1077-11-597   **Robert L. Benedetto*** (`rlb@math.amherst.edu`). *Computing small canonical heights in arithmetic dynamics.*

Let K be a number field, and let ϕ be a morphism from the projective line to itself, defined over K and of degree at least two. It has been conjectured that there is a uniform upper bound for the number of K-rational preperiodic points, and that there is a uniform lower bound for the normalized canonical height of K-rational non-preperiodic points. In this talk, we will discuss some computational evidence for these conjectures, as well as the strategies underlying our computations. (Received September 08, 2011)