

Reduction of symplectic double groupoids

Gabriel Sevestre

(KU Leuven)

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The famous Marsden-Weinstein reduction theorem in symplectic geometry has been largely promoted to other kind of geometric structures, such as Poisson and Dirac manifolds, symplectic groupoids etc.

In this talk, I will show how this reduction procedure works with symplectic double groupoids, obtaining a new symplectic groupoid from an old one. I will give various examples, in particular explaining how this is the right context for considering crossed-modules moments maps, and crossed-modules coadjoint orbits.