



KOÇ UNIVERSITY

Science – Math Seminar

Speaker: Asli Yaman
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Date: Wednesday, Mar. 30, 2005

Time: 16:45 (Tea and cookies will be served at 16:30)

Place: Science Building, Room Z42

Title: Gromov hyperbolicity and relatively hyperbolic groups

Abstract:

We first give an overview on Gromov-hyperbolic spaces. Gromov-hyperbolicity has an important role both in hyperbolic geometry and in geometric group theory, and the study of isometries of (Gromov-)hyperbolic spaces is one of the main area of intersection of these two subjects.

We define "(relatively) hyperbolic groups", which is a very important class of group of isometries of Gromov-hyperbolic space, and give examples.

One approach to study of isometries of (Gromov-)hyperbolic spaces, is to characterise them through their dynamics on their boundaries. We define the notion of "convergence groups" and "geometrically finite convergence groups", which are obtained from these dynamics.

It is known that relatively hyperbolic groups act on their boundaries as geometrically finite convergence groups. We prove the converse of the statement, giving a characterisation of relative hyperbolicity.

Please visit <http://sci-math.ku.edu.tr/> for a schedule of upcoming Science - Math seminars.