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Families of maximal commutative subalgebras in quantum groups

A useful approach to decomposing a representation of an algebra into manageable pieces is through the action of its maximal commutative subalgebras. I will discuss several families of such subalgebras in the context of Lie theory, in particular the shift-of-argument as well as Bethe algebras. These families are parametrized by interesting geometric spaces, such as the Deligne-Mumford moduli space. For a given representation, their action leads to a covering space with associated monodromy realized by the cactus group acting on the crystal for that representation. The talk will focus on the case of $\mathfrak{gl}(n)$.