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*Title:*

**"A new representation for two- and three-point correlators of operators from  $sl(2)$  sector"**

*Abstract:*

We construct a new representation for two- and three-point correlators of operators from  $sl(2)$  sector of planar  $N = 4$  SYM. The spin and twist of operators are arbitrary. We start with the correlation function of light-ray operators and carry out a projection to particular local operators using the method of Separated Variables. With the same calculation we obtain polynomials which are dual to wave functions of  $sl(2, \mathbb{R})$  spin-chain.