

## **FLUID FLOW IN SOME SIMPLE GEOMETRIES**

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Abstract: In this presentation we will consider different aspects of Newtonian and non-Newtonian fluids in parallel and non-parallel geometries. These studies are motivated by fluid flows in biological systems such as blood flow through arteries and veins. Any change in the geometry of the vessel wall can cause changes in blood flow, which can further lead to serious medical conditions. For the non-Newtonian fluids a Casson fluid model will be used to model the problems for parallel and non-parallel geometries. Differences in flow features such as velocity profile will be discussed.