



TOPOLOGY SEMINAR

Linear constraint systems, contextual groups, and simplicial distributions

By

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Abstract: A linear constraint system (LCS) is specified by a linear equation over \mathbb{Z}_d . In the talk, we will introduce contextual LCSs and contextual groups. Both notions are related to the existence of solutions of the LCS. Then we will discuss the connection between contextual LCS and contextual simplicial distributions. Given an LCS and any quantum state vector, we can construct a strongly contextual simplicial distribution. Last but not least, there is an open conjecture stating that an LCS over \mathbb{Z}_d , where d is an odd prime, is non-contextual. We will present some known results and some new progress on such conjecture by showing that there is a large class of odd prime p -group that is non-contextual. This is joint work with Cihan Okay and Markus Frembs.

Date: Monday, October 31, 2022

Time: 13:30

Place: SA141 Mathematics Seminar Room