

1126-35-110

Tien Khai Nguyen* (khai@math.ncsu.edu), 2311 stinson drive, Box 8205, Raleigh, NC 27695.

Conservation laws and some applications to traffic flows. Preliminary report.

In this talk, I will introduce a new class of models of traffic flow on a network of roads. In these models, the percentage of drivers who travel along an incoming road and wish to turn into an outgoing road is not a constant. Moreover, the drivers who enter a congested road are placed in a buffer of limited capacity, waiting their turn in line. The main goal is to describe traffic flow at intersections and study optimization problems on a network of roads.

I will present the well-posedness result for a new intersection model of traffic flows, and the existence of globally optimal solutions, Nash equilibrium solutions for a decision problem involving a continuum of drivers on the network. (Received January 07, 2017)