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AF-Embeddings for Algebras of Decomposition Rank 1

AF-embeddability, ie the question whether a given C*-algebra can be realised as a subalgebra of an AF-algebra has been studied for a long time with prominent early results by Pimsner and Voicuescu who constructed such embeddings for irrational rotation algebras in 1980. Since then many AF-embeddings have been constructed for concrete examples but also many non-constructive AF-embeddability results have been obtained for whole classes of algebras but typically assuming the UCT to hold.

In this talk we consider a separable unital C*-algebra A of decomposition rank 1 and use 1-decomposable approximations of A to construct an AF algebra E and an embedding of A into E. This does not require the UCT for A at all. As an application we can show AF-embeddability of quasidiagonal simple nuclear unique trace C*-algebras without assuming the UCT (and more generally for those with only QD-traces).