

1046-35-555

**G.-Q. Chen, J. Chen\*** (chenjun@math.uh.edu) and **M. Feldman**. *Transonic flows past wedges governed by full Euler equations.*

Transonic flows arise from various physical phenomena. In this talk, I will focus on the wedge problem. When a supersonic flow past a wedge, there will be a shock created attaching to the tip of the wedge, given some subsonic condition in the far field. I will talk about the existence and uniqueness of this type of flow for 2-D steady Euler equations. For a small perturbation of constant supersonic incoming flow, we can find a unique subsonic flow downstream, which is a small perturbation from a constant subsonic state, and a transonic shock in between. We use implicit function theorem as the framework and delicate elliptic estimates are crucial in this framework. (Received September 08, 2008)