

Affine $\mathfrak{sl}(N)$ conformal blocks from $N=2$ $SU(N)$ gauge theories

Alday and Tachikawa have recently proposed a relation between conformal blocks in a two-dimensional theory with affine $\mathfrak{sl}(2)$ symmetry and instanton partition functions in four-dimensional conformal $N=2$ $SU(2)$ quiver gauge

theories in the presence of a certain surface operator. I will describe how to extend this proposal to a relation between conformal blocks in theories with affine $\mathfrak{sl}(N)$ symmetry and instanton partition functions in conformal

$N=2$ $SU(N)$ quiver gauge theories in the presence of a surface operator. I will also discuss the extension to non-conformal $N=2$ $SU(N)$ theories.

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