

## NONCLASSICAL PHOTON STATISTICS AS A RESOURCE IN MICROSCOPY

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Far-field optical microscopy beyond the Abbe diffraction limit is already a reality. Yet, while Abbe's theory was based on classical physics, quantum mechanical phenomena were only very recently used for improving the performance of microscopes. I will review progress in this arena, and show how we increase the resolution of optical microscopes by harnessing the quantum phenomenon of fluorescence antibunching, and how this is intimately tied with recent developments in detector hardware.

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