

Miles Simon

Stability of Euclidean space under Ricci flow

TIME:

21 Nov 2006, 17:00 - 19:00

LOCATION:

Freie Universität Berlin - Fachbereich Mathematik und Informatik
Arnimallee 2-6, 14195 Berlin-Dahlem (Raum 031)

We study the Ricci flow and Ricci-DeTurk flow of Riemannian metrics which are C^0 and L^p close to the Euclidean metric on \mathbb{R}^n . We show that the Ricci-DeTurk flow (using the Euclidean metric as the fixed background metric) of such a metric exists for all time, and that the metric converges to the Euclidean one (in the smooth sense) as time approaches infinity. A similar result is proved for the Ricci flow, although then it is possible that the limit metric is the pull back of the Euclidean metric by a diffeomorphism.

Contact:

Humboldt-Universität zu Berlin . Institut für Mathematik
SFB 647 . Unter den Linden 6 . 10099 Berlin
Tel. +49 30 2093 1804 . Fax. +49 30 2093 2727
sfb647@math.hu-berlin.de