1126-20-372 **William Graham*** (wag@uga.edu), **Martha Precup** and **Amber Russell**. *A new approach to the generalized Springer correspondence: Part 1.* Preliminary report.

Let G be a semisimple algebraic group with Weyl group W. The Springer correspondence is an injective map from the irreducible representations of W to G-equivariant simple perverse sheaves on the nilpotent cone of G. This correspondence can be constructed by considering the pushforward of the constant sheaf from the Springer resolution of the nilpotent cone. However, this construction does not realize all the simple perverse sheaves on the nilpotent cone; to achieve this, Lusztig introduced the generalized Springer correspondence. However, Lusztig's construction uses an induction functor from certain Levi's rather than considering the pushforward of the constant sheaf from a single variety.

In previous work, Graham introduced an analogue of the Springer resolution where the dense G-orbit in the nilpotent cone is replaced by the universal cover of that orbit. Russell showed that in type A, all the irreducible equivariant perverse sheaves on the nilpotent cone appear as direct summands in the pushforward of the constant sheaf from this analogue of the Springer resolution. In joint work of Graham, Precup, and Russell, we show that in type A, this pushforward of the constant sheaf recovers Lusztig's generalized Springer correspondence. (Received January 17, 2017)