
GEORGE ELLIOTT, University of Toronto, Department of Mathematics, Toronto, Ontario, M5S 2E4

A universal description of the AF envelope of an irrational rotation C^ -algebra*

A simple description is given of an embedding of the irrational rotation C^* -algebra into an AF algebra, in which the AF algebra is the same as that considered by Pimsner and Voiculescu in their pioneering work almost thirty years ago, but the construction avoids the technical complexities of the Pimsner–Voiculescu construction. While the description of the embedding is very simple, and it is in fact determined uniquely by a very simple universal property, the proof that the larger algebra is an AF algebra is rather complicated. Indeed, the proof has so far only been carried out in the generic case.

This is joint work with Zhuang Niu.