

## 2-HILBERT $C^*$ -MODULES AND SOME GRÜSS' TYPE INEQUALITIES IN A-2-INNER PRODUCT SPACES

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**Abstract.** In this paper we generalize the concept of complex valued 2-inner product to  $A$ -valued 2-inner product, where  $A$  is a  $C^*$ -algebra. We define and study the notion of  $A$ -valued 2-inner product on right  $A$ -module  $E$  ( $E$  is a linear space) and by new definition, some Grüss type inequalities are given.

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