Xuemiao Chen* (xuemiaochen1991@gmail.com) and Song Sun. Reflexive sheaves, Hermitian-Yang-Mills connections, and tangent cones.

The Donaldson-Uhlenbeck-Yau theorem proves the existence of a Hermitian-Yang-Mills connection on a given slope stable holomorphic vector over a compact Kahler manifold. Later, Bando and Siu generalized this to stable reflexive sheaves by using natural singular Hermitian-Yang-Mills connections. In this talk, I will talk about how to characterize the analytic tangent cones of a singular Hermitian-Yang-Mills connections by using certain new local complex geometric data extracted from the corresponding reflexive sheaves. (Received August 05, 2020)