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Practical limits to sub-wavelength imaging

Imaging beyond the diffraction limit is a topic of much current interest, especially for sensor and biological applications. The numerous techniques in use today may appear unrelated but their resolution limits are actually governed by very similar equations. In this talk I will present a unified view of the most popular imaging techniques and describe how to use this view to identify the most promising techniques and material systems. I will illustrate my conclusions with an example of $\lambda / 50$ sub-wavelength imaging using a microwave field.

