Department of Mathematics
University of Notre Dame

PDE, COMPLEX ANALYSIS AND DIFFERENTIAL GEOMETRY SEMINAR

Guest Speaker: Paula Burkhardt-Guim
NYU Courant

Date: Tuesday, September 19, 2023
Time: 11:00 AM
Location: 125 Hayes-Healy Bldg
Zoom URL: https://notredame.zoom.us/j/4452533957

Lecture Title:

ADM mass for C^0 metrics and distorion under Ricci-De Turck flow

Abstract

We show that there exists a quantity, depending only on C^0 data of a Riemannian metric, that agrees with the usual ADM mass at infinity whenever the ADM mass exists, but has a well-defined limit at infinity for any continuous Riemannian metric that is asymptotically flat in the C^0 sense and has nonnegative scalar curvature in the sense of Ricci flow. Moreover, the C^0 mass at infinity is independent of choice of C^0-asymptotically flat coordinate chart, and the C^0 local mass has controlled distortion under Ricci-DeTurck flow when coupled with a suitably evolving test function.

Paula Burkhardt-Guim - NYU Courant