Brain Structure Visualization using Spectral Fiber Clustering

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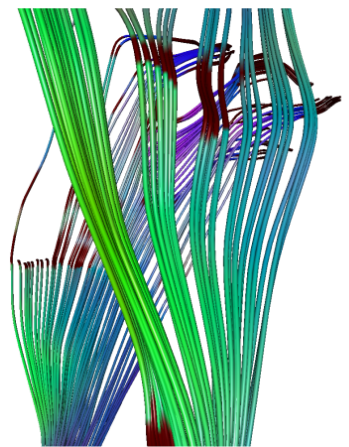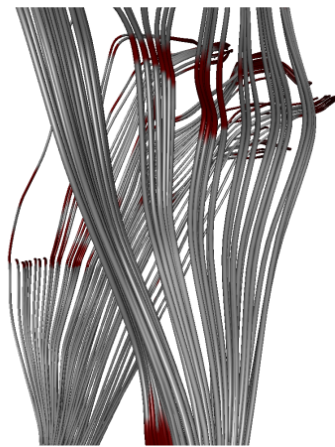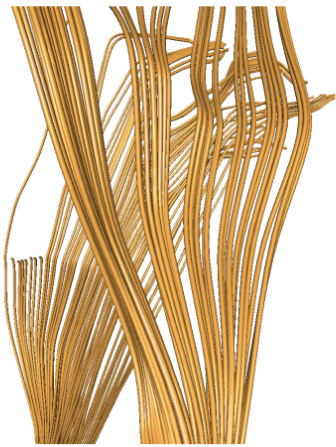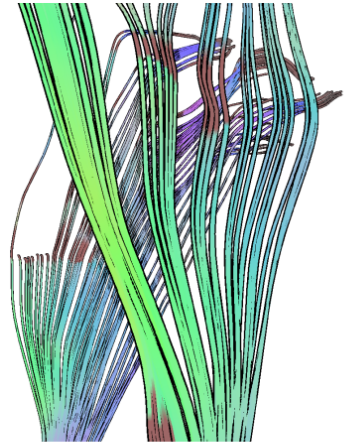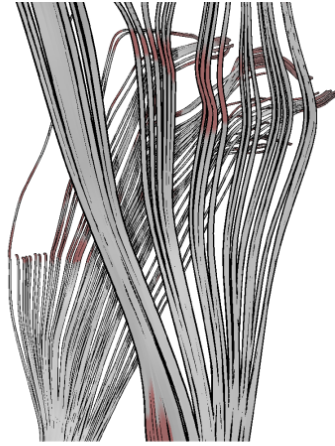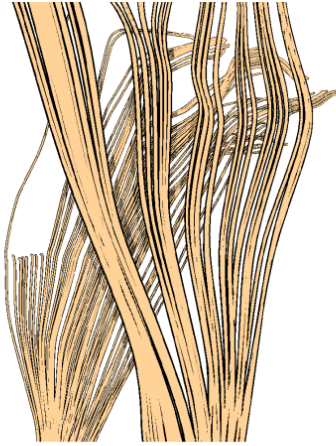Heinz-Otto Peitgen
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Figure 1: Visualization results of the pyramidal tracts using our non-photorealistic rendering techniques (upper row). Spatial depth and topology is emphasized with only limited use of color. Left: simple coloring, center: fractional anisotropy (red) shows diseased parts, right: fractional anisotropy as well as local direction is color-coded. Our polygon-based streamtube visualization is shown below.
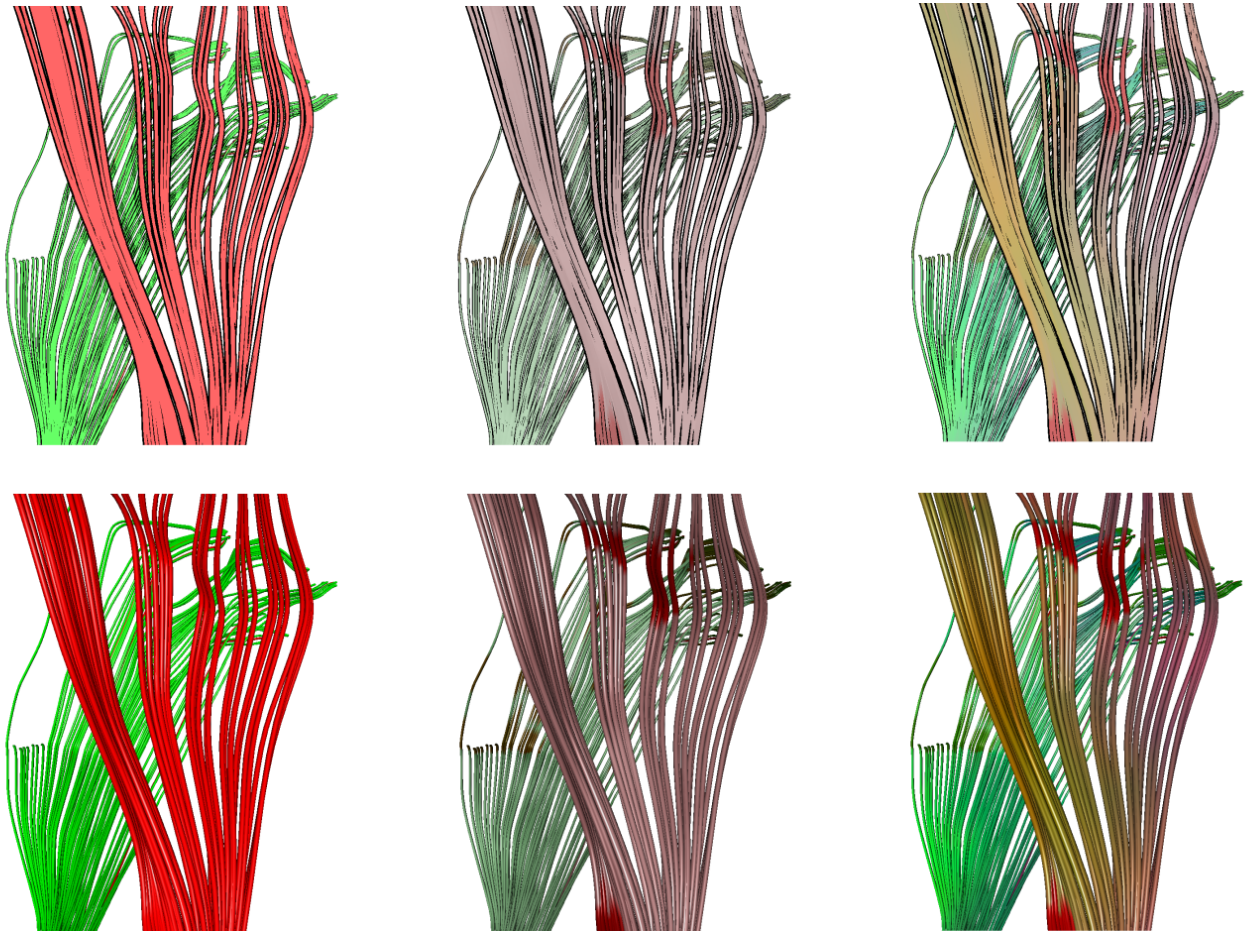
Figure 2: Pyramidal tracts clustered correctly into two parts using our spectral fiber clustering. Left: colors are used for differentiation only, center: additionally, fractional anisotropy is shown, right: color is used for differentiation of the clusters, for the fractional anisotropy as well as for encoding the local direction.