

QUANTUM INVERSE SEMIGROUPS

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Abstract:

Groupoids and inverse semigroups are both generalizations of groups whose main purpose is to describe partial symmetries. There is a wide variety of results in the literature explaining the intimate connection between groupoids and inverse semigroups. On the other hand, the notion of a Hopf algebroid came into play as a generalization of both Hopf algebras and groupoids. The main objective of this talk is to introduce the notion of a Quantum Inverse Semigroup, which intends to play a role analogous to what inverse semigroups do with respect to groupoids. We plan to motivate the notion of Quantum inverse semigroups through examples coming from different contexts, like weak Hopf algebras, partial actions and Hopf categories.