Approximation and Visualization of Surface Uncertainty

Timbwaoga A. J. Ouermi[1], Jixian Li[1], Tushar Athawale[2], Chris. R. Johnson[1]

[1]SCI Institute, University of Utah, [2]Oak Ridge National Laboratory
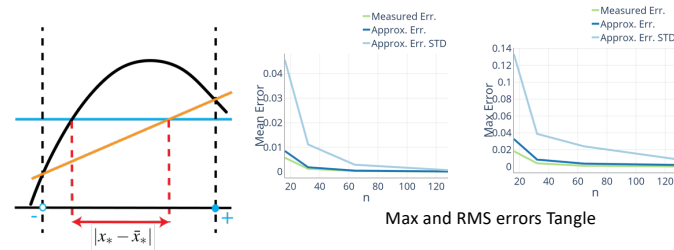
Introduction

Motivation

- The omission of surface extraction uncertainty can lead to inaccurate visualizations and may impact subsequent analyses reliant on the extracted surface
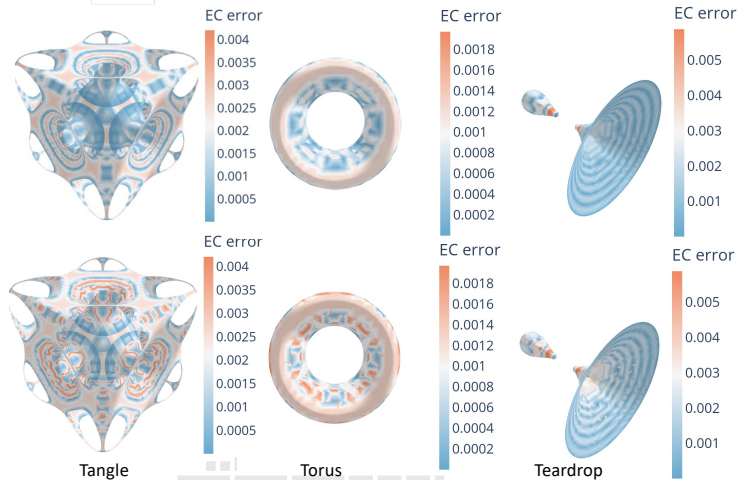
Goal

- Estimate and visualize surface uncertainty caused by the extraction procedure
- Enable exploration and Analysis of the estimation uncertainty
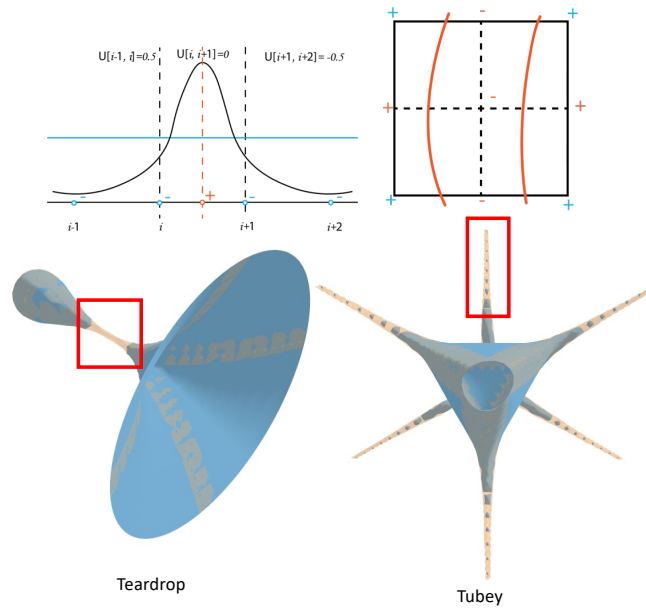- Enable comparison of different methods for surface extraction

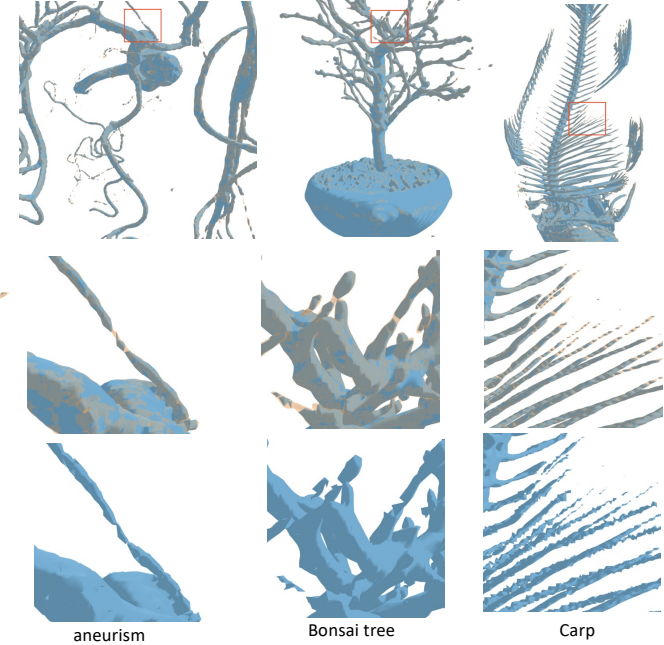## Edge-Crossing Error

Max and RMS errors Tangle

Tangle

Torus

Teardrop

Feature Uncertainty

$U[i-1, i] = 0.5$ $U[i, i+1] = 0$ $U[i+1, i+2] = -0.5$

Teardrop

Tubey

Interactive uncertainty Vis Interface

Results

aneurism

Bonsai tree

Carp

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