## BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA



INSTITUTO DE FÍSICA "Luis Rivera Terrazas"



## SEMINARIO "DR. JESUS REYES CORONA"

## "Geometrical Applications of Split Octonions"

## Dr. Merab Gogberashvili Universidad Estatal de Tbilisi, Georgia.

Eight real octonionic parameters are related to the space-time coordinates, wavelengths and classical action. Representation of rotations by split octonions (active transformations of basis units) lead to the real non-compact form of the Cartan's special group G2. Elementary particles are connected with zero divisors, the elements which nullify octonionic intervals. In this approach in front of time-like coordinates in the expression of pseudo-Euclidean intervals naturally appear two fundamental physical parameters, the light speed and Planck's constant. It is shown that from the requirement of positive definiteness of norms under G2-transformations, together with the introduction of the maximal velocity, there follow uncertainty relations.

Auditorio-IFUAP Viernes 13 de Noviembre de 2015 13:00 Hrs.