



Analysis Seminar

Title: Non-local games and factorizable Markov maps

Speaker: Mizanur Rahaman (École Normale Supérieure de Lyon)

Date: Tue 10th October 2023 at 3:00PM

Location: E0.32 (beside Pi restaurant)

Abstract: For some games played by two cooperating but non-communicating players, the players can use quantum entanglement as a resource to improve their outcomes beyond what is possible classically. Graph colouring game, graph homomorphism game and graph isomorphism game are a few examples of such games. Over the last few years, a remarkable progress has been taken place in the theory of these non-local games. One significant aspect of this development is its connection with many challenging problems in operator algebras. In this talk, I will review the theory of these games and explain the relevant connection with operator algebras. In particular, I will introduce a new class of games which is called bisynchronous and will show a close connection between bisynchronous games and the theory of quantum permutation groups.

This is a joint work with Vern Paulsen.

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