# Gauge Theory & Topology Seminar

Sen Hu (USTC)

## On a generalization of the Ricci flow

By using supergravity action we propose a generalization of the Ricci flow. In the generalized Ricci flow we also have gauge fileds and B fields. It is found that the generalized Ricci flow shares many properties of the Ricci flow such as being parabolic systems after modulo gauge symmetries, monotonicity of entropy along an orbit, Harnack inequality etc. Critical points of this flow are also very interesting. In the three dimensional case it gives Thurston's eight geometries. In the four dimensional case there are interesting connections between the critical points and the newly introduced generalized complex geometries.

**Date:** Friday, November 12
**Time:** 3:30-4:30
**Location:** Harvard Mathematics Department, Science Center 507

**Contact:** Andrew Cotton-Clay (acotton@math.harvard.edu)
http://math.harvard.edu/~acotton/seminar.html