

## Optical Scanning approach to computer-generated holography

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We have recently proposed an optical scanning approach to computer-generated holography. A 3D object composed of polygons is layered along the depth direction and a hologram is generated upon scanning the object by a structured beam digitally. Such a hologram is referred to as a polygon-layer-based hologram. In this presentation, we explore such a technique and offer insights into how to pre-process holographic information effectively. This pre-processing can be valuable for applications in augmented reality (AR) and virtual reality (VR).

### Short Bio:



**Ting-Chung Poon** is Professor of Electrical and Computer Engineering at Virginia Tech, USA. His current research interests include Information Optics and Optical Scanning Holography (OSH). He is Fellow of Optica, the SPIE, the IoP, and the IEEE. In 2016, he received *SPIE's Dennis Gabor Award*. He is the recipient of the 2024 *Optica's Emmett N. Leith Medal*.



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