

POLYNOMIAL IDENTITIES IN NOVIKOV ALGEBRAS

N. ISMAILOV

The talk is devoted to Novikov algebras satisfying nontrivial identities. We show that a Novikov algebra over a field of zero characteristic that satisfies a nontrivial identity satisfies some unexpected “universal” identities, in particular, right associator nilpotence, and right nilpotence of the commutator ideal. This, in particular, implies that a Novikov algebra over a field of zero characteristic satisfies a nontrivial identity if and only if it is Lie-solvable. We also establish that any system of identities of Novikov algebras over a field of zero characteristic follows from finitely many of them, and that the same holds over any field for multilinear Novikov identities. Some analogous simpler statements are also proved for commutative differential algebras.

This is joint work with Vladimir Dotsenko (University of Strasburg, France) and Ualbai Umirbaev (Wayne State University, USA).

ASTANA IT UNIVERSITY, ASTANA (KAZAKHSTAN)
Email address: `nurlan.ismail@gmail.com`