

# Abstract

Heart attacks and strokes are the leading cause of death in humans in the world. This disease is caused by a pile that appears in the blood vessels resulting in narrowing of blood flow from the heart to the entire body. To view this incident, several studies have simulated blood flow through various methods.

In this Final Project has been built a simulation of blood flow in case of narrowing caused by two plaques (bump) on artery walls using Smoothed Particle Hydrodynamics (SPH) method. The SPH method is a computational method for simulating fluid flow with a discrete approach of smoothing neighboring particles. In this method every particle motion will be controlled by the Navier-Stokes equation (N-S).

**Keywords:** Smoothed Particle Hydrodynamics(SPH), Navier-Stokes, blood, pressure.