1039-11-7 **Greg Martin*** (gerg@math.ubc.ca), Dept. of Mathematics, UBC, Room 121, 1984 Mathematics Road, Vancouver, BC V6T 1Z2, Canada. *The limiting curve of Jarník's polygons.*

In 1925, Jarník defined a sequence of convex polygons for use in constructing curves containing many lattice points relative to their curvatures. Properly scaled, these polygons converge to a certain limiting curve. In this talk we will identify this limiting curve precisely, showing that it consists piecewise of arcs of parabolas. We will also show that the local curvatures do not converge to the local curvature of the limiting curve; in fact, the manner in which the local curvatures oscillate depends on the Diophantine approximation properties of the parameter that identifies the locale. If time permits, we will discuss sequences of polygons arising from generalizations of Jarník's construction. (Received January 11, 2008)