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Joint Geometric Analysis Seminar

(Part of MIST program)

ADM mass for C^0 metrics and distortion under Ricci-DeTurck flow

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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.

Date: November 11, 2022 (Friday)
Time: 9:00am – 10:00am (Hong Kong time)
ZOOM link: <https://cuhk.zoom.us/j/91805734715>

All are Welcome