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## Massive holomorphicity in the near-critical dimer model

Thursday, May 22, 2025 3:00 PM (1 hour)

We consider the dimer model on isoradial graphs, in the near-critical scaling regime and with Temperleyan boundary conditions. In previous joint work with Levi Haunschmid-Sibitz we proved (for the square and hexagonal lattices) convergence of branches in the associated Temperleyan tree to the so-called massive  $SLE_2$  of Makarov and Smirnov. We also stated a precise conjecture that the limiting height function is a specific variant of the sine-Gordon model (from quantum field theory) at its free fermion point.

This conjecture is currently being proved in joint work with Scott Mason and Lucas Rey. I will describe some of our results in this direction.

Author: Prof. BERESTYCKI, Nathanael (Cornell University)

Presenter: Prof. BERESTYCKI, Nathanael (Cornell University)