Upper Airway Analysis Report

Analysis Type: Airflow Simulation Processing Date: 2025-02-13 09:28:43

Quantitative Measurements:

Airway Volume: 13990.01 mm^3 cm^3

Airflow Simulation Summary:

Density (ρ): 1.122 kg/m^3
Kinematic viscosity (ν): 1.539 x 10^-5 m^2/s
Initial velocity: 1 m/s
Flow type: Laminar (Slow and steady, no turbulence)

Simulation performed using OpenFoam v2306.

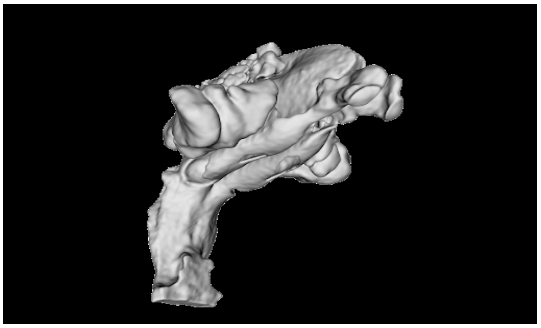

Figure 1: Initial Segmentation

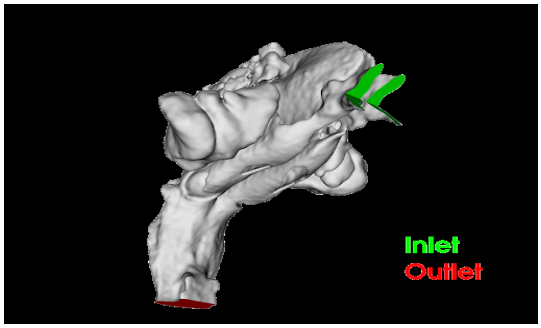

Figure 2: Processed Segmentation

CFD Simulation Results:

Airflow velocity and pressure contours with a scale bar are shown below.

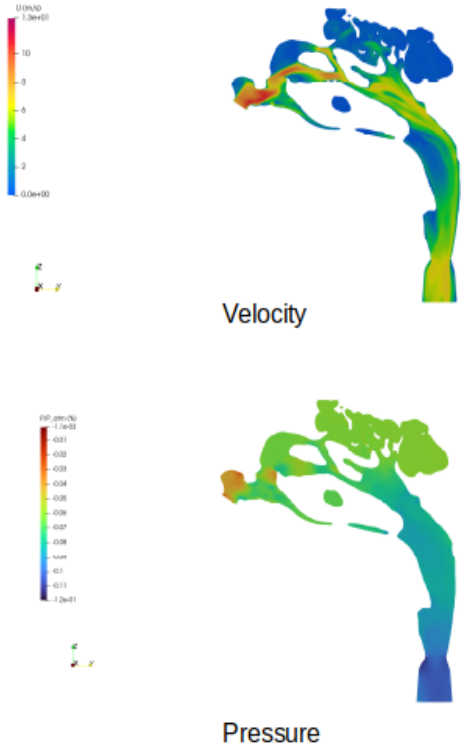

Figure 3: CFD Simulation Contour Plot