

1094-20-384

Calder Daenzer* (daenzer@math.psu.edu). *Geometric T-Dualization and Uniqueness*. Preliminary report.

I will describe how abelian principal bundles and abelian gerbes can be embedded in bundles of Picard groupoids. I will then describe a notion of Pontryagin duality for such bundles. Using this machinery, I will present a new construction of T-duality, and show how it is related to the Mathai-Rosenberg C^* -algebraic construction. A central (and surprising) benefit of this method is that there are natural constraints imposed on the dualization procedure, which result in unique T-duals. Another benefit of this method is that it applies not only to principal torus bundles, but to affine torus bundles as well. (Received August 27, 2013)