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The continuous field of quantum $GL(N, \mathbb{C})$

Given a unital $*$-algebra A together with a good filtration by positive reals on its set of irreducible (bounded) representations, one can construct a C*-algebra A_0 with a dense two-sided ideal A_c such that A maps densely into the multiplier algebra of A_c. When the filtration is induced from a central element in A, we say that A is an s^*-algebra. We also introduce the relative notion of R-algebra over a commutative s^*-algebra R, and of Hopf R-algebra. We formulate conditions such that the completion of a Hopf R-algebra gives rise to a continuous field of Hopf C*-algebras over the spectrum of R_0. We apply the general theory to the case of quantum $GL(N, \mathbb{C})$ as constructed from the FRT-formalism. This is joint work with M. Floré.