

The relationship of bicrossed products of fusion categories and extensions

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In this talk, we review the notions of exact factorizations of fusion categories and extensions of them. We show that some bicrossed product of fusion categories, which are exact factorizations, are related to the notion of crossed extension of fusion categories introduced by Natale. The relation is under the correspondence of exact factorizations and extensions proven by Basak and Gelaki. As a result of this correspondence, we completely characterize the exact factorizations where one of the factors is the category of G -graded vector spaces showing they are all bicrossed products.

In Special Session 9 on Hopf Algebras and Tensor Categories at the Mathematical Congress of the Americas 2025.