

Harvard-M.I.T. Algebraic Geometry Seminar

**Stable bundles, difference varieties and
divisors on moduli spaces of pointed curves**

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Abstract:

We do global calculations on moduli spaces of pointed curves to compute the graded Betti numbers of general sets of points on any nonhyperelliptic canonically embedded curve C . It turns out that these results have surprising connections with moduli spaces of stable vector bundles on curves and geometric divisors on moduli spaces of pointed curves.

Among other things we prove that for any canonically embedded curve C , all exterior powers of the universal quotient on C have a theta divisor which is identified with a difference variety in the Jacobian of C . These vector bundles are of great interest since Green's Conjecture on syzygies of canonical curves boils down to computing the dimensions of their spaces of sections.

This is joint work with M. Mustata and M. Popa.

February 19, 2002
3:00 p.m.
Harvard Room 507

<http://www-math.mit.edu/~abuch/seminar/>