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On the Centre of Crossed Modules of Lie Algebras

This paper studies the relationship between crossed modules of Lie algebras and their centres. We show that the homotopy of the centre of any crossed module $\partial : L_1 \rightarrow L_0$ of Lie algebras fits in an exact sequence involving cohomology of the homotopy Lie algebras $\pi_0(L_*)$ and $\pi_1(L_*)$.

Keywords: Crossed modules, Lie algebra cohomology, Drinfeld centre.

MSC: 18G45, 17B55.