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Computability and non-Computability of Julia sets

Polynomial Julia sets have emerged as the archetypical examples of invariant fractals generated by complex dynamical systems. Their computer-generated pictures are among the "most drawn" images in mathematics. We are interested in questions of algorithmic computability of these objects.

In our talk we will discuss what it means for a planar compact to be computable, and will present both positive and negative results about the computability of Julia sets.