

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

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### 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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