SCMS Seminar

RECTIFIABLILITY OF SINGULAR SET OF RICCI LIMIT SPACE

Speaker: Wenshuai Jiang

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Lecture

Time: 9:30-11:30, Friday, Nov. 8, 2019

Venue: Room 102, Shanghai Center for Mathematical Sciences

Abstract: Let (X,d,p) be the Gromov-Hausdorff limit of a sequence of n-manifolds with lower Ricci curvature and lower volume bounds. It was proved by Cheeger-Colding that X has a singular-regular decomposition X=R\cup S and S has codimension at least 2. However, little else has been understood about the structure of the singular set. In this talk, we will study the structure of the singular set. We will show that S is (n-2)-rectifiable and will discuss the Hausdorff measure of quantitative singular set. The proof is based on the study of neck regions and a neck decomposition theorem. This is a joint work with Jeff Cheeger and Aaron Naber.