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Title: Relative Entropy and the (Quantum) Method of Types

Abstract:

The Method of Types is a set of results in probability theory and information theory that connect (relative) entropy to the probabilities of outcomes in repeated measurement. There does not seem to exist a noncommutative generalization of the Method of Types, even though some results and concepts have noncommutative versions. We give an overview of the Method of Types, emphasizing the role that (relative) entropy plays in it, and discuss possibilities and obstacles in trying to generalize the method to the noncommutative setting. The aim is to get a better understanding of (relative) entropy, in the commutative setting but especially in the noncommutative setting.