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*Quantum automorphisms of commuting squares*

Banica defined a compact quantum group of automorphisms for an inclusion of finite-dimensional  $C^*$ -algebras and determined its representation theory in certain cases. We generalize Banica's work and assign a compact quantum group of automorphisms to a nondegenerate commuting square consisting of finite-dimensional  $C^*$ -algebras and show that it can be realized as a generalized Drinfeld double. Finally, we discuss the representation theory in special cases.