

1027-19-49

Calder Daenzer* (cdaenzer@math.upenn.edu), Dep't of Mathematics, 209 South 33rd St., Philadelphia, PA 19104-6395. *Noncommutative T-duality and Pontryagin duality for groupoids.*

T-dualitization is a transformation taking a gerbe on a principal torus bundle to a gerbe on a principal dual-torus bundle. I will give a conceptual construction of this transformation, exhibiting it as a crossed product construction on certain groupoids, followed by a “Pontryagin dualization” for groupoids. I will also show how T-duality can be phrased in terms of C^* -algebras, and we will see that the C^* -algebras corresponding to T-dual data have isomorphic K -theory. (Received February 06, 2007)