

Kempner Colloquium

THE CAT(0) PROPERTY FOR THE MANIFOLD OF RIEMANNIAN METRICS AND APPLICATIONS

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In 1970, Ebin introduced various Riemannian metrics on the manifold of all Riemannian metrics over a given smooth, closed manifold. His L^2 metric has found particularly broad applications, e.g., in Riemannian geometry, fluid dynamics, low-dimensional geometry and topology, and complex geometry. I will discuss the only recently explored global geometry of the L^2 metric, in particular the proof that it has nonnegative curvature as a metric space. This result is the first step in a program to resolve a 1984 conjecture by Zimmer concerning group actions on manifolds.

January 20, 2012

1:00 p.m.

MATH 350