1125-14-113 **Mee Seong Im*** (`meeseongim@gmail.com`), 646 Swift Road, Department of Mathematical Sciences, Thayer Hall, Office 249, West Point, NY 10996. *On the geometry of filtered representations of quivers and connections to isospectral Hilbert schemes.*

We prove that varieties constructed via unipotent invariants of the Borel on filtered quiver representations are finite dimensional, which are important in the spec and the proj constructions in algebraic geometry. I will discuss their connections to quiver Grothendieck-Springer resolutions and isospectral Hilbert schemes. Other related topics such as quantum Hamiltonian reduction and their connections to Cherednik algebras, and the Borel generalization of the moment map of the Atiyah-Drinfeld-Hitchin-Manin (ADHM) construction will be discussed. This is joint with Lisa M. Jones at the University of Cambridge. (Received September 10, 2016)