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Remodeling Conjecture with inner branes, descendants and primaries

Monday 6 October 2025 10:00 (1 hour)

The Remodeling Conjecture proposed by Bouchard-Klemm-Mariño-Pasquetti relates all-genus open-closed Gromov-Witten invariants in a toric Calabi-Yau 3-manifold/3-orbifold to the Chekhov-Eynard-Orantin Topological Recursion (TR) invariants of its mirror curve. In this talk, I will describe the Remodeling Conjecture when 1) there are multiple Aganagic-Vafa Lagrangian branes, including inner branes; 2) Gromov-Witten invariants have descendant and primary insertions. Descendant insertions correspond to oscillatory integrals and Gamma classes, while primary insertions correspond to period integral of TR forms by special geometry. Furthermore, in the non-equivariant limit, we prove a conjecture of Hosono which equates quantum cohomology central charges of compactly supported coherent sheaves with period integrals of a holomorphic 3-form along integral 3-cycles on the Hori-Vafa mirror. This talk is based on joint work with Chiu-Chu Melissa Liu, Song Yu, and Zhengyu Zong.

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