

Navier–Stokes–Fourier system with general in/out flow boundary conditions

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We introduce a new concept of weak solutions to the Navier–Stokes–Fourier system with general in/out flow boundary conditions. The system is open and interacts with the outer world through the boundary of the physical domain. The theory combines the standard variables: the mass density, the velocity, and the absolute temperature, with the entropy conservative variables: the mass density, the momentum, and the total entropy. The weak-strong uniqueness is established as well as global in time existence.

This is a joint work with A. Novotný (Toulon).