

# The K-theory of Temperley—Lieb subproduct systems

*jeudi 25 septembre 2025 10:20 (50 minutes)*

Subproduct systems arising from Temperley–Lieb combinatorics provide a rich class of quantum structures that interpolate between algebraic and topological features of noncommutative spaces. These systems naturally generate Cuntz–Pimsner algebras, which can be viewed as noncommutative analogues of function algebras on quantum homogeneous spaces or algebraic subsets of noncommutative spheres.

In this talk, we investigate the K-theory of these  $C^*$ -algebras, focusing on duality phenomena in the spirit of KK-theory. Our approach generalizes classical results of Kaminker and Putnam on Cuntz–Krieger algebras to a quantum setting, where the underlying symmetry is encoded by Temperley–Lieb polynomials.

Based on joint work with D. Gerontogiannis and S. Neshveyev.

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