Mathematics and CS Seminar

Towards the scaling limit of the intrinsic metric for two-dimensional critical percolation clusters

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We consider the conformal loop ensembles ($\CLE_\kappa$) in the regime $\kappa \in (4,8)$ which is the range of parameter values so that the loops intersect themselves, each other, and the domain boundary. We show that there is a canonical conformally covariant and geodesic metric defined in the gasket of a $\CLE_\kappa$ (its “intrinsic metric”), the set of points which are not surrounded by any of the loops. We conjecture that this metric describes the scaling limit of the intrinsic metric associated with discrete lattice models which converge in the limit to $\CLE_\kappa$ for $\kappa \in (4,8)$ (e.g., two-dimensional critical percolation). Based on joint works with Valeria Ambrosio and Yizheng Yuan.

Monday, November 18, 2024 03:45pm - 04:45pm
Central Bldg / O1 / Mondi 2a (I01.O1.008)

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