Topology and Geometry Seminar

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Commutativity in Higher Algebraic Objects

Mathematics and Statistics

Date: Wednesday April 3, 2024
Time: **5 PM**
Room: On Zoom

https://uregina-ca.zoom.us/j/97896109097?pwd=RkI2UkZsMlYyZTBzejhEY1R4RCt4Zz09

Abstract: A symmetric monoidal category is a category equipped with a monoidal product that is uniquely commutative up to isomorphism. In this way the iterated monoidal product has an action from the symmetric groups. We can generalize this notion by allowing actions from other permutative groups. Examples include braided monoidal categories, coboundary categories and ribbon braided monoidal categories. These generalized commutative monoidal categories find use in the representation theory of quantum groups (coboundary categories) and the study of TQFTs (ribbon braided monoidal categories).

In this talk I will explain we can generalize the definition of symmetric monoidal ∞-category and ∞-operad in the same manner allowing a more generic notion of G-monoidal ∞-category and ∞-G-operad.

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