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The K-theory of a rational function

The dynamics of iterating a rational function exhibits complicated and interesting behaviour when restricted to points in its Julia set. Kajiwara and Watatani constructed a C^* -algebra from a rational function restricted to its Julia set in order to study its dynamics from an operator algebra perspective. They showed the C^* -algebras are Kirchberg algebras that satisfy the UCT, and are therefore classified by K-theory. The K-theory groups of these algebras have been computed in some special cases, for instance by Nekrashevych in the case of a hyperbolic and post-critically finite rational function. We compute the K-theory groups for a general rational function using methods different to those used before. In this talk, we discuss our methods and results.