

2-Local derivations on finite-dimensional semi-simple Lie algebras

ABSTRACT

We prove that every 2-local derivation on a finite-dimensional semi-simple Lie algebra L over an algebraically closed field of characteristic zero is a derivation. We also show that a finite-dimensional nilpotent Lie algebra L with $\dim L \geq 2$ admits a 2-local derivation which is not a derivation.

Keyword: Semi-simple Lie algebra; Nilpotent algebra; Derivation; 2-Local derivation