

Hyperbolic conservation laws with multiplicative stochastic perturbation

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We consider the Cauchy problem for a multidimensional nonlinear conservation law with multiplicative stochastic perturbation. Using the concept of measure-valued solutions and Kruzhkov's entropy formulation, a result on existence and uniqueness of entropy solution is proved.

A similar result is established for the corresponding problem on a bounded domain.

This is a joint work with Caroline Bauzet and Guy Vallet.

References

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- [2] *G. Vallet, P. Wittbold*: On a stochastic first-order hyperbolic equation in a bounded domain. *Infin. Dimens. Anal. Quantum Probab. Relat. Top.* *12* (2009), 613–651.