

Visualizing Spatial Relations Between 3D-DTI Integral Curves Using Texture Patterns

Contributions

- A new method for visualizing DTI integral curves
- Apply texture patterns on streamtube representations of integral curves, encoding spatial relations between the curves
- Expert feedback shows that our method can complement the existing more standard methods by showing subtle, continuous changes within large structures of integral curves

Motivations

This project is motivated by the need for new methods to visually differentiate integral curves. This will enable doctors to better understanding the white matter structure in the human brain. The goal of our method is to reflect spatial relations between visualized integral curves obtained from DTI volumes with texture patterns.



Figure 2: Applying RGB coloring vs. diamond pattern on whole brain nodel

(a) RGB coloring applied.e.g. Notice that the two cingulum bundle in the middle are colored in red with nearly no noticeable subgroup color distinction.

(b) Diamond pattern applied.e.g. Notice that smaller subgroups can be visually grouped within the bigger singular bundle.





^{172,} New York, NY, USA, 2006. ACM Press.