

# Shock Profiles for Fluid-Particles Flows in the Flowing Regime

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A hydrodynamical limit of a coupled kinetic-fluid model describing the interaction between particles and fluid in a given medium is considered with emphasis on the existence of smooth propagating fronts, i.e. classical heteroclinic traveling wave solutions. We focus on two different type of models based, respectively, on a Burgers and an Euler description of the dynamics of the fluid exhibiting (some) similarities and (many) differences. The implicit lesson is that the second one is (not surprisingly) more significant even having (surprisingly) the same level of difficulty of the first one.

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