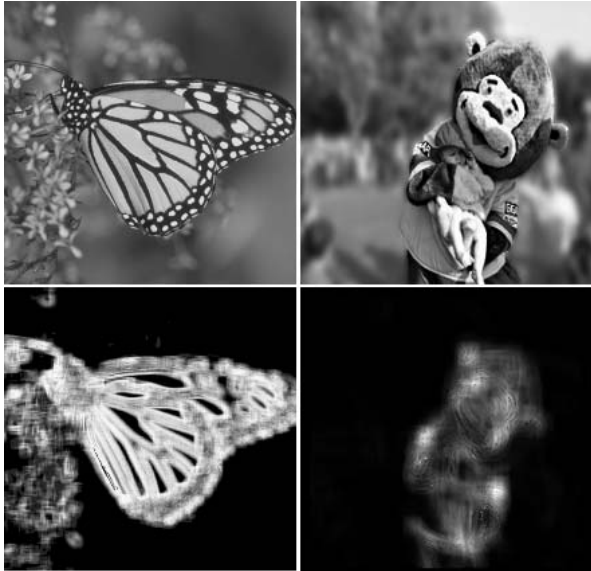
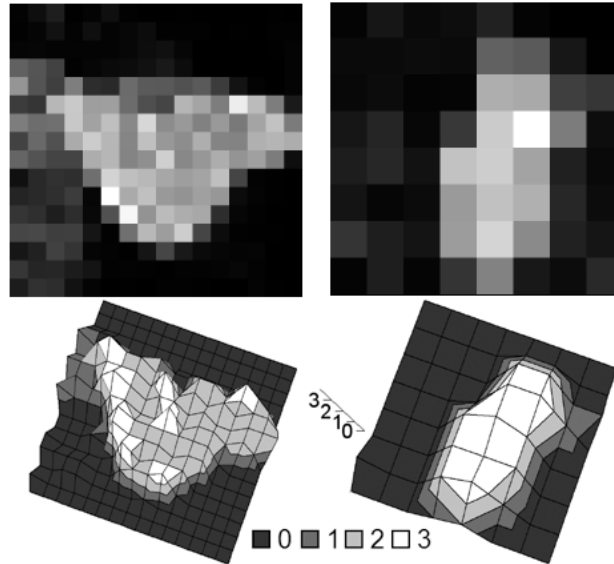


An automatic focus map extraction method is presented using a modification of blind deconvolution for localised blurring function estimation. We use these local blurring functions (so called point spread functions, PSFs) for extraction of focus areas on ordinary images. In this inverse task our goal is not image reconstruction but the estimation of localised PSFs and the relative focus map. Thus, the method is less sensitive to noise and ill-posed deconvolution problems. The focus areas can be estimated without any knowledge about the shooting conditions or the used optical system. The technique is suitable for main object selection and extraction, tracking in video and in surveillance applications, indexing of image databases.



Focus extraction using PSF estimations for all pixels (stop at 20 iterations, use relative error distance). Top: input, bottom:output, brighter: area more in focus.



Focus extraction by block-based PSF estimations for images of Fig. 1. Top: in-focus maps, bottom: relative focus scales 0:low, 3:high.