

# MATEMATIČNI KOLOKVIJI

## Generalizing Malcev correspondence between nilpotent groups and Lie algebras, with applications

Yuri Bahturin

Memorial University of Newfoundland, Canada

We study finite-dimensional nilpotent algebras. We prove an implicit function theorem for such algebras. This allows us to establish a correspondence between nilpotent algebras and (quasi)groups, in the spirit of the classical correspondence between divisible torsion-free nilpotent groups and rational nilpotent Lie algebra, given by A. I. Malcev. Because of the functorial nature of this correspondence, it can be used to translate results from algebras to groups and conversely. We give new examples of this translation.

This is joint work with Alexander Olshanskii.



Univerza v Ljubljani  
Fakulteta za *matematiko in fiziko*



Četrtek, 14. december 2023, 15:15  
Fakulteta za matematiko in fiziko  
Jadranska 21, predavalnica 2.02

Vabljeni vsi prijatelji matematike.  
Predavanju sledi druženje ob prigrizkih.