Truncated shifted Yangians and Nakajima monomial crystals

Abstract:

In geometric representation theory slices to Schubert varieties in the affine Grassmannian are affine varieties which arise naturally via the Satake correspondence. This talk centers on algebras called truncated shifted Yangians, which are quantizations of these slices. In particular we will describe the highest weight theory of these algebras using Nakajima's monomial crystal. This leads to conjectures about categorical $\mathfrak{g}$-action (Langlands dual Lie algebra) on representation categories of truncated shifted Yangians.