
DEREK KREPSKI, University of Manitoba

Lie 2-algebras of infinitesimal symmetries of bundle gerbes

In this talk, we discuss how the infinitesimal symmetries of a bundle gerbe over a smooth manifold M naturally form a Lie 2-algebra. These symmetries are closely related to Lie 2-algebras naturally associated to a closed 3-form $\chi \in \Omega^3(M)$: the Poisson Lie 2-algebra of observables on a 2-plectic manifold (M, χ) , the Lie 2-algebra of sections of the exact Courant algebroid $TM \oplus T^*M$ with χ -twisted Courant bracket, and the so-called Atiyah Lie 2-algebra associated to the Lie algebra action of vector fields on smooth functions. This is joint work with Jennifer Vaughan and Dinamo Djounvouna.