1088-53-260 **Frederick Tsz-Ho Fong*** (fong@math.brown.edu). *Kähler-Ricci Flow on Holomorphic Fibrations.*

In this talk, I will discuss the singularity development of the Kähler-Ricci flow on some holomorphic vibrations, and classify the singularity models using parabolic rescaling.

The first part is a joint work with Zhou Zhang. We study the collapsing behavior of regular Calabi-Yau fibrations under the Kähler-Ricci flow. The flow behavior with possibly singular Calabi-Yau fibers was first studied by Song and Tian, establishing metric convergence in the sense of currents. We focused on the regular case in this work and proved stronger convergence, including smooth convergence in the case where the fibers are complex tori.

The second work studies $\mathbb{CP}^1$-bundles over Kähler-Einstein manifolds. Song, Székelyhidi and Weinkove proved the Gromov-Hausdorff convergence when the Kähler-Ricci flow collapses the fibers. In this work, I studied the finite-time singularities using parabolic rescaling, classified the singularity model and showed the singularity must be of Type I. (Received February 12, 2013)