YU RU LIU, University of Waterloo
Multidimensional Vinogradov-type estimates in function fields

Let $\mathbb{F}_q[t]$ denote the polynomial ring over the finite field $\mathbb{F}_q$. In this talk, we will employ Wooley's new efficient congruencing method to prove certain multidimensional Vinogradov-type estimates in $\mathbb{F}_q[t]$. These results allow us to apply a variant of the circle method to obtain asymptotic formulas for a system connected to the problem about linear spaces lying on hypersurfaces defined over $\mathbb{F}_q[t]$.