Harvard-M.I.T. Algebraic Geometry Seminar

THE LEVEL-RANK DUALITY FOR NONABELIAN THETA FUNCTIONS

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Spaces of sections of tensor powers of the theta line bundle on moduli spaces of semistable arbitrary rank bundles on a compact Riemann surface are subject to a level-rank duality: each space of sections is geometrically isomorphic to the dual of the space of sections obtained by interchanging the tensor power (level) of the theta bundle on the moduli space and the rank of the bundles that make up the moduli space.
This corresponds in representation theory to an isomorphism of conformal blocks of representations of affine Lie algebras, when the rank of the algebra and the level of the representation are switched.
I will describe a proof of the geometric statement, which is the result of joint work with Dragos Oprea, and draws inspiration from work by Prakash Belkale who established the isomorphism for a generic Riemann surface.

Tuesday, November 28th
3:00 p.m.
MIT Room 4-153

http://www-math.mit.edu/ags/