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Tracial matricial structure and stable rank one

Let A be a separable (not necessarily unital) simple C^* -algebra with strict comparison. We show that if A has property (TM) then A has stable rank one and the canonical map Γ from the Cuntz semigroup of A to the corresponding lower-semicontinuous affine function space is surjective. The converse also holds.

As a by-product, we find that a separable simple C^* -algebra, which has almost stable rank one must have stable rank one, provided it has strict comparison and the canonical map Γ is surjective.

This is a joint work with Huaxin Lin.