

Meeting: 1001, Evanston, Illinois, SS 7A, Special Session on Geometric Partial Differential Equations

1001-35-85 **Qing Han*** (qhan@nd.edu), Department of Mathematics, University of Notre Dame, Notre Dame, IN 46556. *Solutions of Tricomi Equations.*

In this talk, we shall discuss the local existence of solutions to Tricomi equations over a planar domain. Tricomi equations are the simplest equations of the mixed type. It is elliptic in one side of the curve and hyperbolic in another side. We shall prove that solutions exist in a rectangular domain if we prescribe the boundary condition appropriately. The result here has an application in the local isometric embedding of surfaces in the three dimensional Euclidean space. (Received August 11, 2004)