# Joint Geometric Analysis Seminar

**(Part of MIST program)**

## *Minimal hypersurfaces in manifolds with Ricci lower bound*

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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 $M_\infty$ (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 $M_\infty$. 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*