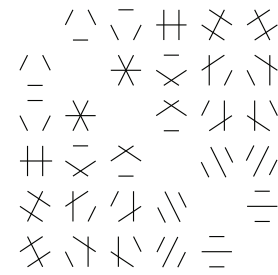


Mathematics Seminar



Rocky Mountain Algebraic Combinatorics Seminar

Plane partitions and the single dimer model.

Ben Young
University of Oregon

Pre-seminar talk

The squish map and the SL_2 double dimer model

Ben Young
University of Oregon

The dimer model is a well-known Gibbs measure on perfect matchings (degree 1 subgraphs) of an edge-weighted planar bipartite graph. There's a more subtle model, Kenyon's " SL_2 double-dimer model", which is a probability measure on degree-2 subgraphs (with doubled edges allowed); there's a 2×2 matrix as well as a weight on each edge, and you take the traces of matrix products along each loop. In recent joint work with Leigh Foster (arXiv:2310.03230), we describe a nice, measure-preserving map - the "Squish map" - from the first model to the second one, in the case where the graph is the regular honeycomb. Here, we can interpret the map in terms of plane partition enumeration in various ways.

Weber 223
4–6 pm, Friday, November 3, 2023
(Refreshments 3:30–4 pm)
Colorado State University
4 pm, Friday, November 3, 2023

This is a joint Denver U / UC Boulder / U of Wyoming / CSU seminar that meets biweekly.
Anyone interested is welcome to join us at a local restaurant for dinner after the talks.



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