

Cohomological Hall algebras, vertex algebras and instantons

Monday, February 4, 2019 11:00 AM (1 hour)

A new class of vertex operator algebras, vertex algebras at the corner, are recently introduced by Gaiotto and Rapčák, generalizing the affine W -algebra of \mathfrak{gl}_N . In my talk, I will discuss an action of this new vertex algebra on the cohomology of certain spiked instanton moduli spaces on 3CY manifold in the sense of Nekrasov. This action is naturally obtained using the cohomological Hall algebras of Kontsevich-Soibelman. This talk is based on my joint work with Miroslav Rapčák, Yan Soibelman, and Gufang Zhao.

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Session Classification: Yaping Yang: Cohomological Hall algebras, Vertex algebras and instantons