

GEOMETRIC ANALYSIS SEMINAR

Speaker: Christine Guenther
Pacific University Oregon

Date: Thursday, March 4, 2021

Time: 11:00 AM

Location: Zoom

Zoom URL: [notredame.zoom.us/j/96288130964?
pwd=c2dDelJJTXhSdTBVSEtLYlI1NEdzZz09](https://notredame.zoom.us/j/96288130964?pwd=c2dDelJJTXhSdTBVSEtLYlI1NEdzZz09)



Lecture Title:

Convergence Stability of the Ricci Flow

Abstract

We define the principle of convergence stability for geometric flows, which says that if a solution exists for all time and converges to a stable fixed point, then solutions that start at nearby geometries also converge to fixed points. In particular, convergence results obtained for symmetrical spaces can be extended to geometries without symmetries. We show convergence stability of the Ricci flow on both compact and asymptotically hyperbolic manifolds, by first using analytic semigroup methods to prove long time continuous dependence of solutions on initial conditions, and then invoking stability results at fixed points.