MATT OLECHNOWICZ, University of Toronto

Distribution of preperiodic points in one-parameter families

Let f_t be a one-parameter family of rational maps (of degree at least 2) defined over a number field K. We show that for all t outside of a set of natural density zero, every K-rational preperiodic point of f_t is the specialization of some K(T)-rational preperiodic point of f. Assuming a weak form of the Uniform Boundedness Conjecture, we also find the average number of K-rational preperiodic points of any family, and give some examples where this holds unconditionally. This talk will not assume any prior knowledge of arithmetic dynamics.