Equidistribution and the Dynamical Uniform Boundedness Conjecture
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Let $K$ be a number field, and let $f$ be a morphism from the projective line to itself, defined over $K$ and of degree at least two. The 1994 Dynamical Uniform Boundedness Conjecture of Morton and Silverman claims, in dimension one, that the number of $K$-rational preperiodic points of $f$ is bounded by a constant depending only on the degrees of $f$ and $K$. Meanwhile, the Dynamical Equidistribution Theorems of Baker and Rumely and of Favre and Rivera-Letelier concern certain dynamically defined measures on Berkovich spaces.

In this talk, I will reinterpret a theorem giving strong but still non-uniform bounds for preperiodic points of polynomials in the context of equidistribution. I will then describe joint work in progress with Rivera-Letelier on generalizing such bounds to rational functions.