



MANHATTAN ALGEBRA DAY

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Some model theory of nonabelian free groups

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Abstract:

Around 1946 Tarski asked whether nonabelian free groups share the same common theory. Many mathematicians, Malcev, Lyndon, Makanin to name a few, have approached the problem and contributed to it. Despite their efforts the problem seemed very hard to tackle and only after more than fifty years, in 2001, a positive answer was given by Kharlampovich-Myasnikov and Sela independently. Since then, the common theory of nonabelian free groups has attracted a lot of attention from the community of model theorists and group theorists. The positive solution to Tarski's question is considered one of the deepest results in the model theory of groups.

In this talk I am going to survey the results that are currently known about this first-order theory and pose problems that are still open.