

Compactness in compressible Navier-Stokes system revisited

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Abstract

In this talk, we revisit the existence theory of weak solutions for the compressible Navier–Stokes system. We propose an approximation scheme that, instead of the classical regularization of the continuity equation (based on the viscosity approximation), employs a more direct truncation and regularization of nonlinear terms and the pressure. This scheme is compatible with the Kolmogorov compactness criterion for the density.