1125-42-2763 **Lechao Xiao*** (xle@math.upenn.edu), 209 South 33rd Street, David Rittenhouse Lab., Philadelphia, PA 19104. *Endpoint estimates for one-dimensional oscillator integral operators.*

The one-dimensional oscillatory integral operator associated to the real analytic phase S is given by

$$T_\lambda f(x) = \int_{-\infty}^{\infty} e^{i\lambda S(x,y)} \chi(x,y) f(y) dy.$$

In this talk, we will provide a complete characterization for the mapping properties of T_λ on $L^p(\mathbb{R})$ in terms of the Newton polyhedron of S. More precisely, $\|T_\lambda\|_p \lesssim |\lambda|^{-\alpha}\|f\|_p$ holds for some $\alpha > 0$ if and only if the point $(\frac{1}{\alpha p}, \frac{1}{\alpha p'})$ lies in the reduced Newton polyhedron of S, and this estimate is sharp if and only if it lies on the reduced Newton diagram. (Received September 20, 2016)