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Dynamic classification of escape time Sierpinski curve Julia sets

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(joint work with Kevin Pilgrim)

In this talk we consider the family of rational maps of the form $z^n + C/z^d$ where $n > 1$. When all the critical orbits escape to infinity, it is known that the Julia set is a Sierpinski curve, i.e., homeomorphic to the Sierpinski carpet. While all these sets are homeomorphic, they have very different dynamics depending upon the behavior of the critical orbits. We give a complete classification of these dynamical behaviors.