

Philippe G. LeFloch, University of Paris 6

"Entropy solutions of nonlinear hyperbolic systems"

ABSTRACT:

I will review the well-posedness theory for nonlinear hyperbolic systems of partial differential equations, which are derived from fundamental conservation principles of continuum physics. The solutions contain shock waves and are sought in the space of functions of bounded variation. The talk will cover the existence (Glimm), uniqueness (Bressan and LeFloch), and continuous dependence (Bressan, LeFloch, Liu, Yang) of entropy solutions to genuinely nonlinear, conservative systems. Recent developments of the theory to deal with more general hyperbolic systems will also be presented.