

C^* -ALGEBRAIC FACTORIZATION HOMOLOGY

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Abstract:

In dimension 2, factorization homology is a procedure used to construct algebraic or categorical objects from the topological data of the space of embeddings of discs into surfaces. It can be also thought of as a generalized homology theory for manifolds. In this talk I shall discuss some basic ideas of the theory. I shall then outline the quantum field theoretic interpretation of factorization homology and how it relates algebraic QFT to TQFT by means of C^* -categories. Finally, I will discuss my working in progress sketching ideas on how to perform factorization homology using a particular class of braided C^* -tensor categories.