

# RIGIDITY AND UNIFORMITY IN ALGEBRAIC DYNAMICS

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The periodic orbits and their structure are fundamental features of a dynamical system. In an algebraic setting, where the system is defined by polynomials, we can use tools from algebraic or arithmetic geometry to study these orbits. Important special cases include endomorphisms of abelian varieties, for example as appearing in the proofs of uniform versions of the Mordell or Manin-Mumford Conjectures in the recent breakthroughs of Dimitrov-Gao-Habegger, Kühne, Yuan and others, where the torsion points of the group coincide with the preperiodic points of an endomorphism. In this talk, I will describe some parallel questions and recent progress on more general families of complex and arithmetic dynamical systems.

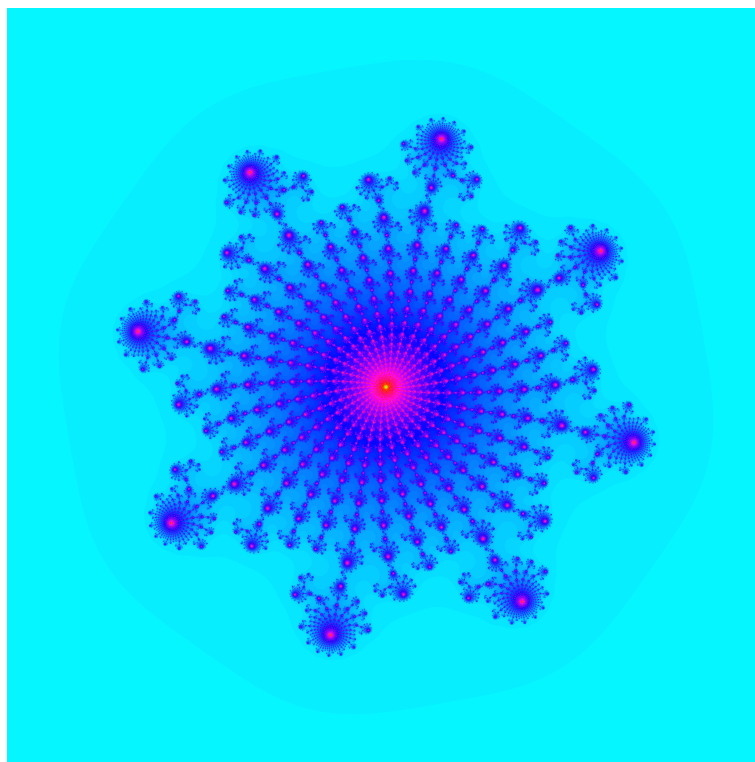


FIGURE 1. The Julia set of a polynomial with symmetries

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