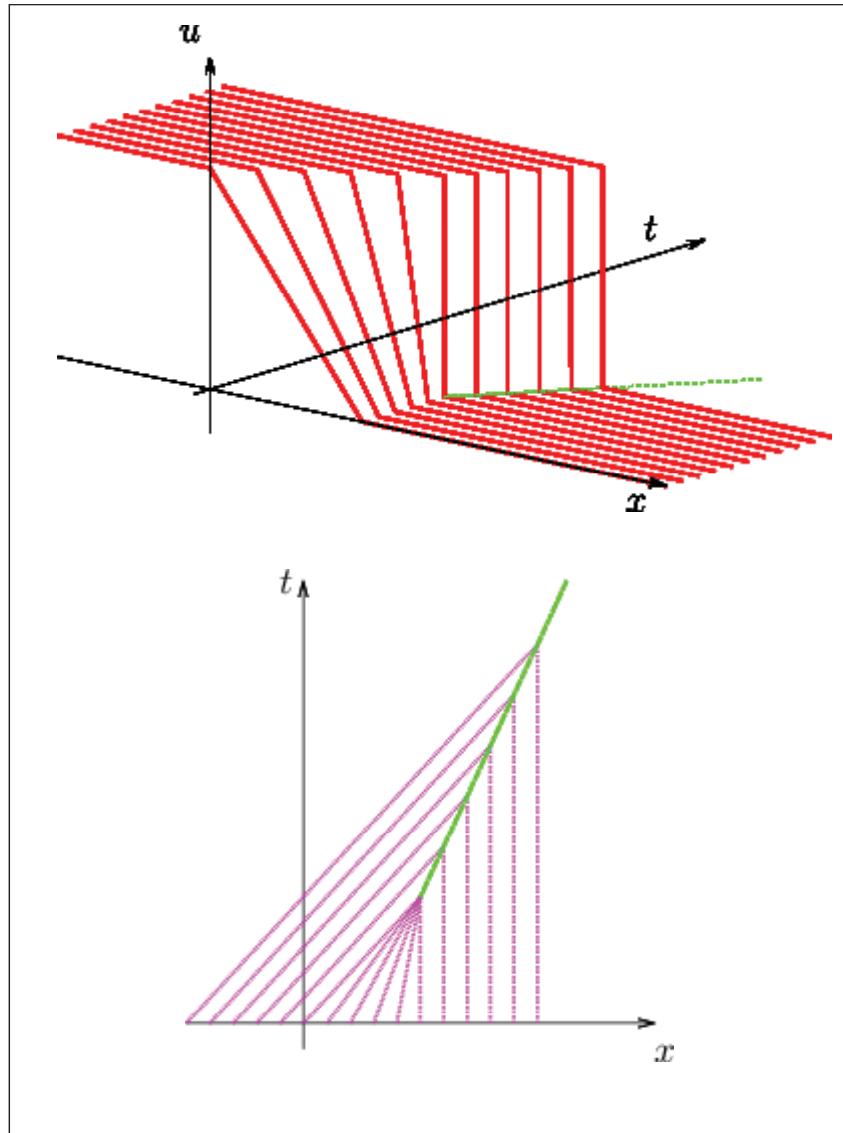# Solvability of Hyperbolic Systems of Conservation Laws

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Hyperbolic systems of conservation laws described as the first order quasilinear partial differential equations have been extensively studied. The most remarkable feature is that not only this type of equations do not possess the smoothing effects but also the regularities of classical solutions will be lost in finite time even if the initial data are smooth. We introduce the notion of weak solutions which interprets the derivatives of solutions in the generalized sense, then we need to allow the presence of discontinuities in the solutions such as shock waves and discuss the solvability in the wider class. However, in contrast to the single conservation laws, the case of systems has not yet been successfully solved until recently, except for the case that the total variation of initial data is sufficiently close to the equilibrium. In terms of the interaction potential estimates of Glimm type, we study the approximate solvability of a system of conservation laws and the stability of weak solutions even if the total variations of initial data are not small for the presence of large oscillations.