Department of Mathematics
University of Notre Dame

ALGEBRAIC GEOMETRY AND COMMUTATIVE ALGEBRA SEMINAR

Speaker: Dmytro Voloshyn
IBS Center for Geometry and Physics, Pohang

Date: Thursday, April 25, 2024
Time: 3:30 PM
Location: 258 Hurley Bldg
Zoom URL: NA

Lecture Title:

Generalized cluster structures on the special linear group

Abstract

The Gekhtman-Shapiro-Vainshtein conjecture (the GSV conjecture) states that for any given simple complex algebraic group G and any Poisson bracket from the Belavin-Drinfeld class, there exists a compatible generalized cluster structure. In this talk, I will review the process of constructing compatible generalized cluster structures, as well as the current state-of-the-art on the GSV conjecture. After that, I will describe a construction of generalized cluster structures on *SL(n)* compatible with Poisson brackets induced from the Poisson dual of *SL(n)* endowed with the Poisson structure determined by a BD triple of type A_{n-1}. I will also describe the associated family of birational quasi-isomorphisms. The talk will be based on the preprint arXiv:2312.04859 (joint work with M. Gekhtman).

Dmytro Voloshyn - IBS Center for Geometry and Physics, Pohang