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FACULTY OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS

SEMINAR

Descriptive complexity of subsets of the space of finitely generated groups

SPEAKER : Assoc. Prof. Dr. Gökhan Benli

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TIME : 13:30

PLACE : Çankaya University (Central Campus), R-213

Under appropriate coding and identification, one can form a compact Polish space of n -generated marked groups. This space was introduced in 1984 with the aim of studying a Cantor set of groups with unusual properties related to growth and amenability and has been well-studied since then. A theme that has been explored, though not studied in its full extent, is the analysis of the interplay between group theoretic properties and topological properties of the sets that they define in this space.

The aim of this talk is to introduce these concepts and make a survey of various group theoretic properties and recent results regarding their descriptive complexities. In particular, we establish that the sets of solvable groups and groups of exponential growth are σ_2 -complete and that the sets of periodic groups and groups of intermediate growth are π_2 -complete. We will also introduce several open questions.

This is joint work with Burak Kaya.

All interested are cordially invited.

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