

Cluster Duality and Non-holomorphic Spectral Curves

mardi 29 novembre 2022 17:45 (45 minutes)

Cluster duality is a correspondence between tropical points of a cluster A -variety and a canonical basis of functions on the corresponding X -variety. (It is a generalization of duality between integers and the multiplicative group.) In the talk, we will suggest related geometric interpretations of the tropical points of the A -variety for a local system of the curve. On the hand, it can be considered as a class of graphs on the surfaces colored by generators of the affine Weyl group. This is a generalization of the notion of measured lamination. On the other hand, it can be interpreted as a class of Lagrangian coverings in the cotangent bundle to the curve representing integer classes of homology. Finally, they are related to the "cells" of the space of the local system on the curve with values in the affine group.

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