

Undistorted solvable linear groups

This is a report on joint work, partly in progress, with Roger Alperin. If a locally compact group G has a compact set of generators one can define the word metric d_G on G . If H is a closed subgroup of G one can compare d_H with the restriction of d_G to H . The subgroup H is called undistorted in G if these two metrics coincide, up to some natural equivalence relation called quasiisometry. I will discuss the case that G is the general linear group over $\mathbb{R}$ or $\mathbb{C}$ and H is a subgroup of the upper triangular group. I will describe the word metric on G and give examples leading to our criteria for H to be undistorted in G . At the end I will also discuss the same question for non-archimedian local fields.