BiO-Net: Learning Recurrent Bi-directional Connections for Encoder-Decoder Architecture
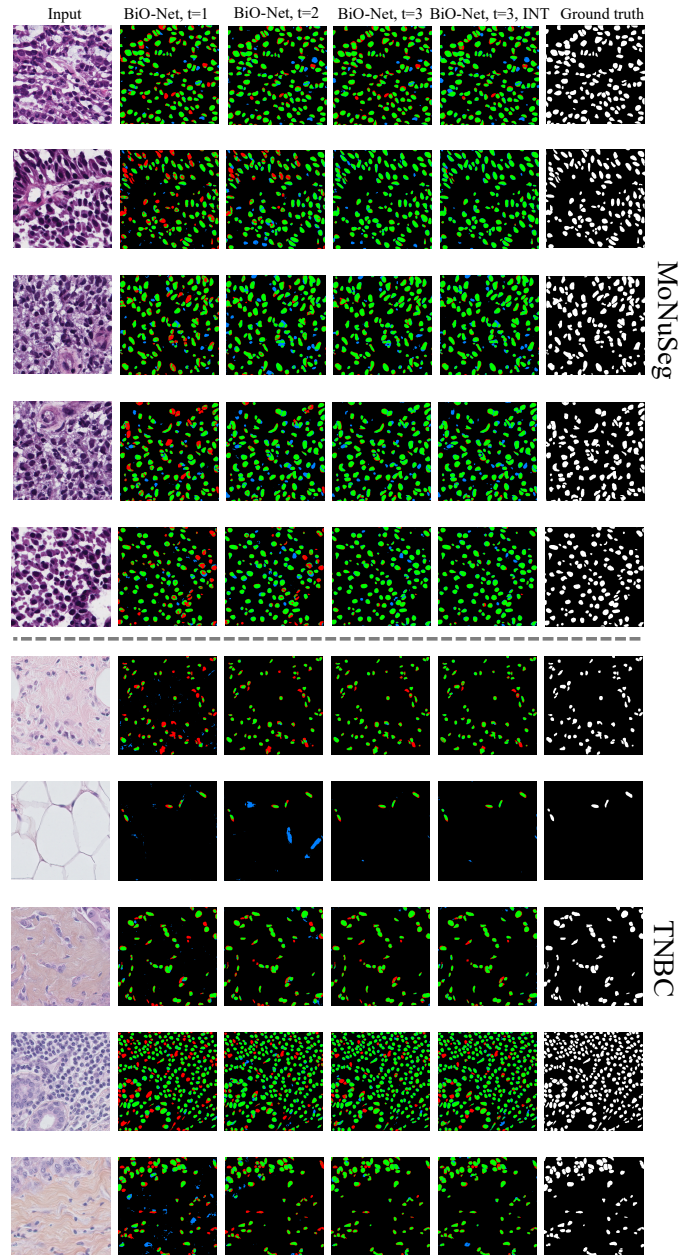

Fig. 1: The comparision of nuclei segmentation results produced by our BiO-Net with various settings. The visualization scheme utilized to make a comparison with ground truth: green for true positve, blue for false positive, red for false negative, and black for true negative. t and INT denote the loop time and whether using inferenced features in all iterations for segmentation, respectively. Clearly, our BiO-Net with (t=3, INT) achieves the best segmentation of nuclei.
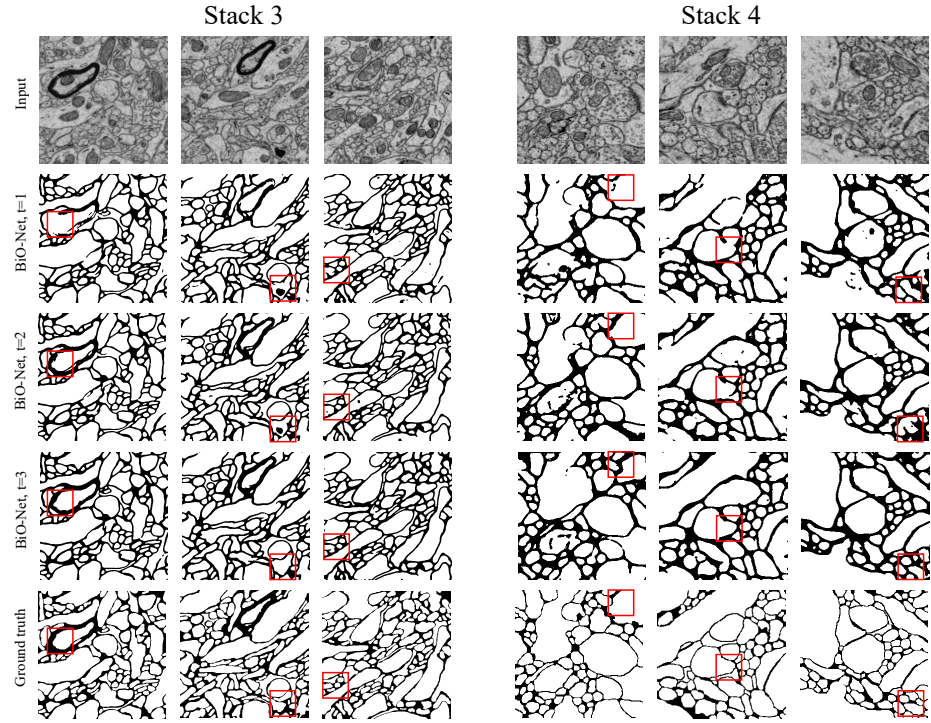
Fig. 2: EM membrane segmentation results of our BiO-Net. One representative ROI example is selected from each EM sample above to demonstrate the improvments of membrane segmentation, when we simply increase the loop time of our BiO-Net.
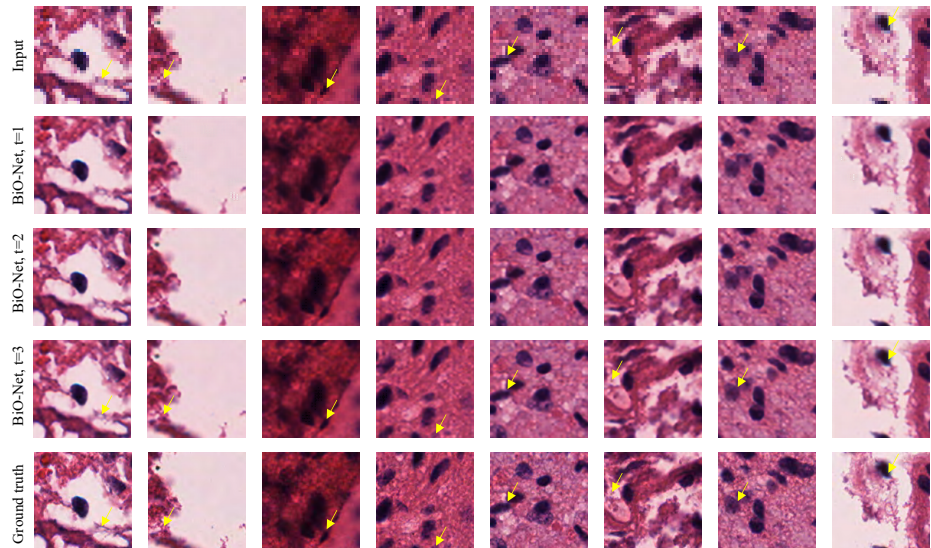

Fig. 3: Image super resolution results of our BiO-Net. Yellow arrows indicate some major aliasing artifacts that alleviated by our BiO-Net.