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**Amelia Tebbe\*** (tebbe2@illinois.edu). *Blowing up Atomic Functors.*

A functor from finite sets to chain complexes is called atomic if it is completely determined by its value on a particular set. In this talk, we present a new resolution for these atomic functors, which allows us to easily compute their Goodwillie polynomial approximations. By a rank filtration, any functor from finite sets to chain complexes is built from atomic functors. Computing the linear approximation of an atomic functor is a classic result involving partition complexes. Robinson constructed a bicomplex, which can be used to compute the linear approximation of any functor. We hope to use our new resolution to similarly construct bicomplexes that allow us to compute polynomial approximations for any functor from finite sets to chain complexes. (Received September 20, 2016)