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The homotopy type of Cuntz classes in real rank zero C-algebras*

Roughly speaking, the Cuntz semigroup generalizes the Murray-von Neumann semigroup for projections to the broader setting of positive elements. Introduced by Cuntz in 1978, it has enjoyed a resurgence since the mid 2000s and has become an important tool in the structure and classification theory of nuclear separable C*-algebras. In this talk we examine the homotopy type of Cuntz classes in real rank zero C*-algebras, and identify their homotopy groups completely for a class that includes AF and irrational rotation algebras.