

## SOME KINDS OF TOPOLOGICAL HYPER $K$ -ALGEBRAS

A. Radfar <sup>(a)</sup>, S. Khosravi Shoar<sup>(b)</sup>, R. Moradian<sup>(c)</sup>

<sup>(a)</sup>*Department of Mathematics, Payamnoor University , Tehran, Iran, p.o. box 19395-3697  
radfar@pnu.ac.ir*

<sup>(b)</sup>*Department of Mathematics, Fasa University, Fasa, Iran  
khosravi.shoar@fasau.ac.ir*

<sup>(c)</sup>*Department of Mathematics, Ilam University, Ilam, Iran  
rmoradian58@yahoo.com*

Received March 5, 2016 ; revised May 24, 2016

### Abstract

In this paper we introduce and characterise the concepts of pseudo topological hyper  $K$ -algebras, strong pseudo topological hyper  $K$ -algebras and topological hyper  $K$ -algebras. Then we find some properties of this structures. Also we define a topology on a hyper  $K$ -algebra, which makes a pseudo topological hyper  $K$ -algebra.

Key words and phrases: hyper  $K$ -algebra, Topological hyper  $K$ -algebra, Pseudo topological hyper  $K$ -algebra, Strong pseudo topological hyper  $K$ -algebra.

---