



RUTGERS - CAMDEN MATH SEMINAR

11:20 AM - 12:20 PM

FRIDAY, SEPTEMBER 30TH, 2022

AVAILABLE ON ZOOM:
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Title: The Clifford Monopole equations (joint work with N.Santana, E.Lopez and A.Quintero-Velez).

Abstract: The spin groups and the Clifford algebras have played a very important role in Differential Geometry and Physics. In the search for a unified spinorial approach to special Riemannian holonomy, we found a suitable notion for twisted pure spinor which generalizes that of a classical pure spinor developed by Cartan. Along the way, we realized that parallel twisted pure spinors, besides satisfying the corresponding twisted Dirac equation, satisfy a curvature identity analogous to the second Seiberg-Witten equation in 4-dimensions. The Dirac equation and the curvature equation constitute what we call the Clifford monopole equations. We will describe the setup of these equations on manifolds of arbitrary dimension, show that they have solutions on certain spaces, how they restrict to the Seiberg-Witten equations, and sketch some aspects of the construction of the moduli space.

