

Reduction and Morita Theory for Coisotropic Triples

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Abstract: Reduction plays an important role in both classical and quantum mechanics.

Using situations from Poisson geometry and deformation quantization as guiding examples, we define so called coisotropic algebras as algebraic abstractions of certain reduction schemes. Since one is always interested in representations of algebraic objects we construct a bicategory of coisotropic algebras and bimodules that allows us to compare coisotropic algebras by means of Morita equivalence. Finally, we show that reduction is well-behaved with respect to Morita equivalence and taking the classical limit.