K-theoretic properties of SU(2)-subproduct systems

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Abstract

In this talk, we shall consider SU(2)-equivariant subproduct system of Hilbert spaces and their Toeplitz and CuntzPimsner algebras. We will provide results about their topological invariants through K(K)- theory. More specifically, we will show that the Toeplitz algebra of the subproduct system of an SU(2)-representation is equivariantly KK-equivalent to the algebra of complex numbers so that the (K)K-theory groups of the CuntzPimsner algebra can be effectively computed using a Gysin exact sequence involving an analogue of the Euler class. Finally, we will discuss why and how C*-algebras in this class satisfy Poincaré duality.

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