

## Free products in AQFT

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We apply the free product construction to various local algebras in algebraic quantum field theory.

If we take the free product of infinitely many identical irreducible half-sided modular inclusions, we obtain a half-sided modular inclusion with ergodic canonical endomorphism and trivial relative commutant.

On the other hand, if we take finitely many Möbius covariant nets with trace class property, we are able to construct an inclusion of free product von Neumann algebras with a large relative commutant.

(joint work with R. Longo and Y. Ueda)