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Joint Geometric Analysis Seminar

(Part of MIST program)

On complete Calabi-Yau manifolds asymptotic to cones

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Abstract

We proved a “no semistability at infinity” result for complete Calabi-Yau metrics asymptotic to cones, by eliminating the possible appearance of an intermediate K-semistable cone in the 2-step degeneration theory developed by Donaldson-Sun. As a consequence, a classification result for complete Calabi-Yau manifolds with Euclidean volume growth and quadratic curvature decay is given. Moreover a byproduct of the proof is a polynomial convergence rate to the asymptotic cone for such manifolds. Joint work with Song Sun.

Date: October 27, 2023 (Friday)

Time: 11:00am-noon (Hong Kong time)

ZOOM link: <https://cuhk.zoom.us/j/91805734715>

All are Welcome