

Amini, Massoud; Asadi, Mohammad B.

On nuclearity of the algebra of adjointable operators. (English) Zbl 1334.46042

Bull. Belg. Math. Soc. - Simon Stevin 22, No. 3, 423-427 (2015).

S. Wassermann [J. Funct. Anal. 23, 239–254 (1976; Zbl 0358.46040)] characterized nuclear W^* -algebras by showing that a W^* -algebra A is nuclear if and only if it is a direct sum of finitely many type I W^* -algebras of the form $Z \otimes M_n(\mathbb{C})$, with $n < \infty$ and Z an abelian W^* -algebra. When A is a von Neumann algebra and E is a self-dual and full Hilbert C^* -module over A , the authors prove that the C^* -algebra $B(E)$ of all adjointable operators on E is nuclear if and only if A is nuclear and E is finitely generated. They also show that if A is a factor, then the nuclearity of $B(E)$ implies that E , A and $B(E)$ are finite dimensional.

Reviewer: [Mohammad Sal Moslehian \(Karlstad\)](#)

MSC:

[46L08](#) C^* -modules

[46L10](#) General theory of von Neumann algebras

Keywords:

[Hilbert \$C^*\$ -modules](#); [nuclearity](#); [Morita equivalence](#)

Full Text: [Euclid](#)