

On the characteristic initial value problem for a class of nonlinear symmetric hyperbolic systems, including Einstein equations

In this talk, we will consider a characteristic initial value problem for a class of symmetric hyperbolic systems with initial data given on two smooth null intersecting characteristic surfaces. We prove existence of solutions on a future neighborhood of the initial surfaces. The general result is applied to general semilinear wave equations, as well as the Einstein equations with or without sources. Joint work with Piotr Chruściel (University of Vienna) and Aurore Cabet (University of Tours).