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Abstracts of Short Communications and Posters

Section:

8. Analysis

1991 MS Classification: 46, 19, 81
Kirchberg, Eberhard, Humboldt-Universität zu Berlin
Classification of non-simple nuclear C*-algebras
There is a generalization $KK_{nuc}(X, A, B)$ of the nuclear KK-functor to the Ψ-equivariant category of C*-algebras A with an upper semicontinuous lattice map Ψ from the open subsets of a T_0-space X to the lattice of closed ideals of A (e. g. the 1-1-map Ψ from the open subsets of $X := Prim(A)$ onto the closed ideals of A).
For stable separable nuclear A *and* B, $A \otimes \mathcal{O}_\infty \cong B \otimes \mathcal{O}_\infty$ *if and only if*
(i) $X := Prim(A) \cong Prim(B)$, *(ii)* A *and* B *are* $KK_{nuc}(X, ., .)$*-equivalent, and*
(iii) the isomorphism of (i) is given by an isomorphism $A \otimes \mathcal{O}_2 \cong B \otimes \mathcal{O}_2$.
In some cases one can prove that (i) implies (iii), and that $A \cong A \otimes \mathcal{O}_\infty$.
Reference: Kirchberg, E., *The classification of purely infinite C*-algebras using Kasparov's Theory*, Fields Inst. Comm. , to appear 1998.