditional Phase-Shifting Digital Holography .....	487

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