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Tau function, topological string and spectral theory

Wednesday 24 January 2024 19:00 (30 minutes)

Tau function not only is the essential object in the study of integrable system in mordern mathematics but also plays important role in physics; they correspond to the (chiral) conformal blocks. I will talk about our work on an application of tau function to study the physics, which is to prove a special limit of the conjectured topological string/ spectral theory (TS/ST) correspondence. I will introduce the TS/ST correspondence and the particular scaling limit we are taking. In particular, we focus on $Y^{N,0}$ geometry. Tau function is an important tool we use in the proof. And in turn, the proved duality helps us to obtain the strong coupling expression for the tau function itself.

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