

Date: 2022. 7. 27.

タイトル TITLE	Elliptic Quantum Toroidal Algebra $U_{q,t,p}(\mathfrak{gl}_{1,\text{tor}})$ and Affine Quiver Gauge Theories		
講演者 NAME	今野 均 (Hitoshi Konno)	所属 INSTITUTION	東京海洋大・学術研究院

We introduce the elliptic quantum toroidal algebra $U_{q,t,p}(\mathfrak{gl}_{1,\text{tor}})$. After giving some representations including a representation realized by using the elliptic Ruijsenaars difference operator, we construct intertwining operators of the $U_{q,t,p}(\mathfrak{gl}_{1,\text{tor}})$ -modules w.r.t. the Drinfeld comultiplication. We then show that $U_{q,t,p}(\mathfrak{gl}_{1,\text{tor}})$ gives a realization of the affine quiver W -algebra $W_{q,t}(\Gamma(\widehat{A}_0))$ proposed by Kimura-Pestun. This realization turns out to be useful to derive the Nekrasov instanton partition functions, i.e. generating functions of the χ_y and the elliptic genus of the instanton moduli space, of the 5d and 6d lifts of the 4d $\mathcal{N} = 2^*$ gauge theories and provide a new Alday-Gaiotto-Tachikawa correspondence.