

1108-14-541

Christopher S Dodd* (cdodd@math.toronto.edu), 44 Albany Ave., Toronto, ON M5R 3C3, Canada. *Quantization, reduction mod p , and automorphisms of the Weyl algebra.*

The Weyl algebra of polynomial differential operators is a basic object which appears in algebraic geometry, representation theory, and mathematical physics. In this talk, I will discuss some conjectures of A. Belov-Kanel and M. Kontsevich concerning the structure of the automorphism group of the Weyl algebra. The question turns out to be related to defining an appropriate notion of "support cycle" for a differential equation, which, in turn, involves techniques from positive characteristic. In particular, we shall explain a "quantization correspondence" which is based on reducing differential equations to finite characteristic. (Received January 20, 2015)