Kempner Colloquium

Riemannian metrics on spaces of Riemannian metrics

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The idea of a "geometry on a space of geometries" has led to many useful results in various areas of geometry, analysis, topology, and dynamics. I will focus on one type of such a structure, the study of a Riemannian metric on some deformation space of Riemannian metrics. After reviewing the foundational concepts, I will survey some applications of this approach to Riemann surfaces and their moduli, as well as dynamics of group actions on manifolds. I will then present a result due to myself hinting at further applications to dynamics, and joint results with Y. A. Rubinstein regarding Ricci flow and the existence of "optimal" metrics on Kähler manifolds.

November 28, 2011
4:00 p.m.
MATH 350