



Photonics Forum

April 27, 2016

*11:45 a.m. -
1:15 p.m.*

9th Floor

Room 901

Photonics Center

8 Saint Mary's Street

Lunch will be served!

Photonics Faculty: Dr. Jason Fleischer

Diffraction Beyond the Diffraction Limit

A good working definition of diffraction is the deviation from ray behavior due to wave effects. Correspondingly, the wavelength determines the magnitude of diffraction and sets the limit on the typical figures of merit, including resolution, contrast, and orders of interference from slits and gratings. In this talk, Dr. Fleischer explores a variety of methods to beat these limits, including nonlinearity, phase-space methods, computational imaging, and quantum effects. Both basic Physics and Engineering applications will be discussed, with some commentary on whether or not the benefits are worth the cost.

Dr. Jason Fleischer obtained his B.A. from the University of Chicago in 1993 and his Ph.D. from the University of California, San Diego in 1999, both in Physics. Following this, he was a Lady Davis Postdoctoral Fellow at the Technion-Israel Institute for Technology. He has been at Princeton since 2004, where he is now an Associate Professor in Electrical Engineering. His current research interests include computational optics, biomedical imaging, and quantum information.



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