

Synthetic aperture digital holography

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Abstract: The limited area and low resolution of the CCD target affect the quality of the holographic image and thus the applications of digital holography. In order to solve this problem, an effective way is introducing synthetic aperture technique to improve the spatial bandwidth product of the digital holographic recording system. This talk will give a brief introduction about the research works of our group on synthetic aperture digital holography. It includes spatial multiplexing, angular multiplexing, polarization state multiplexing, and zeros-padding techniques.

Biography of Jianlin Zhao

Jianlin Zhao was born in Xi'an, Shaanxi, China, in 1958. He received B.S. degree in applied physics and M.S. degree in solid mechanics from the Northwestern Polytechnical University (NPU), China, in 1981 and 1987, respectively, and the Ph.D degree in optics from Xi'an Institute of Optics and Fine Mechanics, Chinese Academy of Science, China, in 1998. He is currently a professor and the head of the Department of Applied Physics, School of Science, NPU. He is also the director of the Shaanxi Key Laboratory of Optical Information Technology and the Key Laboratory of Space Applied Physics and Chemistry, Ministry of Education, China. His current research interests include micro-nano photonics, digital optical information processing, digital holography, and optical fiber sensors.