

## Abstract

### **Air Flow Simulation around a Bullet using OpenFOAM**

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To simulate the supersonic flow around a bullet.



AK-47 Bullet for this simulation. An AK-47 bullet with its cartridge has dimensions of 7.62x39mm. This round rimless cartridge was developed during World War II by the Soviets. It functions well in temperatures ranging from -50 to 50 . The AK-47 rifles fired these bullets at speeds of about 750 m/s.

Solver to be used: sonicFoam  
Meshing Software: GMsh