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Abelian, amenable operator algebras are similar to C*-algebras

Suppose that H is a complex Hilbert space and that $B(H)$ denotes the bounded linear operators on H. We show that every abelian, amenable operator algebra is similar to a C^*-algebra. We do this by showing that if $A \subseteq B(H)$ is an abelian algebra with the property that given any bounded representation $\varrho : A \to B(H_\varrho)$ of A on a Hilbert space H_ϱ, every invariant subspace of $\varrho(A)$ is topologically complemented by another invariant subspace of $\varrho(A)$, then A is similar to an abelian C^*-algebra.

This is a joint work with Laurent W. Marcoux.