1153-14-103 **Mee Seong Im*** (meeseongim@gmail.com), Department of Mathematical Sciences, Thayer Hall, Office 252, Official Business, West Point, NY 10996, and **Travis Scrimshaw**. *The geometry of parabolic Hamiltonian reduction.*

In the construction of Hamiltonian reductions in symplectic geometry, rich connections to Hilbert schemes, Calogero-Moser spaces, and rational spherical Cherednik algebras have emerged. A parabolic analogue of the classical general linear group construction (realized after a reduction from the cotangent bundle of enhanced partial Grothendieck-Springer resolutions) potentially opens doors for its connections to isospectral Hilbert schemes, partial flag Hilbert schemes, and other algebraic varieties that are important in geometric representation theory, algebraic combinatorics, and quantum topology.

Our construction can also be realized by certain (partial) quiver flag varieties, appearing in the geometric interplay in quiver Hecke algebras that categorify quantum groups.

I will discuss a parabolic analogue of the cotangent bundle of the extended general linear Lie algebra, discussing the complete intersection of the zero fiber of a moment map, an enumeration of the irreducible components, and a parabolic analog of an almost-commuting scheme appearing in the study of Calogero-Moser systems. I will end with conjectures on their birationality of their geometric invariant theory (GIT) quotient, which depends on the stability condition, to well-known Hilbert schemes. (Received August 19, 2019)