

ABSTRACT

Heart and blood vessels form part of human organs are most important and interrelated. Tasked heart pumps blood while the blood vessels tasked to deliver them to the entire human body. There are several diseases of the heart and blood vessels one constriction of blood vessels in arteri. Research about the disease narrowing of blood vessels is mostly done, one of them with the experience penyempitan. Tujuan of arterial blood flow simulation is to look at the rate of blood flow in an artery experience constriction. In this final simulation of blood flow in the arteries that are narrowed using the Smooth Particle Hydrodynamic (SPH). SPH method is a numerical technique to simulate particles with the differential equation, where the fluid is represented as part of the so-called discrete particles. In the SPH method of motion of each particle is controlled by the Navier-Stokes equation (N-S) and the continuity equation. To do this simulation will be built with SPH simulator that can simulate fluid motion of blood. From the results of SPH simulator that has been built will be made simulating two-dimensional constriction of blood flow in the artery.

Keywords: Smooth Particle Hydrodynamic (SPH), fluid, arterial