SU(2)-symmetries, subproduct systems, and exact sequences of C*-algebras

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Motivated by the study of symmetries of C*-algebras and by multivariate operator theory, we will introduce the notion of an $SU(2)$-equivariant subproduct system of Hilbert spaces. We will describe the associated Toeplitz and Cuntz–Pimsner algebras and provide results about their topological invariants through K(K)-theory.

In particular, we will show how to compute the (K)K-theory groups of the Cuntz–Pimsner algebra of an (irreducible) $SU(2)$-subproduct system using an exact sequence that involves an operator theoretic analogue of the Euler class.

Based on joint work with Jens Kaad (SDU Odense).