

Global weak solutions to a compressible Navier-Stokes/Cahn-Hilliard system with singular entropy of mixing

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In this talk, we consider a coupled Navier-Stokes/Cahn-Hilliard system describing the evolution of a compressible binary mixture of viscous fluids undergoing phase separation. In contrast to earlier works, we include the physically relevant Flory-Huggins (logarithmic) potential, and we discuss the existence of global-in-time weak solutions in three-dimensional bounded domains for arbitrarily large initial data. The talk is based on a joint work with Danica Basarić (Politecnico di Milano).