1173-17-325 **David M Galban*** (dmg30956@uga.edu). *First and Second Cohomology Groups for BBW Parabolics for Lie Superalgebras.*

For semisimple Lie algebras, a well-known theorem of Kostant computes the cohomology groups of parabolic subalgebras, but it is unknown whether an analog of Kostant's theorem exists for Lie superalgebras. Seeking to provide the first calculations in this direction, in this talk, I will describe the cohomology groups for the subalgebra $\mathfrak{n}^+$ relative to the BBW parabolic subalgebras constructed by D. Grantcharov, N. Grantcharov, Nakano and Wu. These classical Lie superalgebras have a triangular decomposition $\mathfrak{g} = \mathfrak{n}^- \oplus \mathfrak{f} \oplus \mathfrak{n}^+$, where $\mathfrak{f}$ is a detecting subalgebra as introduced by Boe, Kujawa and Nakano. I will show that there exists a Hochschild-Serre spectral sequence that collapses for all infinite families of classical simple Lie superalgebras. Using this, I will provide examples of computation of the first and second cohomologies for some of the simpler cases. (Received September 22, 2021)