

Isoclinism in multiplicative Lie algebras

By MANI SHANKAR PANDEY (Kurnool) and SUMIT KUMAR UPADHYAY (Allahabad)

Abstract. The purpose of this paper is to introduce the notion of isoclinism and cover in a multiplicative Lie algebra, which may help to describe all multiplicative Lie algebra structures on a group. Consequently, we establish the existence of the stem multiplicative Lie algebra. Additionally, we provide the necessary and sufficient conditions for the existence of a stem cover in a multiplicative Lie algebra.

MANI SHANKAR PANDEY
DEPARTMENT OF SCIENCES
INDIAN INSTITUTE OF INFORMATION
TECHNOLOGY DESIGN AND MANUFACTURING
KURNOOL (IIITDM KURNOOL), 518008
INDIA

SUMIT KUMAR UPADHYAY
DEPARTMENT OF APPLIED SCIENCES
INDIAN INSTITUTE OF INFORMATION TECHNOLOGY
ALLAHABAD (IITA), 211015
INDIA

Mathematics Subject Classification: 19C09, 20F12, 20F40.

Key words and phrases: multiplicative Lie algebras, isoclinism, cover, Schur multiplier.