Boğaziçi
MATH COLLOQUIUM

2×2 matrices of determinant 1 and its finite dimensional representations

Hatice Boylan
İstanbul Üniversitesi

Abstract: Already the group $SL_2(\mathbb{Z})$ of 2×2 matrices with integral entries and determinant 1 provides beautiful and interesting mathematics and still deep open problems. We shall give an overview over various aspects of this group, indicate its connections to geometry and number theory, and shall finally arrive at the theory of its finite dimensional representations. In the third part of my talk I shall discuss extensions of the theory to Hilbert modular groups, i.e. groups of 2×2 matrices and determinant 1 with entries in the ring of integers of a given number field. In particular I shall describe a few results of my own work in this domain.

The first two thirds of my talk should be accessible to a general audience.

Date : Wednesday, December 23, 2015
Time: 14:00
Place: TB 250, Boğaziçi University