

# DOUBLE LIE ALGEBRAS OF A NONZERO WEIGHT

M. E. GONCHAROV

The notion of a double Poisson algebra on a given associative algebra was introduced by M. Van den Bergh in 2008 as a noncommutative analog of Poisson algebra. The goal behind this notion was to develop noncommutative Poisson geometry. The notion of double Lie algebra naturally arose directly from the definition of double Poisson algebra (in the same way as the notion of a Lie algebra arises from the notion of an ordinary Poisson algebra). In this talk, we introduce the notion of a lambda-double Lie algebra (lambda is a parameter), which coincides with usual double Lie algebra when the lambda is equal to 0. We state that every lambda-double Lie algebra for a nonzero lambda provides the structure of a modified double Poisson algebra on the free associative algebra. In addition, we prove that there are no simple finite-dimensional lambda-double Lie algebras.

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SOBOLEV INSTITUTE OF MATHEMATICS, NOVOSIBIRSK

*Email address:* `goncharov.gme@gmail.com`