1052-11-51 **Yu-Ru Liu*** (`yrliu@math.uwaterloo.ca`), Department of Pure Mathematics, University of Waterloo, Waterloo, Ontario N2V 2S7, Canada. *Vinogradov's Mean Value Theorem in Function Fields.*

Let $\mathbb{F}_q[t]$ be the ring of polynomials over the finite field $\mathbb{F}_q$. In this talk, we will discuss a generalization of Vinogradov's mean value theorem in $\mathbb{F}_q[t]$. We will apply our result to study Waring's problem in function fields. This is a joint work with Trevor Wooley. (Received August 12, 2009)