

1163-53-1449

Ratikanta Behera* (ratikanta.behera@ucf.edu), Department of Mathematics, University of Central Florida, Orlando, FL. *Tensor Operations and Computations*.

Tensors have significantly impacted many areas of science and engineering in recent years. However, operations with tensors is still a major challenge and preoccupation for the scientific community. Therefore, it is appropriate to develop an infrastructure that supports reasoning about tensor computations. In this talk, we will discuss a closed multiplication operation between tensors with the concept of transpose, and inverse as well as the identity of a tensor. A significant motivation for considering this new type of tensor multiplication is to devise new kinds of factorization of tensors. The technique allows us an excellent environment for learning about tensor computations. (Received September 15, 2020)