

1135-53-1562

Andres Larrain-Hubach* (alarrainhubach1@udayton.edu), Science Center 313, 300 College Park, Dayton, OH 45469. *Decay of Twisted Harmonic Spinors on Taub-NUT Space.*

Given a complex vector bundle over a four-manifold, an Instanton is a unitary connection whose curvature is square-integrable and Anti-Self-Dual. The theory of bow representations, developed by Sergey Cherkis, gives an algebraic method to produce Instantons on Taub-NUT space. He conjectured that every generic Instanton on Taub-NUT corresponds to a bow representation. In a joint project with Sergey Cherkis and Mark Stern, we verified this conjecture. In this talk, I will discuss some results concerning the decay of Twisted Harmonic Spinors on Taub-NUT. These results play a fundamental role in the proof of the correspondence between Instantons and bows. (Received September 23, 2017)