



THE WORLDWIDE CENTER OF MATHEMATICS

D-modules on Poisson varieties and Poisson traces



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Friday, June 11, 2010

Coffee, tea, cookies: 3:30pm

Talk: 4-5pm

929 Massachusetts Ave., Cambridge, Suite #102

Abstract: Let V be an affine symplectic algebraic variety over \mathbb{C} , and G a finite group of automorphisms of V (for example, V is a symplectic vector space, and G is a subgroup of $\mathrm{Sp}(V)$). Let A be the algebra of regular functions on V/G , and E be the space of linear functionals on A which are invariant under Hamiltonian vector fields on V/G (so called Poisson traces). It turns out that E is finite dimensional. I will explain how to prove and generalize this statement, using the theory of D-modules, and will also describe some applications to noncommutative algebra. This is joint work with Travis Schedler.

The Worldwide Center of Mathematics, www.centerofmath.org, is located midway between Harvard and Central Squares, at 929 Massachusetts Avenue, Cambridge, MA, in Suite #102. Travel to the Center by public transportation is easy via the #1 bus, or by taking the subway (the T) to Central Square, and walking for 10 minutes. Suite #102 is located on floor 01, which is distinct from floor 1.

All attendees will need to sign a release form, as the lecture will be recorded for distribution on the Web.