Contribution ID: **16** Type: **Lecture**

Biorthogonal measures, polymer partition functions, and random matrices.

Tuesday, June 4, 2024 11:00 AM (50 minutes)

In this talk, I will describe a particular class of biorthogonal measures related to discrete and semi-discrete polymers (Log-Gamma, O'Connell-Yor, and mixed). More precisely, I will show that the Laplace transform of the partition function of the mentioned polymers coincides with the multiplicative statistics of these biorthogonal measures. This result can be seen as a finite N variant of the connection between the narrow wedge solution of the KPZ equation and the Airy point process. It generalizes previous results of Imamura and Sasamoto for the (homogeneous) O'Connell-Yor polymer. Time permitting, I will show some applications to the small-temperature limit of these polymers and their relation with matrix models. These results have been obtained jointly with Tom Claeys.

Primary author: CAFASSO, Mattia

Presenter: CAFASSO, Mattia