

Bagayoko, *Valuations on groups, ordered groups and exponential groups*

Certain non-Abelian ordered groups of germs (or related objects) coming from o-minimal geometry have a natural “non-commutative valuation”. As in the case of valued fields or valued differential fields, this valuation can be used as an auxiliary tool to investigate purely algebraic problems.

In this talk, I will present first-order notions of valuations on groups, ordered groups and exponential groups (i.e. non-commutative modules) that are suited to study and solve equations in a single variable over these structures.