

1053-35-221

Chi Hin Chan* (cchan@math.utexas.edu), 820 Washington Avenue S.E. Apt # 8, Minneapolis, MN 55414, and **Magdalena Czubak**. *On the regularity of solutions to fractal Burgers equation with critical exponent.*

In this talk, we present a piece of joint work of Chi Hin Chan and Magdalena Czubak, in which we establish the existence of smooth solutions to fractal Burgers equation with critical exponent by applying the parabolic De Giorgi's method as developed by Luis Caffarelli and Alexis Vasseur. In the talk, we will make a parallel comparison between our work on fractal Burgers' equation with critical exponent and the work by Caffarelli and Vasseur in their paper "Drift diffusion equations with fractional diffusion and the quasi-geostrophic equation." (Received September 04, 2009)