OpenFoam Assignment | The Mach 3 Step

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Abstract

–SAMPLE ABSTRACT–

Keywords: computational fluid dynamics, CFD, incompressible, Paraview, R, Python, coe347, spring 2022.

1. Motivation

The flow over a Mach 3 step is a well-studied problem in CFD (computational fluid dynamics), making it a good choice for convergence and performance studies. A simple set of studies are undertaken here.

2. Implementation

We implement all simulation with OpenFoam, analysis with Paraview and Python3, and documentation code in R Xie, Dervieux, and Riederer (2020).

3. Theory : Governing Equations