

## On the generalization of analitic local loops

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It is widely known that there is an equivalence of categories between analitic local groups and Lie algebras. The idea of this poster is to explain the extention of this result to a wider class of algebraic structures that generalize groups.

To obtain the Lie bracket from a Lie group the conjugation maps have to be differentiated. The next natural step is to consider the algebraic structures that encode conjugation of groups. These structures are called racks. In recent years, it has been shown that the tangent space of analitic local racks is a Leibniz algebra, realizing that in case the original rack comes from a group conjugation, it is actualyl a Lie algebra. The problem arises when trying to find an enveloping algebra for Leibniz algebras that have some geometric interpretation.

In case of the extension to analitic local loops, the tangent space of such structures are Sabinin algebras. Eventually, someone could consider both generalizations at the same time and try to find some structure that generalizes group conjugations, but on loops. The problems of dealing with this generalization are the main concern of this poster.

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