RECENT PROGRESS ON NON-COMPACT COMPLETE RICCI FLOWS

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ABSTRACT. In this talk, we will present results on Ricci flow of complete non-compact Riemannian manifolds of dimension three and higher. We have two results. One is that when the dimension of the manifold is three and the initial data is ALE with non-negative curvature operator, we have global flow. In higher dimensions, we show that the uniform bound of Ricci curvature implies global existence of the flow. One may find our work in arxiv.org. If time permit, we also show the existence of global flow on hyperbolic manifolds and related geometric flow which makes physical mass monotone. This work is done with J.Bland (Toronto),Liang Cheng (Beijing), Xingwang Xu (Singapore), and Anqiang Zhu (Beijing).