

## Some properties of a variational model for the reconstruction of occluded boundaries

### Abstract:

We consider a variational model for image segmentation which takes into account the occlusions between different objects.

The model consists in minimizing a functional which depends on:

- (i) a partition (segmentation) of the image domain constituted by partially overlapping regions;
- (ii) a piecewise constant function which gives information about the visible portions of objects;
- (iii) a piecewise constant function which constitutes an approximation of a given image.

The geometric part of the energy functional depends on the curvature of the boundaries of the overlapping regions.

Some variational properties of the model are discussed with the aim of investigating the reconstruction capabilities of occluded boundaries of shapes.

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