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Fusion rings from quantum groups and DAHA actions

In this talk I will give a short overview about fusion rings arising from quantum groups at odd and even roots of unities. These are Grothendieck rings of certain semisimple tensor categories. Then I will study these rings in more detail. The main focus of the talk will be an expectation by Cherednik that there is a certain DAHA action on these rings which can be used to describe the multiplication and semisimplicity of these rings. As a result we present a theorem which makes Cherednik's expectation rigorous.