THE UNIVERSITY **OF HONG KONG**

Institute of Mathematical Research
Department of Mathematics

C O L L O Q U I U M

Singular Hermitian-Yang-Mills connections and reflexive sheaves

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Abstract

The Donaldson-Uhlenbeck-Yau theorem relates the existence of Hermitian-Yang-Mills connections over a compact Kahler manifold with algebraic stability of a holomorphic vector bundle. This has been extended by Bando-Siu in 1994 to a class of singular Hermitian-Yang-Mills connections on reflexive sheaves. We study tangent cones of these singular connections in the geometric analytic sense, and show that they can be characterized in terms of certain algebro-geometric invariants of reflexive sheaves. Based on joint work with Xuemiao Chen (University of Maryland), https://arxiv.org/abs/1912.09561.

Date:	November 9, 2021 (Tuesday)
Time:	11:00 am – 12:00 nn (Hong Kong Time)
Venue:	ZOOM: https://hku.zoom.us/j/
	Meeting ID: 543 4482 374

All are welcome