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GENERALIZED THETA FUNCTIONS AND CONFORMAL BLOCKS OVER SINGULAR CURVES

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Abstract

(Joint work with Gibney and Kazanova)

The Borel-Weil theorem realizes irreducible representations of suitable groups geometrically as sections of line bundles. In a similar spirit, there is an identification (established in the 90's by many authors), over smooth curves, of conformal blocks and generalized theta functions.

I will discuss the case of singular curves. If for conformal blocks in type A associated to projective varieties of minimal degree, this interpretation extends to stable curves, then identities between first Chern classes of vector bundles of conformal blocks will be satisfied. Examples show that on the moduli of genus 2 curves, the extension can fail, and on the moduli of genus zero curves with marked points, it can hold. I will outline a guess, based on several examples, for when such identifications exist.

Date : Monday, July 13, 2015

Time: 15:00

Place : IMBM Seminar Room, Boğaziçi University South Campus