Quantum group dilations

Uwe Franz

University of Franche-Comte at Besancon, France

Dilations are a very useful tool in the study of cp maps and semigroups of cp maps. Kuemmerer and Maassen have shown how to construct dilations of certain semigroups of trace preserving unital cp maps on M_n using Levy processes with values in the unitary group. In my talk I will extend this construction to Levy processes on compact quantum groups and discuss the question which cp semigroups admit such a dilation.