Quantization in Representation Theory, Derived Algebraic Geometry, and Gauge Theory



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Higher spin representations of the Yangian of \mathfrak{sl}_2 and R-matrices

Tuesday 17 September 2024 11:00 (1 hour)

For the Yangian of \mathfrak{sl}_2 , higher spin representations are tensor products of the evaluation pullback of the ℓ_i+1 -dimensional irreducible representations of \mathfrak{sl}_2 , where ℓ_i are the highest weights. In my talk, I will give a geometric realization of the higher spin representations in terms of the critical cohomology of representations of the quiver with potential of Bykov and Zinn-Justin. I will also talk about the construction of R-matrices via the lattice model and the weight functions.

This is based on my joint work with Paul Zinn-Justin.

Presenter: YANG, Yaping (University of Melbourne)