

Upstate New York Online Number Theory Colloquium

Time and Date: 12:00 pm EST May 17, 2021

Speaker: Jason Bell

Title: Transcendental dynamical degrees of birational maps

Abstract: The degree of a dominant rational map $f : \mathbb{P}^n \rightarrow \mathbb{P}^n$ is the common degree of its homogeneous components. By considering iterates of f , one can form a sequence $\deg(f^n)$, which is submultiplicative and hence has the property that there is some $\lambda \geq 1$ such that $(\deg(f^n))^{1/n} \rightarrow \lambda$. The quantity λ is called the first dynamical degree of f . We'll give an overview of the significance of the dynamical degree in complex dynamics and describe recent examples in which this dynamical degree is provably transcendental. This is joint work with Jeffrey Diller, Mattias Jonsson, and Holly Krieger.