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Title: Global Stabilization of a Rigid Body Moving in a Compressible Viscous Fluid

Abstract: We consider the stabilizability of a fluid-structure interaction system where the fluid is viscous and compressible and the structure is a rigid ball. The feedback control of the system acts on the ball and corresponds to a force that would be produced by a spring and a damper connecting the center of the ball to a fixed point h_1. We show with our feedback law that the fluid and the structure velocities go to 0 and that the center of the ball goes to h_1 as $t \rightarrow \infty$.