1127-42-216   **Jongchon Kim*** (`jkim@math.wisc.edu`). *Some remarks on Fourier restriction estimates.*

The Fourier restriction problem, raised by Stein in the 1960's, is a hard open problem in harmonic analysis. Recently, Guth made some progress on this problem using polynomial partitioning, a divide and conquer technique developed by Guth and Katz for some problems in incidence geometry. In this talk, we introduce the restriction problem and the polynomial partitioning method. In addition, we present some new $L^p \to L^q$ estimates for the Fourier restriction operator for the paraboloid. The refinements rely on some important results of Guth used to obtain $L^p \to L^p$ estimates. (Received February 04, 2017)