

Math/Phys Seminar

Speaker: Michael Gekhtman, U Notre Dame
Tues, Jan 30, 1:30 pm, BRNG 1255

Title: Poisson maps as a toll for constructing cluster structures

Abstract:

We present a construction for cluster charts in simple Lie groups compatible with Poisson structures in the Belavin-Drinfeld classification. The latter are described by combinatorial data associated with the corresponding root system.

We use this data to construct a birational Poisson map from the group to itself that transform a Poisson bracket associated with a nontrivial Belavin-Drinfeld data into the standard one. It allows us to obtain a cluster chart as a pull-back of the Berenstein-Fomin-Zelevinsky cluster coordinates on the open double Bruhat cell.

This is a joint work with M. Shapiro and A. Vainshtein.