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Hilbert space representations of the annular Temperley-Lieb algebra. (English)

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Summary: The set of diagrams consisting of an annulus with a finite family of curves connecting some points on the boundary to each other defines a category in which a contractible closed curve counts for a certain complex number δ . For $\delta = 2 \cos(\pi/n)$, this category admits a C^* -structure and we determine all Hilbert space representations of this category for these values, at least in the case where the number of internal boundary points is even. This result has applications to subfactors and planar algebras.

MSC:

46L37 Subfactors and their classification

16D60 Simple and semisimple modules, primitive rings and ideals in associative algebras

57M27 Invariants of knots and 3-manifolds (MSC2010)

Cited in **20** Documents

Keywords:

planar algebras; subfactors; annular Temperley-Lieb; category; affine Hecke

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