המחלקה למתמטיקה, בן-גוריון

קולוקוויום

ההרצאה

and probability measures: word and maps Word geometry

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תקציר: Given a word w in a free group F_r on a set of r elements (e.g. the word commutator w=xyx^(-1)y^(-1)), and a group G, one can associate a word map w:G^r–>G. For g in G, it is natural to ask whether the equation w(x1,...,xr)=g has a solution in G^r, and to estimate the "size" of this solution set, in a suitable sense. When G is finite, or more generally a compact group, this becomes a probabilistic problem of analyzing the distribution of w(x_1,...,x_r), for Haar-random elements x_1,...,x_r in G. When G is an algebraic group, such as SLn(C), it is natural to study the geometry of the fibers of w. Such problems have been extensively studied in the last few decades, in various settings such as finite simple groups, p-adic compact groups, compact Lie groups, simple algebraic and arithmetic groups. Analogous problems have been studied for Lie

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