



GEOMETRIC AND ASYMPTOTIC GROUP THEORY
WITH APPLICATIONS
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*Model theory, pseudofinite words and profinite completions of the
free monoid*

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Abstract:

One can define a metric on the free monoid by declaring two words to be close if it takes a complicated first order sentence to distinguish them. The completion with respect to this metric is a profinite monoid known as the free pro-aperiodic monoid. Previously, most of our understanding of this monoid was based on McCammond's solution to the word problem in free Burnside semigroups. In this talk, we introduce a new approach to this monoid using model theory of infinite words that recovers many of the known results, as well as new results. This is joint work with Sam van Gool.