



ANALYSIS SEMINAR

Hyperbolization of Hyperspaces

by

Zair Ibragimov

California State University at Fullerton

ABSTRACT

The hyperspace of a metric space, i.e., the collection of all non-degenerate subsets, can be thought of as families of coverings or approximations of the space at every scale. Such coverings arise in many questions of analysis and geometry. By studying the asymptotic properties of the hyperspace one hopes to gain some information about the space. Hyperbolization of hyperspaces (in the sense of Gromov) is a way to investigate their asymptotic behavior. After briefly discussing the notion of Gromov hyperbolicity, we describe a procedure to hyperbolize any metric space without changing its quasiconformal geometry. We then discuss the procedure for hyperspaces of metric spaces and, time permitting, for hyperspaces of ultrametric spaces.

Tuesday, January 23, 2012 at 3:00-4:00 pm

Davidson Lecture Hall, Claremont McKenna College

For more information contact Asuman G. Aksoy at aaksoy@cmc.edu