D-MODULES ON THE QUANTUM FLAG VARIETY

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Abstract

The quantum flag variety is an example of a noncommutative space. I will describe how to think of it using the equivariant language, and I will show that it is a noncommutative projective variety. The category of D-modules over this variety will be described. For generic q I will show that this category is equivalent to the category of modules over the finite part of the quantum group. This work attempts to understand A. Joseph's work in the language of noncommutative geometry. It is joint work with E. Backelin.