



20.11.2015

## Einladung

Am Freitag, dem 11. Dezember 2015, 11:15 Uhr, Seminarraum o

spricht

**Dr. Sarah Scherotzke**

(Universität Bonn)

„Graded quiver varieties and Derived Categories“

Zusammenfassung:

Nakajima's quiver varieties are important geometric objects in representation theory that can be used to give geometric constructions of quantum groups. Very recently, graded quiver varieties also found application to monoidal categorification of cluster algebras. Nakajima's original construction uses geometric invariant theory. In my talk, I will give an alternative representation theoretical definition of graded quiver varieties. I will show that the geometry of graded quiver varieties is governed by the derived category of the quiver  $Q$ . This approach brings about many new and surprising results. Also, I will explain that familiar geometric constructions in the theory of quiver varieties, such as stratifications and degeneration orders, admit a simple conceptual formulation in terms of the homological algebra of the derived category of  $Q$ .

**Auf diese Vorträge wird besonders hingewiesen**

gez. Martin Stein, Dekan