

Inverse Hamiltonian reduction for affine W -algebras and factorization of divisors on Calabi-Yau threefolds

Wednesday, March 5, 2025 11:30 AM (1 hour)

I will explain how certain enumerative invariants associated with divisors on toric Calabi-Yau threefolds behave nicely under the decomposition of divisors into their reduced, irreducible components, and moreover that this corresponds in representation theory to the existence of various embeddings of vertex algebras. In a particular family of examples this corresponds to inverse Hamiltonian reduction, a system of embeddings of affine W -algebras associated to smaller nilpotents into those associated with larger nilpotents in the same Lie algebra, recently proved for general type A in joint work with Sujay Nair.

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