

## **On a strong precompactness of a sequence of solutions to a heterogenous transport equation**

**Abstract:** We consider multidimensional transport equation with a flux explicitly depending on the space variable. Therefore, we coin the equation as heterogenous. We prove that a sequence of solution to the equation is strongly precompact in the space of absolutely integrable functions. We use techniques of H-measures introduced by L.Tartar and independently P.Gerard, and further extended by E.Yu.Panov.

Combining the latter result with the kinetic formulation of conservation law, we prove existence of solution to multidimensional heterogenous conservation law with the flux discontinuous in space variables. Such equation occur in various applications such as flow in porous media, sedimentation processes, traffic flow...