1023-49-1898 **Selim Esedoglu*** (esedoglu@umich.edu), Department of Mathematics, University of Michigan, 530 Church St., Ann Arbor, MI 48109. *A segmentation algorithm based on convex duality.*

Segmentation is a fundamental procedure in computer vision. It forms an important preliminary step whenever useful information is to be extracted from images automatically. Given an image depicting a scene with several objects in it, its goal is to determine which regions of the image contain distinct objects.

We will show that a recent convex duality based algorithm due to A. Chambolle, which was originally developed for Rudin, Osher, and Fatemi's total variation denoising model, can be adapted to the segmentation problem. (Received September 27, 2006)