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Joint Geometric Analysis Seminar

(Part of MIST program)

Minimal hypersurfaces in manifolds with Ricci lower bound

Professor Qi Ding
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Abstract

Let N_i be a sequence of $(n+1)$ -manifolds of Ricci curvature $\geq -n$ and the unit ball $B_1(p_i)$ in N_i has volume $\geq v > 0$. Suppose $B_1(p_i)$ converges to a metric ball $B_1(p_\infty)$ in the Gromov-Hausdorff sense. Let M_i be a minimal hypersurface in $B_1(p_i)$ through p_i . Suppose the normalized volumes of M_i are uniformly bounded. In this talk, I will talk about the possible limits M_∞ (of M_i) in $B_1(p_\infty)$ in the induced Hausdorff topology using Cheeger-Colding theory. One of main tools is the distance function from M_∞ . As an application, there is a Frankel property on cross sections of a class of metric cones, which is useful in proving certain Poincare inequality.

Date: 8 October 2021 (Friday)

Time: 10:30am – 11:30am (Hong Kong time)

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

All are Welcome