



Washington University in St. Louis

SCHOOL OF ENGINEERING & APPLIED SCIENCE

Preston M. Green Department of Electrical & Systems Engineering

Seminar Announcement

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Thursday, March 23, 2017
Green Hall, Room 0120
10:00 A.M.

Synthetic Optical Holography

Abstract: Holography is an efficient, multiplex method of acquiring phase across a whole image. I report on the marriage of holography and scanning microscopy, a new development that improves the speed of micro and nano-optical imaging by orders of magnitude while simplifying the experiment. I will show the method applied to scanning near-field microscopy with 10nm resolution and confocal imaging with subcellular resolution. We demonstrate coherent post-processing including refocusing.

Bio: P. Scott Carney is a professor of Electrical and Computer Engineering at the University of Illinois Urbana - Champaign. He holds a BS in Engineering Physics from UIUC (1994), and a PhD in Physics from the University of Rochester (1999) and was a post-doc at Washington University in St. Louis till 2001. He is a theorist with research interests in inverse problems, imaging, coherence theory and other branches of optical physics.

Host: R. Martin Arthur