



Department of  
Theoretical Physics

# THE QUANTUM SPACETIME SEMINAR SERIES

## Periodic dilaton gravity, discrete geometry and double scaled SYK

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(MIT)

**Date:** March 17, 2025

**Time:** 9 AM IST

**Venue:** A304



Zoom link shall be shared separately

We review recent developments connecting theories of dilaton gravity with a periodic potential to theories with discrete geometry such as in the dual of the DSSYK model. We discuss how for a particular choice of potential - a sine potential - a direct connection to DSSYK can be made. We also discuss branes and other non-perturbative effects in this sine-dilaton model. Finally, we speculate on how this model may be more precisely connected to the complex Liouville string of Collier, Eberhardt, Muehlmann and Rodriguez.