

Modeling and Visualization of Blood Flow

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Abstract: Blood flow models have been carried out to investigate the fluid dynamic in blood vessels by many researchers. The goal of this study is to model the behavior of blood vessel when the flow velocity and blood pressure are changed. We propose a modified Poiseuille equation and Bernoulli equation to simulate the effect of blood vessel from the change of blood pressure at any position of interested vessel. We use a particle system to visualize the flow of blood. The solution of the model will be implemented by a visualization of blood flow in vessel with a change of corresponding vessel diameter. The model can be applied to the blood flow in vessel system of heart.

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