RUTGERS
UNIVERSITY | NEWARK

DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

Colloquium

NONSMOOTH LIMITS OF KÄHLER-RICCI FLOWS

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ABSTRACT:

Given a sequence of solutions to a geometric PDE, when is there a subsequence converging to a limit solution? This is a central problem in geometric analysis, and involves finding the right notion of convergence, proving criteria for such a limit to exist, and understanding the regularity of the limit solution. In this talk, we will first briefly overview this problem in the setting of Einstein manifolds, and discuss the additional structure of limit solutions in the Kähler setting. We will then focus on the Ricci flow, where Bamler's recent theory gives a rough picture of limit solutions in arbitrary dimensions. Finally, we will see that limit solutions in the Kähler setting obey improved estimates on their singular strata and that their tangent cones admit natural isometries. This is joint work with Wangjian Jian.

4 − 5pm, Wednesday, October 12, 2022

204 Smith Hall