

# 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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