

## ON THE SKEW LIE PRODUCT AND DERIVATIONS OF PRIME RINGS WITH INVOLUTION

MUZIBUR RAHMAN MOZUMDER<sup>1</sup>, NADEEM AHMAD DAR<sup>2</sup>

MOHAMMAD SALAHUDDIN KHAN<sup>3</sup> AND ADNAN ABBASI<sup>1</sup>

<sup>1</sup>*Department of Mathematics  
Aligarh Muslim University  
Aligarh, India*

<sup>2</sup>*Govt. HSS, Kaprin, Shopian  
Jammu and Kashmir, India*

<sup>3</sup>*Department of Applied Mathematics  
Aligarh Muslim University  
Aligarh, India*

**e-mail:** muzibamu81@gmail.com  
ndmdarlarjurah@gmail.com  
salahuddinkhan50@gmail.com  
adnan.abbasi001@gmail.com

### Abstract

Let  $R$  be a ring with involution ' $*$ '. The skew Lie product of  $a, b \in R$  is defined by  $*[a, b] = ab - ba^*$ . The purpose of this paper is to study the commutativity of a prime ring which satisfies the various  $*$ -differential identities involving skew Lie product. Finally, we provide two examples to prove that the assumed restrictions on some of our results are not superfluous.

**Keywords:** prime ring, skew Lie product, derivation, involution.

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