



Speaker: Jianguo Cao
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Thursday, November 12, 2009
2:00 PM
258 Hurley Hall

Title: Perelman's collapsing theorem for the classification of 3-manifolds

Abstract:

We will simplify the earlier proofs of Perelman's collapsing theorem of 3-manifolds given by Shioya-Yamaguchi and Morgan-Tian. Among other things, we use Perelman's semi-convex analysis of distance functions to construct the desired local Seifert fibration structure on collapsed 3-manifolds. The verification of Perelman's collapsing theorem is the last step of Perelman's proof of Thurston's Geometrization Conjecture on the classification of 3-manifolds. This is a joint work with Jian Ge.

Our proof of Perelman's collapsing theorem is almost self-contained. We believe that our proof of this collapsing theorem is accessible to non-experts and advanced graduate students.