

In this paper, we propose interactive image segmentation using adaptive constraint propagation (ACP), called ACP Cut. In interactive image segmentation, the interactive inputs provided by users play an important role in guiding image segmentation. However, these simple inputs often cause bias that leads to failure in preserving object boundaries. To effectively use this limited interactive information, we employ ACP for semisupervised kernel matrix learning which adaptively propagates the interactive information into the whole image, while successfully keeping the original data coherence. Moreover, ACP Cut adopts seed propagation to achieve discriminative structure learning and reduce the computational complexity. Experimental results demonstrate that the ACP Cut extracts foreground objects successfully from the background and outperforms the state-of-the-art methods for interactive image segmentation in terms of both effectiveness and efficiency.