1086-20-2371 **Shannon Ezzat*** (shannon.ezzat@gmail.com). *Representation Growth Using a Constructive Method.*

Representation growth is a subfield of asymptotic group theory, in which groups are studied indirectly by studying analytic properties of sequences associated to these groups. In representation growth we are concerned with counting the number of complex irreducible representations of degree n as $n \to \infty$. This sequence is commonly studied by encoding these numbers as coefficients in a zeta function, called the representation zeta function.

In this talk we will discuss representation growth of finitely generated nilpotent groups. For a class of filiform groups of arbitrary nilpotency class we use a constructive method to determine the zeta functions associated to these groups; this calculation was not possible using the standard representation growth techniques, namely the Kirillov orbit method. (Received September 25, 2012)