

# New Directions in Holography and Speckle



Holography and Speckle is intended to mark a new era in holography and speckle. A new generation of holographers and speckle users now appears ready to take these fields in new directions unanticipated even 5 years ago. The old familiar applications have now reached a level of maturity that makes them better suited for advanced development than for basic research. So what comes next? We have offered here a sampling of new directions with just enough tie-in to our past to put the new in perspective. This is not a book in which you will find reviews of past work by the usual suspects, whose contributions, however important, those in the field already know well. Here you will find chapters from many whose work has never appeared in such a book and who are looking at these fields with new perspectives. Holography and speckle are being reborn or at least rethought, and you are invited to join us in seeing some of those new directions for the first time. This book contains 26 state-of-the-art review chapters written by leading experts from around the world. CONTENTS (1) A Historian's View of Holography, Sean F. Johnston (2) Optical Singularities in Holography and Speckle Fields, Marat Soskin, Mikhail Vasnetsov, Vladimir Denisenko, and Vladimir Slyusar (3) Speckles and Phase Singularities in Polychromatic Fields, Oleg V. Angelsky, Peter V. Polyanskii, and Peter P. Maksimyak (4) Fast Transforms for Digital Holography, Leonid P. Yaroslavsky (5) A Fresnel Approach to Digital Holography, Michael Liebling (6) Where Are We Going in Art Holography? Setsuko Ishii and Jumpei Tsujiuchi (7) Holographics-Combining Holograms with Interactive Computer Graphics, Oliver Bimber (8) Holographic Spectral Filters, Wenhai Liu, Christophe Moser, Greg Steckman, and Demetri Psaltis (9) Holographic Optical Elements for Infrared

Wireless Communication, Yisi Liu, Nandigana Krishna Mohan, and Quazi T. Islam (10) Volumetric Holographic Imaging of Living Tissue, David D. Nolte, Kwan Jeong, Michael Melloch, and John Turek (11) Holography and Structured Illumination for Super Resolved Imaging, Zeev Zalevsky, Dror Fixler, Javier Garcia, and Vicente Mico (12) Dynamic Holography in Material Science and Microbiology, N. Kukhtarev and T. Kukhtareva (13) Photorefractive Polymers for Dynamic Holography, Jayan Thomas, Robert A. Norwood, and Nasser Peyghambarian (14) Holography in Bacteriorhodopsin for Medical Image Processing, Chandra S. Yelleswarapu, Francisco J. Aranda, and D. V. G. L. N. Rao (15) Resonant Holographic Interferometry, Neal J. Brock and Michael S. Brown (16) Polarization and Stokes Parameters in Techniques for Digital Speckle Pattern Correlation, Roberto Torroba (17) Intrinsic Noise in Whole-Field Three-Dimensional Imaging of Small Particles and Holographic Particle Image Velocimetry, Ye Pu and Hui Meng (18) Speckles for Photo-stitching of Interferograms at Digital Camera Detection, Ferenc Gyimesi, Venczel Borbaly, Balazs Czkevi, and Zoltan Feszty (19) Speckle Interferometry for the Measurement of Residual Stresses, Guillermo H. Kaufmann and Armando Albertazzi Jr. (20) Flame Temperature Measurement Using Speckle Techniques, Chandra Shaker and R. S. Sirohi (21) Beam Divergence and Surface Curvature Effects in Speckle Metrology: Recent Developments, V. M. Murukeshan and N. Sujatha (22) Digital Speckle Interferometry in Engineering, Lianxiang Yang and Thorsten Siebert (23) Dynamic Electronic Speckle Pattern Interferometry: A Comparison of Spatial Phase-Shifting Methods, Michael B. North Morris (24) Recent Applications with Digital Speckle Correlation Decorrelation, T. W. Ng (25) The Holographic Principle in Optical Holography, Thomas Orr Anderson and H. John Caulfield (26) The Fourier

[\[PDF\] Ye Sylvan Archer \(Volume V\)](#)

[\[PDF\] American Legends: The Life of Geronimo](#)

[\[PDF\] British and American Aces of World War I: The Pictorial Record](#)

[\[PDF\] Bleau, la foret de Fontainebleau et ses rochers \(French Edition\)](#)

[\[PDF\] Mark Zuckerberg \(People in the News\)](#)

[\[PDF\] The Pivotal I Ching](#)

[\[PDF\] Bell Telephone System Technical Publications \(Volume 43\) September 1964 Part 2 of 2 Parts \(No. 1 ESS Switching System\)](#)

**NSF Award Search: Award#0401858 - Holographic Optical** Functional imaging by dynamic speckle in digital holographic optical John Caulfield *New Directions in Holography and Speckles*, 2007, Artech House. **Wedge Prism for Direction Resolved Speckle Correlation** *New Directions in Holography and Speckle Hardcover* - ?? *New Directions in Holography and Speckle* ??????????. **Publications - School of Engineering and Computer Science** 034.242 Speckle interferometry and speckle spectroscopy with the 6m telescope. 034.244 Speckle imaging with the 034.249 A holographic Fourier transform spectrophotometer. W. W. Schempp. *New directions in spectrophotometry*, p. **Holography and Coherent Optics - Google Books Result** Shang HM, Tham LM and Chau FS (1995), *Shearographic and holographic* Chapter 22, *New Directions in Holography and Speckle*, edited by Caulfield H J **Literature 1988 - Google Books Result** Holography is the science and practice of making holograms. Typically, a hologram is a .. A light wave incident on a grating is split into several waves the direction of these diffracted waves is determined by .. When a laser is used to reconstruct the hologram, the image is speckled just as the original image will have been. **Advanced Batteries: Materials Science Aspects Analysis of** Fuzessy Z, Gyimesi F, Borbely V: *Upgrading Holographic Interferometry for Industrial Application by Digital* *New Directions in Holography and Speckle*. **Zoltan Fuzessy - ODT Personal data sheet** Buy *New Directions in Holography and Speckle* by (ISBN: 9781588831019) from Amazons Book Store. Free UK delivery on eligible orders. **New Directions in Guided Wave and Coherent Optics: Volume I and - Google Books Result** It is important that the Bragg-matched scattering of any four waves,  $E_1, E_2, E_3, E_4$ , by those gratings does not create any wave of a new direction, and in that **New Directions in Holography and Speckle (??) - ????** In recent years, there has been great interest in the development of new electrode materials and electrolytes for *New Directions in Holography and Speckle*. **New Directions in Holography and Speckle** Caulfield H J and

Vikram C S 2008 Digital speckle interferometry in engineering New Directions in Holography and Speckle ed L X Yang and T Siebert **Oleg V. Angelsky / Department of Correlation Optics /** pattern with a new direction of the fringes and a new spacing between them.  $p(x, s)$  which the observer sees as a pattern with a grainy structure or speckle. **High temperature displacement and strain measurement using a** Holography and Speckle is intended to mark a new era in holography and speckle. A new generation of holographers and speckle users now appears ready to **Design and experiment on a multi-functioned and programmable** Holography and Speckle is intended to mark a new era in holography and speckle and speckle users now appears ready to take these fields in new directions **Speckle-Wave Interactions in Application to Holography and - Google Books Result** Johnston, S. F. (2008) A historians view of holography. In: Caulfield, H.J. and Vikram, C.S. (eds.) New Directions in Holography and Speckle. **Advances in Speckle Metrology and Related Techniques - Google Books Result** The speckle interferometers in the third and fourth directions are generated by opening a book chapter of New Directions of Holography and Speckles. **A Review of Optical NDT Technologies** The figure 16 is a photograph of the holographic reconstruction of the temporal response of a multimodal fiber : the images of the response are the two speckled **New Directions in Holography and Speckle (??) - ????** Wedge Prism for Direction Resolved Speckle Correlation Interferometry. Chandra S. .. R. K. Erf, Ed., Speckle Metrology, Academic Press, New York (1978). 2. R. Jones and C. Wykes, Eds., Holographic and Speckle Interferometry, Second. **Recognition of Direction of New Apertures from the Elongated** New Direction in Holography and Speckle - Ed. by Chandra Vikram, H.J. Caulfield.- American Scientific Publishers (chapter Speckles and Phase Singularities **Chandra Yelleswarapu - Physics Department - University of** R. K. Erf, Ed., Speckle Metrology, Academic Press, New York (1978). R. Jones and C. Wykes, Eds., Holographic and Speckle Interferometry, 2nd enlarged ed., Biological nano-ceramic materials for holographic data storage . New Directions in Holography and Speckles, pp 263 279, American Scientific Publishers, **none Wedge prism for direction resolved speckle correlation interferometry** 405 to p.440) of the book entitled New Directions of Holography and Speckles, edited by H. J. Caulfield and C. Vikram, published by American Scientific **D.V.G.L.N. Raos Home Page - Physics Department - UMass Boston** Lian-xiang Yang and Thorsten Siebert, [Digital speckle interferometry in engineering],New directions of holography and speckles. Valencia: **Whole Field Strain Measurement on Complex Surfaces by Digital** Advancement in the theory of information and computing opened the door for a new era in the field of Dreams Art And Technology Of **New Directions in Holography and Speckle / Read PDF Releases** Systems and methods of dual plane digital holographic microscopy . for Medical Applications for New Directions in Holography and Speckles, American **A historians view of holography - Enlighten: Publications** Recognition of Direction of New Apertures from the Elongated Speckle Images: [8], H. Lin, Speckle Mechanism in Holographic Optical Co herence Imaging, **New Directions in Holography and Speckle: H. John Caulfield and** Bimber, O., New Directions in Holography and Speckle, Chapter on HoloGraphics: Combining Holograms with Interactive Computer Graphics. American