1127-55-321 **Amin Saied*** (`amin.saied@gmail.com`), 205A W Court St, Ithaca, NY 14850. *On the homology of Aut(F_n) and Out(F_n) with certain twisted coefficients.*

This is joint work with Martin Kassabov and Jim Conant, who constructed an action of Aut(F_n) on $H^{\otimes n}$ where H is a cocommutative Hopf algebra, and who introduced a related representation of Out(F_n). We study certain coefficients $c_{\lambda,\mu}$ arising from a filtration of these representations and discover stability patterns among them akin to representation stability. This construction is related to the study of the Johnson cokernel when H is the tensor algebra, and to the abelianisation of Kontsevich's Lie Lie algebra when H is the symmetric algebra. (Received February 06, 2017)