

Speaker: Nicolas Templier

Title: Mirror symmetry for minuscule flag varieties

Abstract: We prove cases of Rietsch mirror conjecture that the Dubrovin quantum connection for projective homogeneous varieties is isomorphic to the pushforward D -module attached to Bernstein-Kazhdan geometric crystals. The idea is to recognize the quantum connection as Galois and the geometric crystal as automorphic. The isomorphism comes from global rigidity results where a Hecke eigenform is determined by its local ramification. We reveal relations with the works of Frenkel-Gross, Heinloth-Ngo-Yun and Zhu on Kloosterman sheaves. It implies combinatorial identities for the counts of rational curves and the Peterson variety presentation as corollaries. Work with Thomas Lam.