

Hyperbolic conservation laws: classical results and new perspectives

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The talk will shortly summarize classical results of well-posedness for a scalar conservation law

$$(1) \quad \begin{aligned} u_t + \operatorname{div} F(x, u) &= 0 && \text{in } (0, \infty) \times \mathbb{R}^d, \\ u(0, \cdot) &= u_0 && \text{in } \mathbb{R}^d. \end{aligned}$$

We want to indicate new trends in generalizations of this simple problem for the case of bounded domains, discontinuous fluxes and many others.