

The Multi-pole Occlusion Camera

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Reconstructing point datasets is a challenging problem in computer graphics. Our solution is to use occlusion cameras, a class of non-pinhole cameras that produces reference images that are robust to disocclusion errors. When a 3D scene is modeled with a conventional (pinhole) depth image, even minimal translations of the viewpoint expose surfaces which were not sampled in the reference image, which causes disocclusion errors. An occlusion camera has rays that reach around occluders to sample barely hidden surfaces that are likely to become visible in nearby views.

In this talk I will present our work (in progress) on the multi-pole occlusion camera, a variant of the of occlusion camera that allows disocclusion-error resistant reconstructions