

Almost Linear Nash Groups

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Abstract

A Nash manifold is a smooth manifold with a “semi-algebraic” structure on it. A Nash group is a group with a compatible Nash manifold structure on it. A Nash group is said to be almost linear if it has a (finite dimensional) Nash representation with finite kernel.

Almost linear Nash groups are nice in the following sense: their structures are simpler than that of general Lie groups; in the study of infinite dimensional representation theory, they are more flexible than linear algebraic groups. Basic notions and properties concerning almost linear Nash groups will be explained.

Prerequisite: smooth manifold, Lie group, abstract algebra