

Supplemental Materials: Segmenting the Brain Surface from CT Images with Artifacts Using Locally-Oriented Appearance and Dictionary Learning

S-I. STATISTICAL SIGNIFICANCE TESTING

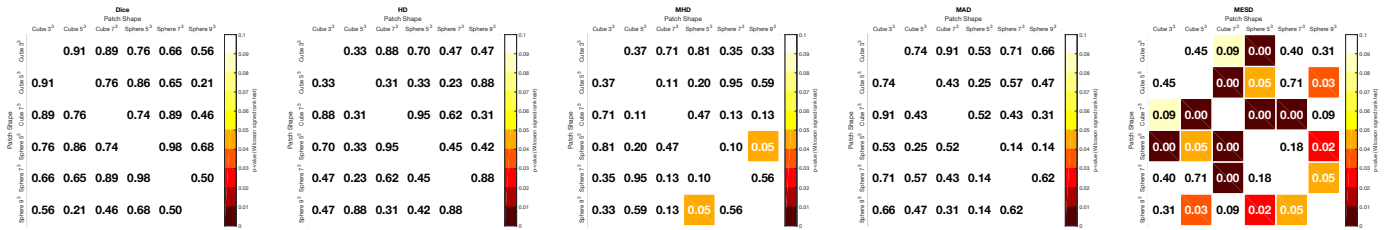


Fig. S1. P-value tables showing statistical significance for segmentation evaluation metrics corresponding to Table I. These results show our proposed method with different patch sizes and shapes (cube or spherical). We assessed statistical significance using a two-sided Wilcoxon signed rank test ($p \leq 0.05$). We quantified segmentation performance using the following metrics: Dice overlap, Hausdorff Distance (HD), Modified Hausdorff Distance (MHD), Mean Absolute Distance (MAD), and Mean Electrode to Surface Distance (MESD).

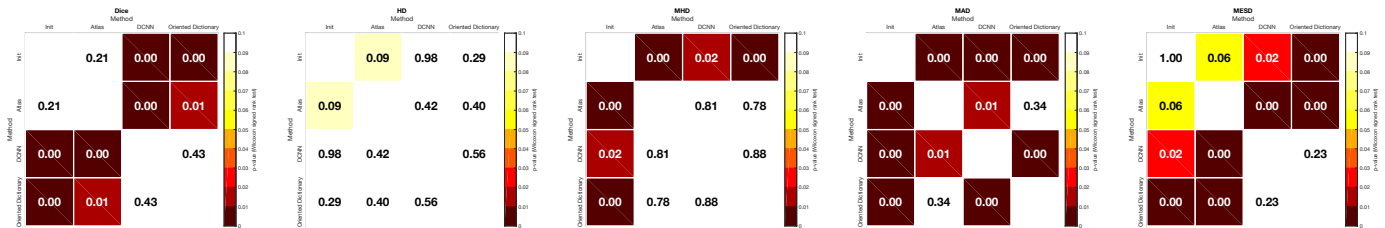


Fig. S2. P-value tables showing statistical significance for segmentation evaluation metrics corresponding to Table II. These results show our proposed method using locally-oriented image patches with dictionary learning (Oriented Dictionary) compared to the initial surface segmentation estimate (Init), standard atlas-based segmentation (Atlas), and a deep convolutional neural network (DCNN). We assessed statistical significance using a two-sided Wilcoxon signed rank test ($p \leq 0.05$). We quantified segmentation performance using the following metrics: Dice overlap, Hausdorff Distance (HD), Modified Hausdorff Distance (MHD), Mean Absolute Distance (MAD), and Mean Electrode to Surface Distance (MESD).