Geometry, Physics, and Representation Theory Northeastern University

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Vanishing relations in the cohomology of the moduli space of parabolic bundles on a curve

Abstract. We will construct tautological line bundles on the moduli space of parabolic bundles of arbitrary rank on a Riemann surface, and show that the Poincaré duals to their Chern classes have simple geometric representatives. We use this construction to show that the ring generated by these Chern classes vanishes below the dimension of the moduli space, in analogy with the Newstead-Ramanan conjecture for stable bundles. This is joint work with Jonathan Weitsman.