

Novel Methods for the Removal of Non-Uniform Blur

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Removing non-uniform defocus type aberrations from optical images is a very difficult problem to resolve. Image detail may be in or out of focus, in proportion to the distance of different parts of the imaging object to the camera. Novel imaging paradigms have been proposed that by introducing a known perturbation into the imaging system enable the use fast deconvolution algorithms to recover image detail. Moreover, a wisely-chosen perturbation can cause the system to reveal information which would otherwise be unobtainable. In this talk we discuss various strategies for the design of optical systems that enable imaging of objects affected by non-uniform defocus and spherical blur.