DIFFERENTIAL GEOMETRY SEMINAR
AND
GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

Cross Curvature Flow on Locally Homogenous Three-manifolds

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Abstract: Recently, Chow and Hamilton introduced the cross curvature flow on three-manifolds, which is a weakly parabolic partial differential equation system when the sectional curvatures have a definite sign. They also conjectured the long time existence and convergence of cross curvature flow on closed three-manifolds with negative sectional curvature. In this talk, we will study the cross curvature flow on locally homogenous three-manifolds. We will describe the long time behavior of the cross curvature flow for each case. This is a joint work with Yilong Ni and Laurent Saloff-Coste.