1116-14-799 **Mee Seong Im*** (meeseong.im@usma.edu), 646 Swift Road, Department of Mathematical Sciences, United States Military Academy, West Point, NY 10996, and **Ben Cox** (coxbl@cofc.edu). *On the categorification of Verma modules for* $\mathfrak{sl}_2$. Preliminary report.

The quiver-graded Springer and the Grothendieck-Springer resolutions are extremely interesting geometric objects as they appear in the geometric construction of quiver Hecke algebras, modified Steinberg varieties, quantum shuffle algebras and quantum cluster algebras, to name a few. I will talk about the general notion of categorification, leading us to the current work-in-progress of categorifying Verma modules for the Lie algebra $\mathfrak{sl}_2$. This is joint with Ben Cox, a faculty at the College of Charleston. (Received September 14, 2015)