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Research Area: Computational Simulation/Visualization

Visualization plays an important role in allowing scientists to see and interpret results of computational simulations. To visualize results from simulations of biological processes, including cardiovascular and pulmonary flow, the SCIRun visualization software is needed. The attributes of the visualization software will be examined and optimized for showing the cardiovascular and pulmonary flow in three spatial dimensions. The pulmonary flow studies were previously obtained using a mathematical model made up of six branchings (generations). In addition to visualizing flow in three spatial dimensions, the SCIRun visualization software will also be used to display flow in an arterial model, a single tube where flow is computed in two spatial dimensions but visualized in three.

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