

# Modular transformation of $c=1$ toric conformal block from isomonodromic deformations

*Monday, 23 September 2024 17:35 (25 minutes)*

We will see how isomonodromic tau functions for a torus with one puncture can be expressed in term of  $c=1$  conformal blocks (or  $\mathcal{N}=2^*$  gauge theory partition functions). Then we will study monodromy dependence of these tau functions, find their behavior under the modular transformation  $\tau \rightarrow -1/\tau$ , and then use this knowledge to find an explicit formula for the fusion kernel for  $c=1$  conformal block. The talk will be based on a joint work with Fabrizio Del Monte and Harini Desiraju.

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